INTEGRATING THE ARTS INTO SCIENCE TEACHING AND LEARNING

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Abstract

One way to enhance learners' natural propensity for wonder and interest in science is to integrate arts into science learning. Combining arts with science builds on students' interests in nature while allowing them the joy and pleasure of artistic expression. Although educators often discuss integrating the arts into science learning, empirical support is relatively recent (Gullatt, 2008). This study synthesizes previous empirical studies and theoretical literature published on arts integration, how the arts are integrated into science teaching, and the efficacy of arts integration for science learning.

Key Words: arts integration, science education, creativity

1. Introduction

"Science is creative. Write it big, shout it loud, because the message is not getting through." (Howe, 2004, p.14)

The American educational system often prioritizes the study of STEM (Science, Technology, Engineering, and Mathematics), and researchers and practitioners have argued for equal emphasis on the arts as well. Incorporating the arts into learning is considered important and useful for four reasons (Hartle,

Pinciotti, & Gorton, 2015).   First, all cultures demonstrate some sort of need for aesthetic beauty and harmony which makes the arts universal. Second, we process sensory information though the arts, which makes them an embodied system of learning. Third, in our 21st century multicultural world, arts become a language that everyone can understand without a translator. Finally, the arts "provide a natural, and intrinsically motivating medium for children to work 'in advance of themselves' to demonstrate a capacity to work 'as if' they are painters, scientists, presidents, or rock stars" (Hartle et al., 2015, p. 294).

The importance of the arts has caused some educators to recently advocate for broadening STEM to include the arts. The term STEAM (Science, Technology, Engineering, Arts, and Mathematics) was introduced by Georgette Yakman, who realized that, "We live in a world where you can't understand science without technology, which couches most of if its research and development in engineering, which you can't create without an understanding of the arts and mathematics" (Yakman, 2012, p.15). The ability of art to inspire creativity in scientific thinking, educate young learners in a holistic manner, and offer another pathway for making and communicating meaning are three important reasons for integrating the arts into science learning.

2. Theoretical Background

Arts Integration Defined

The addition of the arts into teaching and learning is called arts integration (AI). Although some people might consider science and the arts to lie on opposite ends of a curriculum continuum, the two subjects share many commonalities. For instance, the skill of observing is very important in both science and the arts. Historically, many scientists were required to take lessons in drawing or painting "in the belief that whatever you haven't drawn, you haven't seen" (Root-Bernstein &

Root-Bernstein, 2013). The emphasis on observations can be seen in both science and arts educational standards. The NGSS (Next Generation Science Standards) standards focus on guiding students in using observational skills to describe patterns in nature (NGSS, 2013) while the National Core Arts Standards (NCCAS) lists "perceive and describe aesthetic characteristics of one's natural world and constructed environments" as one standard (NCCAS, 2014). Although a science lesson may culminate in an explanatory model while an art lesson might end with an artistic creation, teachers and learners in both subject areas can focus on observing nature or human constructions.

Inquiry serves as a center or hub at the heart of both science and the arts (Nichols & Stephens, 2013). The process of inquiry, which is cyclical in both science and the arts, can involve posing a question, gathering data through observations, recording data, and analyzing or organizing data to form or identify patterns. The scientist or artist then examines the results which can lead to more iterations of the inquiry cycle (Nichols & Stephens, 2013). Even though outsiders (i.e., general public) tend to focus almost exclusively on the final product (a piece of artwork, a new scientific discovery), they are misguided when they ignore or undervalue learning that took place during the planning, investigation, and creative process (LaJevic, 2013). In addition, both science and the arts share similar goals of solving problems creatively and exploring and describing the natural world (Poldberg, Trainin, & Andrzejczak, 2013; Nichols & Stephens, 2013). Integrating the arts into science teaching and learning allows students to practice thinking about the world through both scientific and artistic lenses.

Arts Integration Enacted

Integrating the arts into science teaching and learning usually happens in one of four ways. In the *Subservient Style*, AI occurs in order to make the content more interesting. For instance, a Subservient AI lesson might include a student drawing a

picture of the stages of mitosis and meiosis. The Subservient Style allows teachers to cover the necessary content while using a different modalities other than written or verbal. The *Affective Style* of AI is useful when teachers want to set the mood in the classroom. In the Affective Style, students receive the arts but do not interact with or use the arts. For example, students might listen to quiet ocean sounds while studying for a test on waves. The *Social Integration Style* of AI assists with the social functions of a school by allowing time for the students to create art to use in performances or community events. For example, students might make woodcut prints of animals to sell at a holiday art show while participating in a Social Integration Style AI project. Finally, in the *Co-equal, Cognitive Integration Style*, a teacher with an extensive art background, or one who collaborates with art specialists leads the AI lesson. In a complex, multi-day unit, a teacher might work with an art specialist to create a study of Periodic Table superheroes and supervillains that culminates with student creations of cartoon characters based on the characteristics of various chemical elements. Researchers and educators typically advocate for this type of AI experience, However, the Co-equal, Cognitive Integration Style is least often found in the classroom (Bresler, 1995).

3. Method

The purpose of this literature review was to examine previously published research on arts integration into science. The research questions that guided this literature review were:

1. What are the potential benefits of arts integration into science instruction or whole school curricula?
2. What obstacles might impede effective implementation of the arts into science teaching and learning?

This literature review examined the existing research on integrating the arts into science teaching and learning. All articles were published in peer-reviewed journals and focused on arts integration into science classrooms or whole schools in Pre-K through 12th grade. Publications that focused on related topics such as the evaluation of arts integration curricula or research on integrating arts into a single subject area other than science (e.g., math or language arts) were deemed not relevant for this literature review.

Keywords, Databases, and Selection Process

The first literature search was conducted using the ERIC and ProQuest databases with temporal parameters of 1980 to 2015. Choosing ERIC and ProQuest ensured that billions of pages of educational research literature were searched as these two databases are hosted by the two main educational research hosts, EBSCO and ProQuest. The following keywords were used in the searches: arts integration AND science AND education, arts integration AND science AND preschool, and arts integration AND science AND elementary education. The term arts integration, both with and without quotation marks, was used in the search. The keywords arts integration AND science AND education generated 403 articles when arts integration was used and 44 hits resulted from the use of "arts integration". The keywords arts integration AND science AND preschool produced 1,357 results. To obtain more specific results, this original set of articles was further limited by searching for instances when the keywords were found using the filter "anywhere but full text" which reduced the results to 18 additional relevant papers. Using the keywords arts integration AND science AND elementary education produced 99 results. After excluding articles that focused on research outside of the preK-12 spectrum and other non-relevant topics, 53 articles remained from the initial search of the ERIC and ProQuest databases.

Next, we targeted the journals that were most frequently represented in the database results, and we conducted a manual search of these three journals: *Journal for Learning through the Arts*, *Primary Science Review* and *Arts Education Policy Review*. See Table 1. The top five science education ISI indexed journals also were manually searched for studies on arts integration. These journals included *Journal of Research in Science Teaching, Science Education, Studies in Science Education, International Journal of Science Education,* and *Research in Science Education*. Lastly, the authors used a snowballing approach to gather articles that were cited by authors of articles already included in the literature review. A total of 11 additional articles resulted from this second phase of the search process, yielding a total of 64articles for inclusion in the review.

Table 1. *Journal Search Results*

Journal	Number of articles
Journal for Learning Through the Arts	10
Primary Science Review	4
Arts Education Policy Review	4
International Journal of Science Education	3
Early Childhood Education Journal	3
Studies in Art Education	3
Science and Children	2
Mind, Brain, and Education	2
Gifted and Talented International	2
Art Education	2
Creative Education	2
Teaching Artist Journal	2
All other journals (25 titles)	1/journal = 25
Total	**64**

Analysis Methods

All 64 selected articles included in the study were identified as theoretical or empirical. See Table 2. The authors read and summarized empirical articles in a matrix to search for and identify patterns about AI in the selected research. After

identifying the main research results for each paper, we inductively aligned the papers into logical themes based on results of the studies using the constant comparative method (Glaser and Straus, 1967), at times placing articles in more than one theme. For instance, results from a study on a whole-school AI program were coded and placed in the categories of "Teacher Needs", "Learning Gains", and "Creative Thinking". We then organized our review around themes that commonly appeared in AI research studies. A parallel constant comparative method was used to code and place the theoretical articles into themes.

Table 2. *Studies According to Literature Type*

Type of literature	Number
Empirically-based, peer-reviewed journal	36
Theoretically-based, peer-reviewed journal	28
Total	64

4. Result and Discussion

Benefits of AI

Implementation of AI programs has been effective across the PreK-12 continuum (e.g., Winters & Griffin, 2014; Duma & Silverstein, 2014; Snyder, Klos, & Grey-Hawkins, 2014). Research results indicated that AI increased students' science academic performance (e.g., Hendrix, Eick, & Shannon, 2012; Phillips, Gorton, Pinciotti, & Sachdev, 2010; Poldberg et al., 2013), and state test performance (Duma & Silverstein, 2014; Snyder et al., 2014) as well as their use and understanding of science academic vocabulary (Webb & Rule, 2012; Winters & Griffin, 2014).Teachers also perceived several benefits of AI. Teachers who preferred to implement the arts into their teaching believed that arts integration supported and facilitated child development (Ozturk & Erden, 2011). Another study

found that arts integration was especially useful for students who needed a means of expression that was not dependent on a limited vocabulary, such as English Language Learners (e.g., Brouillette & Jennings, 2010, Pruitt, Ingram and Weiss, 2014).

In addition to learning gains, five studies in this literature review demonstrated that integrating the arts can positively influence classroom and school climates (Brouillette & Jennings, 2010; Brown & Sax, 2012; Chemi, 2014; Lynch, 2007; Snyder et al., 2014). The arts can naturally predispose people toward positivity and "generate an emotionally safe environment in which individuals can dare to experiment, learn and deal with complexity" (Chemi, 2014). Snyder and colleagues examined an AI program implemented in a low-performing middle school and found that AI led to a more positive school climate and a decrease in disciplinary suspensions (Synder et al,, 2014). On the classroom level, students in AI classrooms demonstrated more positive emotions, higher abilities to regulate their own emotions, and greater capabilities to understand others' emotions (Brouillette & Jennings, 2010; Brown & Sax, 2012; Lynch 2007).

Results from four studies indicated that AI offers students more opportunities for creative thinking (Cremin, Glauert, Craft, Compton, & Stylianidou, 2015; Duma & Silverstein, 2014; Luftig, 2000; Liu & Lin, 2014). Luftig's study of AI in primary schools found that creative thinking was facilitated by arts infusion (2000). Liu and Lin (2014) discovered that students in AI classes showed more divergent thinking, autonomy, and curiosity about science. Cremin and colleagues (Cremin et al., ,2015) found that preschool students who were enrolled in AI programs asked more questions that drove scientific inquiries, while Duma and Silverstein (2014) found that an AI intervention encouraged students to approach ideas from multiple perspectives.

In addition to offering opportunities for creative thinking, using AI also allowed students to process and demonstrate learning in creative ways using modes

other than writing. Five studies in this literature review offered findings on how AI enabled students to learn in different ways (Flores, 2005; Pruitt et al., 2014; Jakobson & Wickman, 2015; Lynch, 2007; Nelson & Norton-Meier, 2009). Jakobson and Wickman (2015) found that students in AI programs learned in both cognitive and aesthetic manners. Students in AI programs were able to effectively demonstrate their learning through non-written products (Pruitt et al., 2014; Lynch, 2007). Learning through the arts also allowed students to use their minds to process information in different ways, such as through the use of mental maps (Flores, 2005; Nelson & Norton-Meier, 2009).

In addition to students, teachers also benefited from the use of AI. When teachers participated in AI instruction, they often found that the benefits greatly outweighed the extra work required. Bresler (2011), studied arts integration with high school teachers who experienced profound changes in their self-images as teachers after an AI project. Instead of feeling like an isolated teacher alone in the classroom, teachers reported they subsequently perceived themselves as being an integral part of a larger whole. When teachers collaborated with common goals in mind, leaders often emerged as teachers recognized their contributions to the community of learners (Bresler, 2011).

Teachers also reported feeling more camaraderie and confidence in a case study of primary teachers who integrated arts into their science teaching (Iiyambo, 2005). These teachers also explained the pedagogical benefits they received, including the ability to teach more rigorously, and new strategies they used to reach learners (Iiyambo, 2005).

Theoretical articles identified other benefits of AI. For instance, a child's day can sometimes be filled with fragmented learning—a math lesson on addition, a physical education lesson on playing basketball, followed by reading about insects and identifying states on a map. Arts integration can be a step toward

decompartmentalizing learning (Brown, 2007). Thinking of curriculum as discrete and compartmentalized is a disservice for learners, as teachers are preparing them for a very connected, interdependent world (Manner, 2002). In addition, the arts aid children in strengthening control of their large and small muscles through actions such as painting, cutting, and modeling (Fox and Diffily, 2000).

Table 3. *Descriptive Summary of Empirical Studies Reporting Academic Gains*

Study	Sample	Research Question(s)	Intervention	Summary of findings
Brouillette & Jennings (2010)	K-2nd grade students	What were the effects of artist visits and AI on student learning, social-emotional development, and the culture of an elementary school?	Year-long, whole-school puppetry residency	Steady improvement in API (Academic Progress Index)
Duma & Silverstein (2014)	2nd-5th grade students (n=725)	What effect would CETA (Changing Education Through the Arts) program have on school?	CETA-whole school reform model that builds teachers' abilities to use AI as a primary teaching approach across the curriculum	Increase in reading scores on state tests
Hardiman et al. (2014)	5th grade students (n=82)	What are the effects of AI curricula on academic outcomes?	AI instruction in three-week units on astronomy and ecology	Delayed post-test results showed that student in AI intervention retained learning more; students at a basic level showed highest gains

Hendrix et al. (2012)	4th and 5th grade students (n=38)	Is creative drama an effective strategy to increase science conceptual learning when used in addition to inquiry-based science?	Drama-based AI intervention in science class	Pre-/post-tests showed higher gains in AI intervention group
Phillips et al. (2010)	3-4 year olds (n=181)	Does PASELA (Promoting and Supporting Early Literacy through the Arts) improve literacy- and learning-related and school-readiness skills in young children?	PASELA AI program	Small improvements in literacy-, learning-related and school-readiness skills in preschool children
Poldberg et al. (2013)	2nd grade students	How does integrating arts into science teaching and learning stimulate scientific thinking and artistic development while supporting growth in domain specific literacy?	"A New VIEW on Science" AI program	Students demonstrated increased performance across the three content domains
Snyder et al. (2014)	Middle school students	How will AI implementation transform teaching and learning?	Whole-school AI implementation	Increase in student achievement on state assessments

Webb & Rule (2012)	2nd grade students (n=22)	How does allowing for more creativity in a science activity affect student learning of vocabulary and enjoyment of schoolwork?	Transforming lifecycle figures into drawings (intervention), rather than simply labelling (control)	Students in intervention condition learned more vocabulary
Winters and Griffin (2014)	Preschool and 2nd grade students (n=2 case studies)	How does music enhance children's language abilities?	Musical intervention	Increased vocabulary

Obstacles to successful AI

Like many successful pedagogical methods, arts integration is a challenge. "Setting the stage for creative possibilities to thrive (in science education's context) requires a willingness to think differently about what science can mean and a similar openness to expanding the boundaries of what we consider to be science education" (Gershon & Ben-Horin, 2014, p. 6). Identifying opportunities to integrate the arts into science is not always easy for teachers. For example, case studies from primary classrooms in nine European countries showed that teachers often cannot specifically identify opportunities to integrate the arts or be creative in their science instruction (Cremin et al., 2015). Newton & Newton (2010a) studied 16 pre-service primary teachers and found that most teachers believed it was difficult to encourage creative thinking in their students. Some pre-service teachers believed that creativity was not clearly defined while others thought young learners did not have a sufficient science comprehension level to allow for creativity. Newton and Newton also asked 23 experienced primary teachers to read statements such as "In work on Earth, Space, and Gravity the children see the dents that marbles make in a sandpit and then are asked to explain the craters on the Moon" and choose whether the statement offered

children no opportunity (0), a small opportunity (1) a moderate opportunity (2), a good opportunity (3) or a very good opportunity (4) to be scientifically creative (Newton & Newton, 2010b, p. 2003). Results showed notable variation existed between teachers who could identify opportunities for creative thinking and those who could not (Newton & Newton, 2010b).

Time and training were two factors that heavily influenced the effectiveness of arts integration programs. Teachers needed both time to implement integrated lessons in their classrooms and extensive time for training and preparation (e.g., Gullatt, 2008). Without teacher training, integrating creativity in the classroom may amount to a difficult burden for teachers and staff. However, when effective training was provided to teachers before the arts implementation program began, teachers developed positive views of arts integration programs and were able to successfully reach more learners during collaborative learning in the classroom (Duma & Silverstein, 2014).

Teachers who are successful in AI often see themselves in five different roles (Hartle et al., 2014). First, they have creative self-efficacy and are able to see their own creative possibilities because all humans are creative. Some teachers may need an artistic mentor in order to see themselves as creative. Second, teachers must view themselves as researchers who carefully collect data on how their children learn. Third, teachers must be able to act as designers, to use their awareness of concepts such as space and color to engage learners. Fourth, teachers must be able to act as co-constructors rather than directors of learning. A successful AI experience "involves the teacher, learners and work of art or art medium in what is referred to as 'third space'…where connections are made" (Hartle et al., 2015, p.296). Fifth, teachers must act as advocates for the arts by developing relationships with artists and other community partners. Teachers are able to use these five roles to increase learning and development in children

Several theoretical misunderstandings also serve as obstacles to successful AI. Often, direct instruction and arts integration are seen as a false dichotomy (Aprill, 2010). Our lack of funding for public education creates a mindset of scarcity in which content areas compete with other content areas for funding, time, and importance (Aprill, 2010). The emphasis on standardized test scores (mostly related to reading and math) causes other subjects to be seen as less important. In order for arts integration to be regarded as equally important, it "needs to be properly conceived of as part of the whole culture of a school" (Aprill, 2010, p. 7).

Teacher characteristics that support successful AI programs

In addition to studies reporting benefits and obstacles or AI, several articles discussed why teacher beliefs are important to successful AI. Once teachers have learned to identify opportunities for creative thinking they must consider best practices for encouraging creative thinking. In Liu and Lin's (2014) investigation into primary science teachers' beliefs about scientific creativity, they identified three different points around which the teachers' beliefs centered. First, most of the teachers recognized that they must emphasize autonomous and active learning. Second, teachers believed that inquiry-based learning must be prevalent because students can only be creative when they are given the ability to solve a problem. Finally, primary science teachers believed that diverse, meaningful and enjoyable learning activities must be emphasized when designing creative learning environments (Liu & Lin, 2014).

Specific teacher characteristics are important when planning arts integration. For instance, experienced teachers were more likely to integrate arts into their curriculum than teachers with fewer years of teaching experience (Ozturk & Erden, 2011). Another study found that teachers who were possessed tenacity, flexibility, and perseverance also reported feeling successful in an AI program (Bresler, 2011; Strand, 2006).

In addition, successful AI teachers must be willing to adjust their mindset about teaching and learning science. For instance, Chemi (2014) found when teachers and artists collaborated to integrate the arts in pre-K through middle school, artists felt that long periods of creativity were requisite and fundamental, whereas teachers always tried to optimize their time, making the creative process more linear. Teachers who have been conditioned to move quickly from one activity to the other, filling every minute with productive activity, must recognize that lengthy creative processes are also valuable and effective for learning. The idea that "viewing a painting for a few seconds [means] being able to relate to the artwork only on a shallow basis [while] artfulness is about enjoying the details, questioning, and engaging with the work of art, comparing it to other works or one's own personal life" (Chemi, 2014, p.381) can be successfully applied to science. In summary, teachers who are able to slow down and engage with science through arts integration can attain great results with young learners.

Adjusting one's mindset is not a simple task. Teachers need substantial guidance, often offered through carefully structured professional development and administrative support, before and during an arts integration experience. After 160 primary teachers participated in the Kennedy Center for the Performing Arts' AI professional development program (Changing Education Through the Arts), they reported feeling empowered and valuing arts integration for young learners (Duma & Silverstein, 2014).

5. Conclusion and Remark

This review sought to examine and synthesize the research published on integrating arts into science teaching and learning. The authors found 64 relevant studies on AI and were able to identify central findings that were seen across multiple studies. The literature review indicated that although empirical studies on this topic exist, there is a need more research on the benefits, obstacles, and best practices of integrating the arts into science learning. Authors of theoretical publications agree that science and the arts share many analogous characteristics, processes, and goals. However, a consistent definition of creativity and AI is lacking in the literature, and would be useful in future research.

Another worthwhile area of future research is the power of positive emotions generated by AI in economically disadvantaged children, which can lead to more science interest and self-efficacy. Children in an AI program at a low-income preschool program in Philadelphia experienced more happiness, pride, and socio-emotional readiness to learn (Brown & Sax, 2013). Future research in AI could lead to an increase in equal opportunities for low-income students.

The research included in this literature review demonstrated that integrating arts into science teaching and learning is beneficial because it enables students such as English Language Learners to create meaning in a way that de-emphasizes verbal and written skills. The results of this literature review showed integrating arts into science was beneficial for teachers as well as learners. When teachers were able to participate in quality training before AI and supportive collaboration during AI, both students and teachers succeeded in new arenas. According to the empirical studies detailed in this literature review, integrating arts into science teaching and learning can help students ranging from preschool to high school become more scientifically literate and increase interest in science education.

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DESIGN-BASED RESEARCH IN MATHEMATICS EDUCATION[1]

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Abstract

This paper sketches the approach of design-based research in mathematics education with results of two innovation-oriented projects. The projects investigated how students can be involved in the development of mathematical concepts and skills by using design tools related to guided reinvention and emergent modelling. Both studies combine design-based research with a prominent role for the hypothetical learning trajectory as a research instrument in the three phases of design research (design, teaching experiment, retrospective analysis). Each of the phases of the research cycles is addressed: the preliminary phase in which a hypothetical learning trajectory and instructional activities are designed, the teaching experiment phase and the phase of the retrospective analysis. We conclude with a reflection on design-based research as an approach to study innovative teaching approaches that offers researchers to take into account contextual factors and that create opportunities for others to adapt the results to their research or teaching practice.

1. Introduction

One of the salient characteristics of mathematics is the use of symbols. This is not merely an external characteristic, as mathematical symbols are an integral part of mathematics. It is hard to think about measurement without the use of unit measures, or to understand calculus without pointing to rates of change in graphs. This intertwinement of meaning and visual representations poses a problem for mathematics education. Experts - like teachers and instructional designers - tend to

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see these symbols as carriers of meaning. For them, symbols and graphs are transparent; they can "see the mathematics through it", so to speak. The students, however, often do not have the necessary mathematical background to interpret those symbolic representations in that manner. As a consequence, teachers will have to explain to the students what there is to see, and how to reason with those symbolic representations. This, Cobb et al. (1992) point out, leads to proceduralising and algorithmetising and the loss of meaning - or to, as van Oers (2000) calls it, "pseudo mathematics".

To find a way out of this dilemma, one may consider the history of mathematics to investigate how meaning and symbols emerged. It turns out that mathematical symbols did not arrive ready-made, with full-fletched meaning. Instead, one can discern a reflexive process in which symbolising and the development of meaning co-evolve (Meira, 1995). Symbolising, here, refers to inventing and using a series of symbols. In relation to this, Latour (1990) and others (e.g. Roth & McGinn, 1998) speak of a "cascade of inscriptions". This notion of a cascade of inscriptions has its counterpart in semiotic concepts as "chain of signification" (Walkerdine, 1988; Whitson, 1997).

The current challenge for mathematics educators is to develop mathematics education that is in line with these dynamic conceptions of symbolising and development of meaning. The task of researchers is to shed light on the key elements of this type of mathematics education. In order to investigate the possibilities of such a new and innovative approach to mathematics education is that the instructional materials are not available yet. Moreover, research into the topic requires a process in which the design of instructional activities and teaching experiments are intertwined with the development of instructional theories for specific topics in mathematics. In this paper we will discuss two projects with the aim to illustrate the characteristics of such a design-based research approach that ensure a systematic approach and that offer the

opportunities to generalize findings over specific contexts. For each project, this implies a dual goal:

- on the one hand, answering the question on how to develop and investigate an innovative teaching and learning process, and
- on the other hand, investigating the reflexive relations between symbol use and the development of meaning.

Given these goals, we chose what is called design-based research or developmental research (Gravemeijer, 1994, 1998), as our research method. Following Brown (1992), Cobb, Confrey, diSessa, Lehrer and Schauble (2003) refer to this type of research as design experiments, which they elucidate in the following manner:

> Prototypically, design experiments entail both "engineering" particular forms of learning and systematically studying those forms of learning within the context defined by the means of supporting them. This designed context is subject to test and revision, and successive iterations that result play a role similar to that of systematic variation in experiment.
> (Cobb, Confrey, diSessa, Lehrer & Schauble, 2003, p. 9)

In this description, the two central aspects of this paper come to the fore in (a) the design of means of support for particular forms of learning, and (b) the study of those forms of learning. In each of the two research projects under discussion, the backbone of the design is formed by the design, development and revision of a hypothetical learning trajectory.

2. Design-based Research

The design-based research approach has a cyclic character in which thought experiments and teaching experiments alternate. A cycle consists of three phases: the

preliminary design phase, the teaching experiment phase, and the phase of retrospective analysis. A second characteristic of design-based research is the importance of the development of a learning trajectory that is made tangible in instructional activities. The design of instructional activities is more than a necessity for carrying out teaching experiments. The design process forces the researcher to make explicit choices, hypotheses and expectations that otherwise might have remained implicit. The development of the design also indicates how the emphasis within the theoretical development may shift and how the researcher's insights and hypotheses develop. As Edelson argues, design is a meaningful part of the research methodology:

(...) design research explicitly exploits the design process as an opportunity to advance the researchers understanding of teaching, learning, and educational systems. Design research may still incorporate the same types of outcome-based evaluation that characterise traditional theory testing, however, it recognizes design as an important approach to research in its own right. (Edelson, 2002, p.107)

This is particularly the case when the theoretical framework involved is under construction.

2.1. Hypothetical learning trajectory

Within each macro level research cycle, we distinguish three phases: the preliminary design phase, the teaching experiment phase, and the phase of retrospective analysis. The first phase of preliminary design includes two related parts, the development of a Hypothetical Learning Trajectory (HLT) and the design of instructional activities. In the next four sections we elaborate on each of these (partial) phases.

The first phase of each research cycle includes the development of a "Hypothetical learning trajectory" – a term that is taken from Simon (1995). Originally, Simon used the HLT for designing and planning short teaching cycles of one or two lessons. In

our study, however, we developed HLTs for teaching experiments that lasted for sequences varying from 8 to 20 lessons. As a consequence, the HLT comes close to the concept of a local instruction theory (Gravemeijer, 1994). A second difference with Simon's approach is that Simon took a teacher's perspective, whereas we take a researcher's perspective.

The development of an HLT involves the choice or design of instructional activities in relation to the assessment of the starting level of understanding, the formulation of the end goal and the conjectured mental activities of the students. Essential in Simon's notion of a HLT is that it is hypothetical; when the instructional activities are acted out, the teacher – or researcher in our case – will be looking for evidence of whether these conjectures can be verified, or should be rejected.

For the design of the student activities, their motivation and the estimation of their mental effects, the designer makes full use of his domain specific knowledge, his repertoire of activities and representations, his teaching experience, and his view on the teaching and learning of the topic. After a field test by means of a teaching experiment, the HLT will usually be adapted and changed. These changes, based on the experiences in the classroom, start a new round through the mathematical teaching cycle, and, in terms of the design research approach, the next research cycle.

The concept of the HLT may seem to suggest that all students follow the same learning trajectory at the same speed. This is not how the HLT should be understood. Rather than a rigid structure, the HLT represents a learning route that is broader than one single track and has a particular bandwidth.

With an emphasis on the mental activities of the students and on the motivation of the expected results by the designer, the HLT concept is an adequate research instrument for monitoring the development of the designed instructional activities and the

accompanying hypotheses. It provides a means of capturing the researcher's thinking and helps in getting from problem analysis to design solutions.

2.2. Design of instructional activities

The preliminary design phase of the design research cycles includes the development of the HLT and the instructional activities. The expectations of the students' mental activities established in the HLT are elaborated into specific key activities in the instructional materials.

The design of instructional activities in these studies included the development of student text booklets and teacher guides. While designing these materials, choices and intentions were captured and motivated, to inform the teacher and to keep track of the development of the designer's insights. When the materials were about to be finalised, these aims and expectations were described at the task level. Key items, that embodied the main phases in the HLT, were identified. These items reflected the relevant aspects of the intended learning process and were based on the conceptual analysis of the topic. The identification of key items guided observations and prepared for the retrospective data analysis. Finally, teacher guides as well as observation instructions were written, to make intentions and expectations clear to teachers and observers. During the design phase, products were presented to colleagues, teachers and observers. This led to feedback that forced the researcher to become explicit about goals and aims, and that provided opportunities for improving all the materials.

While designing instructional activities, the key question is what meaningful problems may foster students' cognitive development according to the goals of the HLT. Three design principles guided the design process: guided reinvention, didactical phenomenology and emergent models.

The design principle of *guided reinvention* involves reconstructing the natural way of developing a mathematical concept from a given problem situation. A method for this can be to try to think how you would approach a problem situation if it were new to you. In practice, this is not always easy to do, because as a domain expert it is hard to think as if you were a freshman. The history of the domain can be informative on specific difficulties concerning concept development (e.g. Gravemeijer & Doorman, 1999).

The second design principle, *didactical phenomenology*, was developed by Freudenthal (Freudenthal, 1983). Didactical phenomenology aims at confronting the students with phenomena that "beg to be organised" by means of mathematical structures. In that way, students are invited to build up mathematical concepts. Meaningful contexts, from real life or "experientially real" in another way, are sources for generating such phenomena (de Lange, Burrill, Romberg, & van Reeuwijk, 1993; Treffers, 1987). The question, therefore, is to find meaningful problem contexts that may foster the development of the targeted mathematical objects. The context should be perceived as natural and meaningful, and offer an orientation basis for mathematisation.

The last remark leads to the third design principle, the use of *emergent models* (Gravemeijer e.a., 2000; Van den Heuvel-Panhuizen, 2003). In the design phase we try to find problem situations that lead to models that initially represent the concrete problem situation, but in the meantime have the potential to develop into general models for an abstract world of mathematical objects and relations.

2.3. Teaching experiments

The second phase of the design research cycle is the phase of the teaching experiment, in which the prior expectations embedded in the HLT and the instructional activities are confronted with classroom reality. The term "teaching experiment" is bor-

rowed from Steffe (Steffe & Thompson, 2000). The word "experiment" is not referring to an experimental group - control group design. In this section we explain how the teaching experiments were carried out; in particular, we pay attention to the data sampling techniques used during the teaching experiments.

The research questions share a process character: they concern the development of understanding of mathematical concepts. Therefore, we focussed on data that reflected the learning process and provided insight into the thinking of the students. The main sources of data were observations of student behaviour and interviews with students. The observations took place on three levels: classroom level, group level and individual level. Observations at classroom level concerned classroom discussions, explanations and demonstrations that were audio and video taped. These plenary observations were completed by written data from students, such as handed in tasks and notebooks.

Observations at group level took place while the students were working on the instructional activities in pairs or small groups. Short interviews were held with pairs of students. In addition to this, the observers made field notes.

The lessons were evaluated with the teachers. In particular, the organisation of the next lesson and the content of the plenary parts were discussed. Also, decisions were taken about skipping (parts of) tasks because of time pressure. Such decisions were written down in the teaching experiment logbook.

2.4. Retrospective analysis
The third phase of a design research cycle is the phase of retrospective analysis. It includes data analysis, reflection on the findings and the formulation of the feed-forward for the next research cycle.

The first step of the retrospective analysis concerned *elaborating on the data*. A selection from video and audiotapes was made by event sampling. Criteria for the selection were the relevance of the fragment for the research questions and for the HLT of the teaching experiment in particular. Data concerning key items was always selected and these selections were transcribed verbatim. The written work from the students was surveyed and analysed, especially the work on key items, tests and hand-in tasks. Results were summarised in partial analyses. This phase of the analysis consisted of *working through the protocols* with an open approach that was inspired by the constant comparative method (Glaser & Strauss, 1967; Strauss & Corbin, 1988). Remarkable events or trends were noted as conjectures and were confronted with the expectations based on the HLT and the instructional activities.

The second phase of analysis concerned *looking for trends* by means of sorting events and analysing patterns. The findings were summarised illustrated by prototypical observations. These conjectures were tested by surveying the data to find counterexamples or other interpretations, and by data triangulation: we analysed the other data sources, and in particular the written student material, to find instances that confirmed or rejected the conjectures. Analysis of the written materials often evoked a reconsideration of the protocols. Analysis was continued in this way until saturation, which meant that no new elements were added to the analysis and no conclusions were subject to change.

The third phase in analysing the data was the *interpretation of the findings* and the comparison with the preliminary expectations of the HLT. Also, explanations for the differences between expectations and findings were developed. These conclusions and interpretations functioned as feed-forward for the formulation of new hypotheses for the next cycle in the research.

3. An exemplary case: the basic principles of the mathematics of change[2]

Background and design of HLT

The aim of this project is to find out how students can learn the basic principles of calculus and kinematics by modelling motion. Nowadays, graphs are used in calculus and kinematics education as representations for describing change of velocity or distance travelled during a time interval. Students are expected to give meaning to the relation between distance travelled and velocity through characteristics of these graphs such as area and slope. The use of such instructional materials is based on a representational view (Cobb et al., 1992), which assumes that instructional materials can represent scientific knowledge, and that scientific concepts can be made accessible without fully taking into account the limitations of the knowledgebase of the students into which they have to be integrated.

Cobb et al. oppose this view. In line with their reasoning, we claim that symbolisations and knowledge of motion can co-evolve in a learning process. Theories on symbolising give rise to heuristics for designing a learning route within which the mathematical and scientific knowledge emerges from the activity of the students (Gravemeijer et al. 2000). In this route, the creation, use and adaptation of various graphical representations are interwoven with learners' activities in a series of science-practices, from modelling discrete measurements to reasoning with continuous models of motion. Our focus is on students' contributions during these practices, and how we can built upon their contributions towards the intended attainment targets. Consequently, for understanding their reasoning we use the design-based research approach of planning and testing the envisioned trajectory in classroom situations for investigating *how* a trajectory works and can be improved, instead of trying to decide *whether* it works.

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[2] This case is based upon: Doorman & Gravemeijer (2009).

The learning route – inspired by the domain history - is tried out and revised during teaching experiments in three tenth-grade classes. We collected data by video and audio taping whole class discussions and group work. The videotapes were used to analyse students' discourses and students' written materials with respect to the conjectured teaching and learning process.

Teaching experiment phase

We illustrate the change in how students think and talk about a model with the following episode. The trajectory starts with questions about a weather forecast. The teacher discusses the change of position of a hurricane with students: when will it reach land? This problem is posed as a leading question throughout the unit as a context for the need of grasping change. After the emergence of time series as useful tools for describing change of position, students work with situations that are described by stroboscopic photographs. The idea is that students come up with measurements of displacements, and that it makes sense to display them graphically for finding and extrapolating patterns. Two types of discrete graphs are discussed: graphs of displacements (distances between successive positions) and graphs of the total distance travelled. Note that discrete graphs are not introduced as an arbitrary symbol system, but emerge as models of discrete approximations of a motion, that link up with prior activities and students' experiences. By using the computer program Flash students are able to investigate many situations. During these activities their attention shifts from describing specific situations to properties of these discrete graphs and the relation with kinematical concepts.

Our findings confirm such a change in reasoning. In the beginning students refer to distances between successive positions. After a while they reason using the global shapes and properties of graphs and motion. An example of such reasoning concerns an exercise about a zebra that is running at constant speed and a cheetah that starts hunting the zebra. The question is whether the cheetah will catch up with the zebra. In

the graphs the successive measurements of the zebra and the cheetah are displayed. The following discussion takes place between an observer and two students (Rob and Anna).
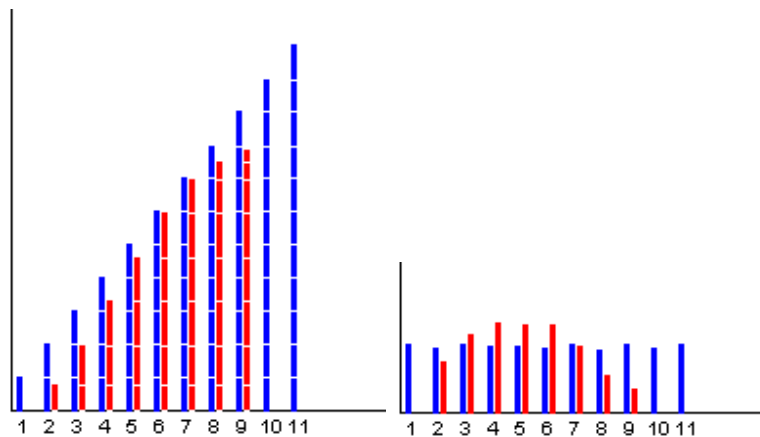

Figure 1. Distance-travelled and displacement graphs in Flash.

Observer: Oh yes. So why did you choose the one for the total distance [left graph in Fig. 1]?

Rob: Because it's the total distance that they cover and then you can-

Anna: Then you can see if they catch up with each other.

Observer: And can't you see that in the other [right graph]? There you can also see that the red [grey] catches up with blue [dark grey]?

Rob: Yes, but -

Anna: Yes, but that's at one moment. That only means that it's going faster at that moment but not that it'll catch up with the zebra.
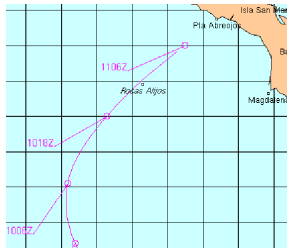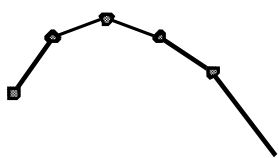
Retrospective analysis

A difference between the displacements graph and the distance-travelled graph is the difference between the interpretations of the horizontal (time) axis. A value in the distance-travelled graph represents a distance from the start until the corresponding

time, while a value in the displacements graph represents a distance in the corresponding time interval. Anna's last observation is an important step in the process of building the model of a velocity-time graph (and everything that comes with it).

The qualitative analyses show that during the practices students re-invent and develop graphical symbolisations, as well as the language and the scientific concepts that come with them. However, these inventions only became explicit after interventions by an observer or by the teacher. Additionally, we found that the teacher had a crucial role during the classroom discussions. It was not always easy to organise the discussions in line with the intended process. Sometimes the teacher reacted to students' contributions in terms of the inscriptions or concepts aimed at. In those cases students awaited further explanation. The discussions appeared to be especially productive when the teacher organised classroom discussions about students' contributions in such a way that the students themselves posed the problems that had to be solved, and reflected on their answers. In a second teaching experiment we arranged a setting where the teacher had more information about the possible contributions of the students and the way in which they could be organised. Additionally, we designed activities for classroom discussions. The HLT for the second teaching experiment is summarized in Figure 2. This summary shows the development of the tools that students used in their reasoning about change and how the transparency of the tools, the image that students have, is created by previous activities with preliminary representations. Furthermore, the figure illustrates the interaction between the development of these tools and the mathematical concepts and skills.

In this approach the construction and interpretation of graphs and the scientific concepts are rooted in the activities of the students through emerging models. This ensures that the mathematical and physical concepts aimed at are firmly rooted in students' understanding of everyday phenomena. On the basis of our findings we

conclude that classroom discussions where students discuss their solutions and pose new problems to be solved, are essential for a learning process during which symbolisations and knowledge of motion co-evolve.

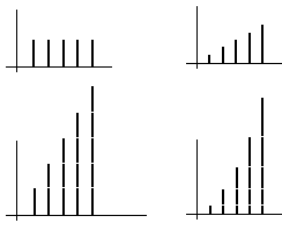| Tool	Imagery	Activity	Concepts
   time series (e.g. satellite photos & stroboscopic pictures)	real world representations signify real world situations	predicting motion (e.g. in the context of weather predictions)	displacements in equal time intervals as an aid for describing and predicting change
		should result in a feeling that the ability to predict motion with discrete data is an important issue	
trace graphs of successive locations 	signifies a series of successive displacements in equal time intervals	compare, look for patterns in displacements and make predictions by extrapolating these patterns	displacements as a measure of speed, of changing positions, but difficult to extrapolate
		resulting in a willingness to find other ways to display displacements for viewing and extrapolating patterns in them	

discrete 2-dim graphs	signifies patterns in displacements of trace graphs (and cumulative)	compare patterns and use graphs for reasoning and making predictions about motion (also at certain moments: interpolate graphs) refine your measurements for a better prediction: displacements decrease	displacements depicting patterns in motion; linear line of summit in graph of displacements or graph of distances traveled; problems with predictions of instantaneous velocity
		should result in the need to know more about the relation between sums and differences, and in the need to know how to determine and depict velocity	

Figure 2: The HLT for the second teaching experiment

4. An exemplary case: Indonesian traditional games and the need for a standard measuring unit[3]

Background and design of HLT

In many countries, measurement is taught to young children as an isolated concept at a formal level. Teaching and learning linear measurement mostly focuses on the use of the ruler as an instrumental procedure. One possible effect of this approach is that students tend to perform a measurement as an instrumental procedure, without a consistent conceptual basis. The lack of a conceptual basis also plays a role in the inability of most students in grades 2 to 4 to correctly measure the length of an object that is not aligned with the first stripe of the ruler (Kamii & Clark, 1997; Kenney & Kouba in Van de Walle, 2005; and Lehrer et al, 2003).

In Indonesia, there are traditional games that, without any doubt, are related to measurement. Games like "gundu" (playing marble) and "benthik" embody linear measurement concepts including comparing, estimating and measuring distances. It is conjectured that the game playing provides a natural context for experience-based activities in which measurement concepts and skills can become meaningful and support further teaching and learning. Consequently, the main objective of this case was to contribute to a local instruction theory for the teaching and learning of linear measurement for Indonesian grade 2 students.. The students' situational reasoning within the game can be used as a source for the teaching and learning process to elicit the concepts of linear measurement. In addition, teachers can foster the learning of linear measurement by building on students' reasoning by referring to situations within the game and generalizing to other measuring practices and tools.

In the experience-based activities we used two Indonesian games, gundu and benthik. These Indonesian traditional games provide a natural situation for linear measurement in which students performed comparison and measurement of length in determining the winner of the games. The focus in the first Indonesian traditional game – gundu – is a comparison of lengths (the rules of the games can be found in the appendix). The winner of the game is the player whose marble is the nearest to a given circle, therefore students need comparison to determine the winner. Direct and indirect comparison activities are important, because they do not require dealing with numbers and units, and therefore direct students to focus on understanding length as the measurable attribute and the basic processes of measuring. We conjectured that students would use three kinds of benchmarks to compare the distances, namely: mental benchmark (i.e. mental estimation), body parts, and non-body parts such as pencil, stick, etc. In the second game – benthik –he winner is the team that obtains the

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[3] This case is based upon: Wijaya, Doorman & Keijzer (2011).

bigger accumulative distances. This game changed focus from the concept of comparison of length to measurement of length.

A class discussion was always conducted after each game playing to elicit issues in measurement and to support and develop students' acquisition of the basic concepts of linear measurement. The purpose of the class discussion was not merely communicating some sensible idea or strategy, but also encouraging all students to share, discuss and develop their way of reasoning. Therefore, these class discussions also aimed to develop interactivity as an accepted norm in the classroom.

The experience-based measurement activities as the preliminaries of the instructional sequence aimed at providing a situational grounding in which the Indonesian traditional games provide and activate situational knowledge and strategies of linear measurement such as iterating hand spans and pencils to cover the distances. The class discussion after the game playing aimed to develop the situational level – in which students used their own hand spans to determine the winner – to the referential level when students started to consider a need to use a "common measurement unit" for fairness of the game. As the final activity, the formal measurement activities focused on the concept of a "standard measuring unit" and using a "standard measuring tool" (see Figure 3).
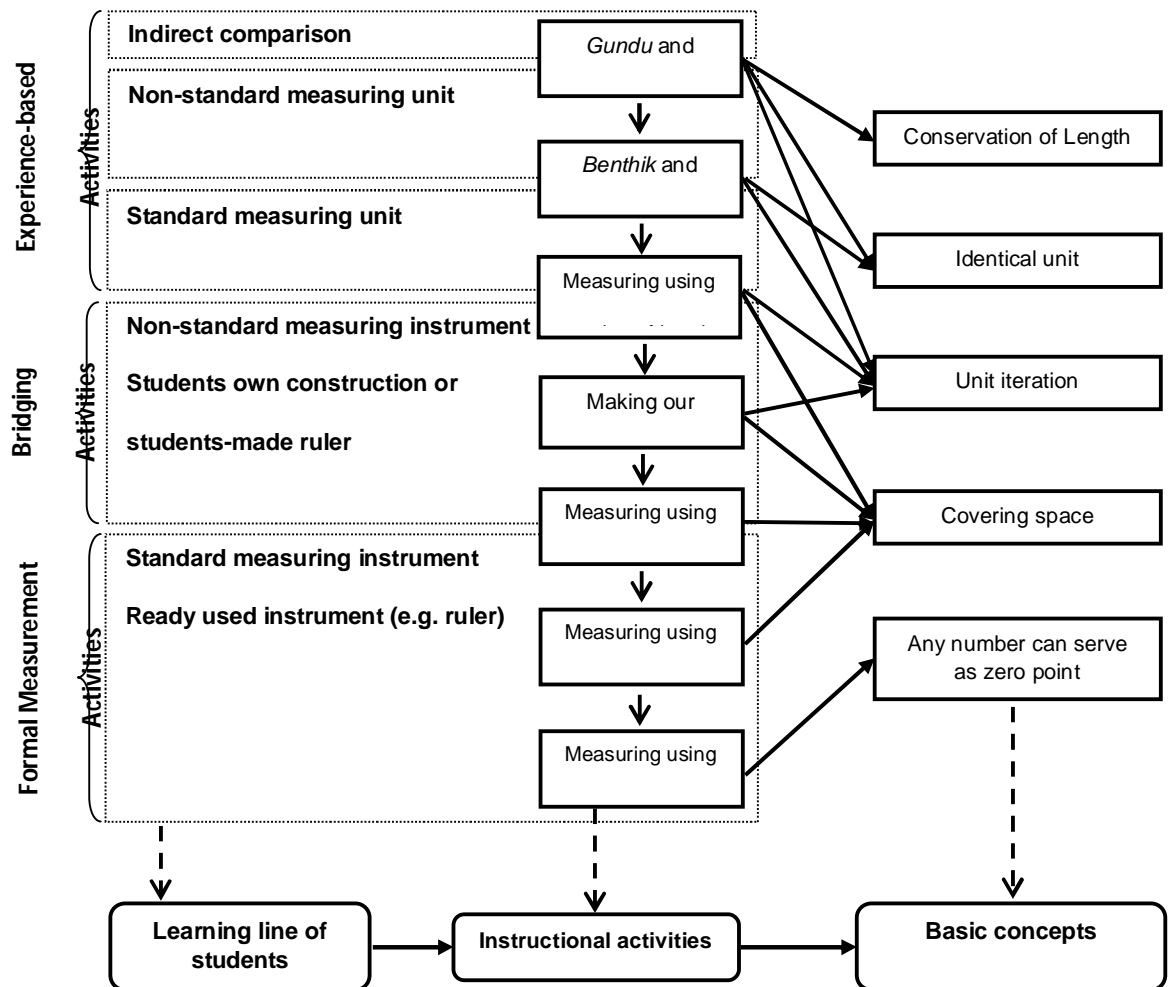
Figure 3. The main framework of experience-based activities for learning linear measurement

Teaching experiment phase

During the game playing, students started to use "third objects" as their measuring units and also started to realize that they needed to iterate the unit when the measured distances were longer than the measuring unit. At the beginning of playing gundu, students still used body parts (i.e. handspans and feet) and pencil to compare the distances. But in the last 15 minutes of playing, students started to think about other

strategies when there was a conflict in which two marbles seemed to have the same distance to the circle, namely 3 spans in length. In fact, the distances of these marbles to the circle were different (i.e. about   and   spans) but both students adapted their last span to have a complete or integer span.

This fairness conflict stimulated students to consider a need for precision and, furthermore, to come up with an idea of a standard measuring unit. This 'need' or 'motive' for improving their measurement practice emerged during the playing. Finally, the students were able to determine the nearest marble when they used a piece of chalk to compare the distances from each marble to the circle. In this situation, the students started to consider that the choice of the unit size determines the precision of the measure.

The students' linear measurement experience from playing the game was combined with the teacher's story to elicit the basic concepts of linear measurement. The advantage of the fairness conflict in determining the winner within the situation of game playing was also shown in the class discussion. The fairness conflict could stimulate students to realize the need for a standard measuring unit because of the shared game playing experiences and intrinsic motivation to be fair. The following vignette illustrates how the fairness conflict plays this key role:

> Haya :   The game is not fair if there are many students measuring the distances because the different size of steps will give different result (of measurement)
>
> Teacher :   So … can we use different steps to measure the distances in our game?
>
> Students: No it is not because it is not fair
>
> Teacher :   What should we do?

> Haya :   In a game, we will have a fair game if there is only one person who measures the distances, because the different size of steps will give a different result (of measurement)

The game playing as situational level provided for an experience for students that supported them to move to the referential level. Haya proposed a solution to have a fair game by referring to a specific situation in the game playing. The phrase "…the different size of steps will give a different result" proposed by Haya illustrates that Haya became to understand the need for precision (i.e. the relation between the size of a measuring unit and the result of the measurement). Next, the teacher posed the problem about "different steps" to stimulate students to elicit the concept of a standard measuring unit. The question of the teacher and the word fair encourage Haya to come up with a standardization of the measuring unit, although she still used one person's body part as measuring unit. Haya also shows how she started to move from the referential level to the general level when she tried to generalize the solution that was indicated by the phrase "In a game…".

In the second traditional game, benthik, most students started to use a stick instead of handspans as the measuring unit. In this activity, iterating sticks became the model-of the activity of iterating hand spans. The students' understanding of a standard measuring unit was still developed in the class discussion following the game of benthik. In the class discussion, iterating sticks was also used to foster the idea of using a standard measuring unit. Therefore, the stick became the model-for reasoning about characteristics of measurement and measuring instruments.

Retrospective analysis

In summary we point on the importance of the fairness conflict during these teaching experiments. The fairness conflict seemed to contribute to stimulating students to conceive the idea of a standard measuring unit. However, student achievement at this stage was still at an informal knowledge. Consequently, the next important step in the

instructional sequence was providing "bridging" activities to develop students' informal knowledge into more formal knowledge of linear measurement. The use of strings of beads is proposed to shift reasoning from iterating sticks to using a ruler.

This research aimed to contribute to formulating and developing a local instruction theory for teaching and learning of linear measurement in grade 2 of Indonesian elementary school. The local instruction theory with respect to the sequence of experience-based activities and the intended concept development for the teaching and learning of linear measurement is summarized in the local instruction theory (Figure 4). This summary shows the interaction between the development of the tools that were used and the acquisition of the mathematical concepts.

Activity	Tool	Imagery	Practice	Concept
Indonesian traditional games: playing *gundu*	Hand span, feet, marble		Indirect comparison	Conservation of length Emergence of a benchmark for indirect comparison
			The activity of iterating the benchmarks of comparison should become the focus for the introduction to measurement.	
Indonesian traditional games: playing *benthik*	Hand span, feet, stick	Signifies that the "third object" in comparison become the measuring unit in measurement	Playing *benthik* provides an opportunity to develop the use of "a third object" as a benchmark for indirect comparison, which becomes a measuring unit	
			Measuring as the development of indirect comparison	Identical unit and unit iteration
			The fairness conflict in the game could lead to the need for a standard measuring unit	

Measuring using strings of beads	Strings of beads	Signifies the iteration of measuring unit, such as hand span, feet and marbles	Measuring and reasoning about activity of iterating and counting a measuring unit. A beginning of using standard measuring unit.	Standard measuring unit for the fairness and precision of measurement
			The use of strings of beads should shift the focus of learning process from measuring units to measuring instruments	

Figure 4. The final HLT of Indonesian games in teaching measurement

5. Conclusions

The two case studies both tried to create innovative approaches for topics in mathematics education. The focus on *symbolising* proved viable. The use of semiotic theories turned out useful for analysing the relationship between symbolising and development of meaning. We assume on the basis of these projects and prior research that a carefully designed trajectory of symbol and meaning development is necessary to support the learning of mathematics. In that process, students need to get opportunities for their own constructions and reflection on them. Realistic contexts proved important in that.

With respect to the methodology of design-based research, we consider the Hypothetical Learning Trajectory a useful instrument in all phases of design research. During the design phase it is the theoretically grounded vision of the learning process, which is specified for concrete instructional activities. During the teaching experiments, the HLT offers a framework for decisions during the teaching experiment and guides observations and data collections. In the retrospective analysis

phase, the HLT serves as a guideline for data selection and offered conjectures that could be tested during the analysis. The final HLT is a reconstruction of a sequence of concepts, tools and instructional activities, which constitute the effective elements of a learning trajectory. In this manner, the result is a well-considered and empirically grounded local instruction theory. The HLT, together with a description of the cyclic process of design and research, enables others to retrace the learning process of the research team. Understanding the how and why of the specified steps makes it possible to let that learning process become your own and to adapt findings to your own context.

With these two examples we illustrated design-based research as a systematic approach for innovation-oriented studies. The close connections between design and theory development offer teachers and researchers opportunities to translate the results to their own teaching or researching practice.

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THE EMPLOYMENT OF THE TECHNOLOGICAL INNOVATIONS IN THE EDUCATIONAL PROCESS

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Abstract

Teachers are the cornerstone in the educational process. Employing the technological innovations does not mean minimizing the importance of the teacher's role as some may imagine. The employment of technology in the educational process is considered one of the most important and contemporary topics. The aim of this paper is to develop skills of the employment of technological innovations for preparatory stage teachers. This research contributes to the effective employment of the technological innovations in the preparation and explanation of the educational lessons. Teachers' correct usage of the technological innovations will enhance the process of education. Besides, the development of the skills of employment of technological innovations of teachers may overcome difficulties that face preparatory stage teachers in dealing with technological innovations in the educational process. Finally, it provides a training program of the skills of employment of technological innovations of teachers.

1. Introduction

Teachers are the cornerstone in the educational process. Any change or development in the educational process cannot be done without developing teachers' performances through integrated training, i.e., academic and vocational and cultural. There is also a crucial need for developing teachers' educational and technological ability to interact with the requirements of the specialization and the latest developments in the technical era.

Employing the technological innovations does not mean minimizing the importance of the teacher's role as some may imagine. Rather, it adds a new aspect to this role

which should vary to cope with shifts in the educational goals, i.e. , from knowledge transition to basic skills development and self-learning promotion.

The employment of technology in the educational process is considered one of the most important and contemporary topics. Nowadays, the ability of youth to face challenges and demands of change creatively defines nations. In turn, employing technological innovations in education allow teachers to present the academic content in a more efficient and dynamic way. It also helps teachers to provide better educational services and guidance to their students. It saves time for teachers to discover students' talents and points of weakness. In addition, it promotes students' mental skills and increases their systematic and abstract thinking. Accordingly, they become more aware of their ways of thinking and learning.

Ali Abdel Moneim indicated that "applying technological innovations in teacher's preparation programs has become an urgent need justified by evidence when considering the nature of the age that we live in, and requirements of education. Technological innovations developed clear imprints on the education system in general, and teacher's preparation programs in specific as a power, which is difficult to stop, affects positively or negatively on aspects of the educational process. "

The employment of technological innovations must be linked to problems of education. Technological innovations should not be applied for technological dazzling. There are many problems facing the processes of teaching and learning, which we should work to solve:

1. Individual differences.
2. Suitable learning time.
3. Learning speed rate.
4. Motivation.
5. Psychosocial state
6. Correcting and developing performance (for teacher and learner).

There are several novel models in the field of technology, both in the field of technological devices and in the field of developed scientific materials and programs. These technological innovations are computer, Internet, Email, Internet search engines, instant messaging, file transferring over the Internet. They also include multimedia, video conferencing, service provided by the internet through direct communication between users using sound and image together, educational Satellite, e-books, smart board. The smart board is considered one of important technological innovations for the educational process, through which technological innovations and skills could be applied. The smart board has a great importance in educational situations, and it also has many positives for students and teachers as follows:

- Allowing control of graphics, images and writings in terms of display size for easy understanding or reading.

- Easiness to use if teachers have been trained well to use it.

- Cleanliness; there is no need to clean materials or remove dust of chalk; regular way may hurt the teacher and the student health.

- Helping teacher to identify and highlight the main ideas simplifying them, so that addresses one and clear target for each slide show.

- Easiness to use with other teaching aids; they are combining fixed and dynamic sound image.

- Encouraging the teacher to use the most educational media with visual, motor and auditory entrances with ease through the presentation of pictures or video or sounds.

- Cutting the monotony of educational situations hence the role of teacher is producing information.

- Saving time and effort and energies of teacher. Smart board provides less effort and shorter time.

- Clarity and contrast of writings which help to improve the learning process and the degree of perfection.   .

- Attracting the attention of students, so it helps to comprehend the lesson better.

- Helping to accommodate student's difficult and complex concepts which need a lot of time to learning.

- Helping to raise the level of attention and focus of students.

In addition to the mentioned advantages, smart board is also characterized by the possibility of using most of the Microsoft Office programs and the possibility of serving online free programs which helps to broaden the experience of the learner. Considering the importance of technological innovations and their advantages in the educational process, the researcher finds that technological innovations need to be activated in schools where there are such boards and developing skills of using technological innovations in the educational process for teachers to affect positively on the educational process.

The problem of the research:

Based on what is mentioned above, the problem of the research can be stated as teachers' weakness in the skills for employing technological innovations in the educational process.

Research questions:

The current research answers the following main question:

What is the effect of the employment of the technological innovations in the educational process?

It also provides answers for several subsidiary questions:

1. What are the skills of employing the technological innovations targeted for development in teachers through the use of smart board?

2. What is the design of the training program for the development of the teachers' skills of employing the technological innovations?

3. What is the effect of the use of the technological innovations on teachers' cognitive achievement?

4. What is the effect of the use of the technological innovations on the development of the teachers' skills?

The aims of the research:

The current research aims to develop skills of the employment of technological innovations for preparatory stage teachers.

The importance of the research:

The current research may contribute to the following:

- The effective employment of the technological innovations in the preparation and explanation of lessons.

- Teachers' correct usage of the technological innovations will enhance the process of education.

- The development of the skills of employment of technological innovations of teachers.

- Overcoming difficulties that face preparatory stage teachers in dealing with technological innovations in the educational process.

- Providing a training program of the skills of employment of technological innovations of teachers.

Research Delimitations:

The current research is limited to:

Employing skills of technological innovations in the educational process:

- **First skill:** the use of Academic Guidance electronically.

- **Second skill:** the use of electronic control.

- **Third skill:** the use of admission tests electronically.

- **Fourth skill**: the use of electronic correction.

- **Skill fifth:** the production of the General Diploma books electronically

The research sample

The research group was selected randomly from the general diploma students. The experimental group consists of 30 students.

2. Research Methodology

The research follows the descriptive analytical approach in the presentation of theoretical framework and related studies, as well as the experimental approach to study the causal relationships between the independent and dependent variables.

Experimental design research

Experimental design is shown in the following table:

Table (1) the Experimental Design to Research

Statistical treatment	Test and observation card (pretest)	Experimental treatment	Test and observation card (posttest)
Experimental group	Experimental group	Functional report	Experimental group

Research variables

The research includes the following variables

1. Independent variable: the employment of technological innovations.

2. Dependent variable: the development of the skills of teachers.

Research instruments:

- Achievement test to measure the cognitive aspects associated with the employment of skilled technological innovations.

- Observation Card of practical performance to employ technological innovations skills.

Research Procedures:

To achieve the goals of current study, researcher will do the following actions:
1. present analytical study of related studies in order to set a theoretical framework

of the research, and preparation of an initial list of technological innovations skills, designing research tools, and analyzing results of research.

2. Identify the skills of employing technological innovations submitted them to experts in the field of educational technology.

3. Put the final form of skills in accordance to opinions of the jury members.

4. Identify the learning objectives to be achieved in order to employ technological innovations skills, submitted them to the experts in the field of educational technology for approval.

5. Prepare a list of educational goals in its final form after making adjustments in accordance to the views of the jury members.

6. Set up a content to employ the skills of technological innovations, in the light of skills' list and a list of educational goals, and then presented to the experts in the field of educational technology for approval.

7. Set up of a content of the skills in its final form after making adjustments in accordance to the views of the jury members.

8. Design training program using smart board, which deals with the employment of technological innovations skills, and presented to the experts in the field of educational technology for clearance.

9. Build the program in its final design after the adjustments in accordance to the views of experts.

10. Design achievement objective test ; to measure the achievement associated with the aspect of cognitive skills employing technological innovations, use it after confirming its reliance and constancy.

11. Design observation card to measure the performance of the practical skills of employing technological innovations, submitted it to the experts in the field of education and psychological technology, to ensure the reliance of this card.

12. Design observation card of pre and posttest in its final form in accordance to the views of the jury.

13. Choose the experimental group to do the exploratory and basic research experiment.

14. Conduct exploratory experiment to search.

15. Perform basic research and experiment through:

- Achievement test and observation card application.

- The application of the training program and explaining the cognitive and psychomotor content and skills for the experimental group teachers.

- The application of the achievement test and observation card performance.

16. Calculate teachers' performance rate of employing technological innovations skills.

17. Provide statistical processing of the research results.

18. Results and interpretation will be discussed in the light of the theoretical framework, and related studies.

19. Provide recommendations and suggestions for further research.

Definition of terms:

Technological innovations: Halafawi (2006) states that technological innovations can be identified as an idea or a product comes in the form of an integrated system, or another sub-integrated system; to serve as creative and innovative solutions to the problems of Education.

Technological innovations are also identified as recruitment of technological means in the educational process. It is an educational integrated system for transferring

learning in order to increase the teacher and the learner performance to deal with the educational process and solve problems, combining several types of educational stimuli; to achieve specific educational goals.

Technological innovations are also identified operationally as " recruitment of technological media in the educational process in order to increase the ability and skills of teacher in dealing with the problems and difficulties of the educational process to improve the quality and output of the educational process."

List skills of technological innovations are in the form of the following main skills:

- **First skill:** the use of Academic Guidance electronically.

- **Second skill:** Use of electronic control.

- **Third skill:** use of admission tests electronically.

- **Fourth skill:** the use of electronic correction.

- **Fifth skill**: the production of the General Diploma books electronically.

The researcher analyzed the previous skills into sub-skills, according to the following steps:

Firstly, Reviewing Books, literature related studies.

Secondly, Conducting Interviews with some of the professionals working in the field of educational technology.

Thirdly, Ordering Sub-skills of each skill, in the form of a graded hierarchy. The Researcher prepares a list in its initial form, which consisted of five key skills, and 55 sub-skills. The jury agreed to the validity of that list, modified formulation of some skills. Then, the first question of the research is answered.

Fourthly, identifying the educational objectives of the training program:

Determining educational objectives may help the current study as follows:

- Determine the desired change in behavior trainees, which they have to learn.

- Determine the nature of the training program, its components and its properties, through the formulation of the program's objectives in procedural statements that describe the new behavior of the trainee.

- Building content accurately fits those objectives to be achieved.

- Building achievement test and observation card commensurate with those goals.The researcher has formulated behavioral and procedural objectives along with cognitive and performative in an initial list. The initial list was submitted to jury of specialists in educational technology, curriculum and instruction to know their opinions in the following:

  • The suitability of the target list to the skills that have been identified for the training program.

  • The accuracy of the drafting of each of these objectives.

  • The accuracy of objectives' terms to achieve the behavior of learning. The agreement ratio of jury on the list of targets was (98.50%), where the researcher calculates the ratio of the agreement using the equation, "Cooper, 1974"

Fifthly: Selection and organization of the content of the program:

The following criteria have been considered when choosing content:

- It should be linked to behavioral and procedural objectives.

- It should be reliable.

- There is a balance between its comprehensiveness and depth.

- Be appropriate for the experience of the trainees, their needs and abilities.

- To be sequenced logically; sequence from the simple to the complex, and from easy to difficult. The researcher has developed scientific content in its initial form, which has been presented to a group of experts to express their opinions in the following points:

- The extent to which the scientific content achieve the objectives.

- The accuracy of drafting of scientific content.

Scientific content in its final form consists of five main modules:

- **Module I:** The first skill: use of Academic Guidance electronically.

- **Module II**: The second skill: Use electronic control.

- **Module III**: Third skill: use of admition tests electronically.

- **Module IV:** fourth skill: use of electronic correction.

- **Module V:** fifth skill: the production of books of General Diploma electronically.

Sixthly: setting the suggested design of training program:

In the light of the objectives, content of the training program, and the need for diversity training methods to achieve the needs of the trainees, the researcher put initial design of means and methods of training program where they were divided into seven columns:

- **First column**: Behavioral objective to be achieved should be registered.

- **Second column:** records the type of experience required to achieve the objective, whether directly or indirectly.

- **Third column:** records training method followed to achieve the objective.

- **Fourth column:** registers training methods used to achieve the objective.

- **Fifth column:** registers training content which was chosen to achieve the objective.

- **Sixth column:** records the timing of each activity pursued to achieve the objective.

- **Seventh column:** registers justifications of using training methods and the use of training facilities.

The jury members have agreed to the need to make some adjustments on that perception. These modifications were represented in modifying the formulation of some terms mentioned in the design.

Seventhly: determining the activities carried out by the trainees:

- Noticing what offered to the trainees well.

- Trying to gain skills of technological innovations during training.

- Using smart board to apply what the trainee sees of skills during the training program.

- Looking at their own training program content and trying to master its knowledge and skills.

- Answering achievement test.

Eighthly: Designing instruments for evaluating trainees

Tools for evaluating trainees were the achievement test to measure the cognitive aspects of the trainees, and observation card to measure performance of the trainees.

1. Achievement Test:

In light of the list of educational objectives, scientific content, the researcher built achievement test that measures the cognitive aspects of training program content among the trainees.

2. Observation Card to Measure Performance:

The researcher built observation card to measure performance of trainees in skills aspects of the training program.

2/1 - The aim of observation card to measure performance:

The aim of observation card to measure performance is to access to accurate scale to measure the performance level of the trainees' practical skills included in the training program.

2/2- Building observation card to measure performance:

It was built in the light of the educational objectives and scientific content of the training program.

Observation card to measure performance consists of five parts, which are as follows:

- **Part I:** trainees' performance skills in the use of the first Skill: Using Academic Guidance electronically.

- **Part II:** trainees' performance in the second skill: Use electronic control.

- **Part III:** trainees' performance skills in the use of third skill: Use admition tests electronically

- **Part IV:** the performance of the trainees in the fourth skill: use electronic correction.

- **Part V:** trainees' performance skills in the use of the fifth skill: the production of books of General Diploma electronically.

Ninthly: conducting pilot study

Pilot study has been conducted on a group of teachers which consisted of (20) teachers, randomly selected. Teachers of pilot study have no prior knowledge of the skills employing technological innovations. The experiment was conducted in the laboratory which has a smart board, devices and other tools needed to conduct exploratory trial. Achievement test, which relates to cognitive skills employing

technological innovations, was conducted. As well as observation card was applied to measure skills of trainees to employ technological innovations, after being exposed to training program employing technological innovations through smart board.

Procedures of pilot study:

Procedures of pilot study were as follows:

The researcher gives trainees an idea of the training program and its goals and purposes. During a training program, the researcher focused on observing the trainees, the extent of their commitment and their attention, and their reactions to the training program. The researcher responds to trainees' inquiries, problems and obstacles they faced to be avoided in the basic experiment. The objective achievement test and performance card were applied on the exploratory group after exposure to the training program to ensure the effectiveness of this program in improving technological innovations skills, as well as to ensure the reliability of each of the achievement test, and performance card.

The results of the pilot study:

- It indicated the suitability and validity of the program to be applied.

- It indicated the stability of both achievement test and observation card to measure performance.

- Difficulties faced by the researcher and students of experimental Group were identified to be avoid when doing the basic experience of research.

- There were some problems relating to computers, but they were solved.

Tenthly: Administering basic experiment of research:

Basic experiment of research was conducted as follows: 1. Choosing the place of implementation of the basic experiment: Conducting pre and post tools, teaching of educational content by a method of functional report.

2. The time of application of the basic experiment:

The designed program has been implemented.

3. The Research Sample:

The experimental group consisted of (30) teachers who were selected randomly. They have no prior knowledge of the skills of technological innovations.

4. Pre-application of the achievement test and observation card:

The pre application of the achievement test and, which deals with the cognitive skills associated with employing technological innovations. Observation card has also been applied to measure skills of employing technological innovations, to determine the extent of knowledge trainees have before conducting the program.

Participants have been trained on the training program and scientific objectives and content to equip them with the skills of employing technological innovations through smart board.

5. Post administration of the achievement test and observation card and statistical treatment to draw conclusions: After the completion of the implementation of the basic experiment and tools, students' grades in each of the achievement test, and observation card to measure performance, monitored and entered into the computer through the SPSS statistical analysis software, in preparation for the statistical processing.

3. Interpretation and Discussion of the Results

The current research results can be summarized in the following points:

• There were statistically significant differences at the 0.05 level of significance between the scores of the experimental group in the pre and posttest level relating to the employment of technological innovations, owned by Smart board, in favor of the posttest administration . This means that the average level of achievement of teachers

of experimental group is better than their level in the pretest. This means that training program using a smart board has effective impact in improving the knowledge concerning the employment of skilled technological innovations.

• There were statistically significant differences at the level of 0.05 between the performance of experimental participants' group scores in employing technological innovations for the favor of post-performance. This means that the proposed training program using a smart board has effective impact in improving the performance skills to employ the skills of technological innovations owned by the Smart Board.

Recommendations:

In the light of the findings of the current research, which was represented in the effect of the proposed training program in improving performance level of employing of the technological innovations skills required for smartboards, the current research recommends the following:

1. Providing all educational stages with technological innovations .

2. Equipping schools withcapabilities that enable the achievevent of the maximum benefit from technological innovations.

3. Providing training courses for the employment of technological innovations in the educational process in order to raise teachers' abiltity to use the technological innovations.

4. Resolting for experts to ensure that the training process will achieve the desired benfits and do not result in mere lecturing .

5. Providing a manual guide which shows the necessary rules in dealing with the impact of technological innovations as well as clarifyies how employed in the educational process.

6. Activating the use of technological innovations available within schools and employing them in the educational process. Showing teachers their effective role in the educational process.

7. Providing smartboards within classes with adue care to their accessories.

8. Raising teachers' awareness of the importance of the modern technological tools to the educational process.

INDONESIAN EDUCATION, PISA SCORES AND 3 READING STRATEGIES THAT WORK

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Abstract

This presentation introduces me and my engagement with Indonesian contexts of teaching and learning. I then introduce the Organization for Economic Cooperation and Development's (OECD) "Programme for International Student Assessment" (PISA), noting the challenges facing Indonesia in this period of reform. Publically acknowledging the challenges is an important step in narrowing the agenda and effecting positive future changes. Based on this information from the PISA data, I introduce three effective reading strategies that can be used in all years of schooling: (i) summarising non-literary texts to get the main detail; (ii) reading figurative language in literary texts; and (iii) actively reading to make meaning from the unwritten ellipses.

Introduction

I write this paper as a Literacy educator, teacher educator and researcher from Australia. I've been a classroom teacher for a decade. I have taught English to first language speakers and second language speakers. I love reading and writing, which I think is important for a reading and writing teacher. I have also been a teacher educator, researcher and doctoral supervisor for 15 years at the Queensland University of Technology in Australia. I specialise in English Curriculum and Literacy Education. I have a special interest in teaching in cross cultural contexts. I am privileged to work with a talented group of international scholars. One of these scholars was from Indonesia, Dr Uswatun Qoyyimah. Dr Qoyyimah (2015) wrote an award winning PhD thesis on moral curriculum reform in Indonesia. Through the process of supervising Dr Qoyyimah's thesis, I very much enjoyed being re-

acquainted with education in Indonesia. I was reminded about the friendliness and generosity of Indonesian people. I'll talk more about friendliness later, as this idea comes up in the PISA data for Indonesia.

Indonesia was the site of my 2005 Doctoral Thesis. In this work I examined teachers' content knowledge for teaching English to Indonesian adults and secondary school students (Exley, 2001a,b, 2003, 2004, 2005a,b). I compared and contrasted two groups of teachers/students across two sites of teaching and learnings. The first case study was about adult learners in a major city in Central Java who were being taught by a range of Indonesian and international teachers. The second case study was about youth from a regional village in Central Java who were taught English by Australian guest teachers. A comparison and contrast study is useful for the way it confirms the problems of generalising about a nation's teaching and student outcomes on the basis of one group of teachers/students in one context of teaching and learning. The specifics of each context should be taken into account. I'd like to talk a little more about the findings of my doctoral dissertation if I may. Doing so gives us an important background for understanding Indonesia's performance in the 'Programme for International Student Assessment' (PISA) and the teaching of reading, not only as literature, but also as information text.

Research into Language and Literacy Education in Indonesia

At the outset, all of the teachers in my study spoke about the friendliness of the students and teachers alike. The data from my two case studies also showed that all the teachers had similar understandings about the learning attributes of the Indonesian students. Teachers from both case studies reported that the 'typical' strategies used by Indonesian National teachers and the teaching environment encouraged Indonesian students to be passive, shy, quiet, mindful of their place within patriarchal hierarchies, and rote learners (Exley, 2005a,b). For example, both case studies

revealed how the Javanese term *kasar*, the *Pancasila*, large teacher-student ratios, confined physical space, and the limited availability of resources affected the students' learning behaviours (Exley, 2005a,b).

However, very importantly, examples were also given to show that when circumstances permitted, Indonesian students were also other than passive, shy and quiet and were not always restricted by patriarchal hierarchies. Teachers from both case studies declared that Indonesian people could be critical thinkers (Exley, 2005a,b). However, some of the teachers suggested that Indonesian people could not be overtly critical of government policies because of the strict control measures introduced by the state that socialised people to believe that it was disloyal and unpatriotic to criticise Indonesia (see also Qoyyimah, 2016).

Indonesian teachers seem to have a strong desire to create critical literacy skills in their student cohort. The teachers explained how they asked students to read criticisms of other countries' policies and then asked the students to criticise the policies of these other governments. At a higher level, the teachers also encouraged the students to apply these critical review skills to their own academic work (Exley, 2005b). These examples show the creativity of the Indonesian teachers as well as their commitment to scaffolding students' critical literacy practices.

The Australian guest teachers who were working with Indonesia youth in secondary schools said they provided a range of strategies that included discussing imaginary problems, role playing, researching sensitive topics, developing group work skills, undertaking critical reading exercises, simulations, and coaching on appropriate ways to withdraw from discussions on sensitive issues. The Australian guest teachers also provided demonstrations, carefully structured the Indonesian students' responses, used humour, re-structured the way the teaching space was utilised, connected with students' interests by playing pop music, and played games. In terms of evaluation,

the Australian guest teachers also focused more on what the students could do, rather than marking students on what they could not do. These teachers said that such teaching practices required a lot of work, substantial time for planning, and a reduced teacher/student ratio (Exley, 2005b). It's little wonder good teachers are utterly exhausted.

Despite all the Heads of Schools and Heads of Departments being happy with the teaching strategies of the Australian guest teachers, something interesting happened in the lead up to exams. Here is an excerpt from my thesis (Exley, 2005b, p. 255):

> *December he was taken off his teaching duties with the third years because they were going to have their big external exams in June. Although he said that his Head of Department would not have put it like this, his candid interpretation of the decision was that he may have been seen to be wasting the students' time.*

This statement is important for the way it talks about literacy, literacy learning and literacy assessment. I think there's a point of conversation for educational bureaucrats, school administration and teachers alike. What gets valued in the Indonesian education system? What gets shut out of the Indonesian education system?

Indonesia is, of course, not alone with this dilemma. You might know that from 2008 Australia introduced a high stakes national assessment for literacy and numeracy. This program, called NAPLAN, has had a negative effect on the teaching of critical literacy and critical reading and writing practices in Australian junior and secondary schools. The assessment plan only targets rudimentary literacy and numeracy skills so the teaching of critical literacy and critical reading and writing practices has been side-lined in some schools. The impact is more pronounced for the group of students

who are deemed 'at-risk' of not being successful in education. These students tend to be those who speak another language or come from a minority culture or are from low socio-economic areas as well as those from geographically isolated locations. For these students, the futures driven curriculum is set aside and more teaching and learning time is devoted to practising for the national assessment. I would argue that these are the students who need carefully scaffolded and highly effective critical literacy and critical reading and writing practices. It's a social justice issue when the students who are most at-risk only get access to a rudimentary literacy program, denied of high quality instruction in critical literacy, critical reading and critical writing.

Programme for International Student Assessment

Indonesia, like Australia, is very interested in the PISA rankings. PISA is the 'Programme for International Student Assessment' and is administered by the global consortium of the 'Organization for Economic Cooperation and Development' (see https://www.oecd.org/pisa/aboutpisa/). The PISA website states:

> *The Programme for International Student Assessment (PISA) is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. To date, students representing more than 70 economies have participated in the assessment.*

Indonesia is a non-member country, and has participated in PISA every three years since 2000. Comparative data of the longitudinal kind is useful for identifying trends and the impact of various reforms. I don't wish to compare Australia and Indonesia specifically. Such an exercise is not useful for our discussion today. Moreover, both countries have their own contexts that need to be considered and the statistics conceal this complexity.

One statistic that warrants attention is that Indonesia has the second highest percentage of 25-34 year olds who have not completed upper secondary education (OECD, 2015). The graph indicates that approximately 60% of Indonesian young adults have not completed upper secondary education (OECD, 2015, p. 30). The country with the highest percentage of 25-34 year olds who have not completed upper secondary education is China. China is currently undergoing a significant education reform. For example, from 2000 to 2010,China shifted her scores from 94% to 64% (OECD, 2015, p. 32). I've recently been working in China over the last two years. I am confident that China will improve her score even further in the years ahead. This leaves Indonesia with lot to think about.

Why does this statistic matter? The 2015 OECD report explains that this statistic is part of the measure of human capital within a country. This indicator provides a measure of the types of knowledge and skills held by society generally as well as a sense of how important tertiary education is for the population. This measure also points to the earnings advantage and health advantage when individuals within a country attain tertiary education. This measure also indicates other social outcome advantages such as an increase in volunteerism, an increase in trust and an increase in having a say in government (OECD, 2015).

The data from PISA 2012 reading, mathematics and science is available. Although 2015 assessments have been undertaken, the formal results are not yet available. The 2012 data show the following information for Indonesian student performance in the area of reading, mathematics and science (see http://gpseducation.oecd.org/CountryProfile?primaryCountry=IDN&treshold=10&topic=PI).

- *In Indonesia, the average performance in reading of 15-year-olds is 396 points, compared to an average of 496 points in OECD countries.*
- *On average, 15-year-olds score 375 points in mathematics, the main topic of PISA 2012, compared to an average of 494 points in OECD countries.*
- *In science literacy, 15-year-olds in Indonesia score 382 points compared to an average of 501 points in OECD countries.*

The results are low. There is much work to be done to give Indonesian students a solid chance in 2020 and beyond.

An important statistic that is missing from this list is that Indonesia is making great gains in terms of equity (OECD, 2015, p. 13). Indonesia actually outstrips Australia in terms of improving equity outcomes for students. This is no small feat; equity outcomes remain a source of much debate in Australia, as it should. Admirably, Indonesian students report an extremely strong sense of belonging. Ninety-six percent of participating students agreed that they 'made friends easily at school' and agreed that they 'felt happy at school' (OECD, 2014, p. 20). These indicators matter and it's a credit to the nation that so many students report so positively on their sense of self and sense of well-being. In fact, Indonesian students are the happiest students in the world (OECD, 2014, p. 21). Many nations will be looking to Indonesia to see what it is you do to have such friendly and happy students.

PISA Reading Results - 2009

So let's return to the PISA results. To be clear, PISA is not directly linked to the school curriculum. The two hour tests are designed to assess to what extent students at the end of compulsory education, can apply their knowledge to real-life situations

and be equipped for full participation in society. Students from each country take different combinations of different tests.

The 2012 PISA tests were focused on mathematics. I'd like to recall the data from PISA 2009 which focused on the teaching of reading. There's some celebratory news and some sobering news. The celebratory part is that when compared to the 2000 PISA reading test, Indonesia made great gains (2010, p. 33). In terms of improving scores, Indonesia is the 4th highest ranked nation in the world. You obviously know how to make a positive change. It seems a lot of this positive difference is to do with a change in the number of students who are now reading for enjoyment (OECD, 2010, p.75). Great work once again to the policy makers, teachers and communities of Indonesia. This focus is important because students who enjoy reading are more likely to be better readers. I'm going to stress the term 'more likely', because interestingly, this isn't the case in Indonesia (OECD, 2010, p. 67). The sobering part is that Indonesian students from villages, cities and large cities are still under-performing on all measures of reading despite saying that they like to read for enjoyment.

So what kind of reading is associated with being a good reader? In most countries, students who read fiction for enjoyment were much more likely to be good readers (OECD, 2010, p. 68). Students who read newspapers, magazines and nonfiction were also better readers in many countries, although the effect on reading performance was not as pronounced. This is a really important point if we think about the advent of the internet and the ease of access that many youth have to the internet. I'm also very conscious of the digital divide and the large number of students who have no or limited access to the internet. The point I want to make is that the internet gives our young people reason to read more often, but that reading is destined to be (a) non-literary, (b) unsustained, and (c) not of the disciplinary fields that is rewarded in schooling. This doesn't mean the internet is not good; it means we need to also

actively promote the reading of sustained literary experiences as well as sustained non-literacy experiences from the disciplinary fields that are the goals of education.

The OECD (2010) report also provided some advice on what learning strategies help students perform better in reading. The OECD 2010 (p. 72) report advises:

- *Students who know how best to summarise information that they read can perform much harder reading tasks, on average, than those who do not.*
- *Students also perform better when they know which strategies help them to understand and remember information, and by adopting strategies to guide their own learning.*
- *Having a deep understanding of reading strategies, and using those strategies, are even stronger predictors of reading performance than whether students read widely for pleasure.*

I would now like to introduce three reading strategies that can be applied in all year levels.

Reading Strategy 1: Summarising Information in Non-Literary Texts

This first reading strategy is learning how to summarise information in non-literary texts. Take the following sentence on the science topic of coastal rock formations.

Science Topic: Coastal Rock Formations

The bedrock into which our coast is carved from approximately the end of Almar St (West Cliff) and Ano Nuevo is a sedimentary formation known as the Santa Cruz Mudstone.

Grammatically speaking, this is a simple sentence. But it contains a number of complicated grammatical elements that need to be understood. It is a single clause because there is only one event or one happening, represented by the main verb. But a novice reader will also erroneously see 'carved' as the verb (happening). It is useful if students are taught that information texts often use relational verbs. Relational verbs set up relationships between concepts, or things. In this case, the relational verb is 'is'. Another complexity is that this sentence carries two words 'is'. The first 'is' is contained within the group 'is carved' but the carving is not the main activity of this sentence. The reference to 'is carved' is just telling us about the bedrock, not an event about carving. We need to teach students to look for the main verb of the clause. In this case the main verb is the 'is' (sitting between 'Neuvo' and 'a sedimentary'). Once we find the main verb and we identify it as a relational verb, we know we are looking for two concepts of things. These concepts or things typically are placed either side of the verb. The first concept, or thing, is a long noun group: 'The bedrock into which our coast is carved from approximately the end of Almar St (West Cliff) and Ano Nuevo'. The second concept, or thing, is another long noun group: 'a sedimentary formation known as the Santa Cruz Mudstone'. Each of these long noun groups have a head noun as identified below in bold:

- **First noun group: The bedrock into which our coast is carved from approximately the end of Almar St (West Cliff) and Ano Nuevo**
- **Second noun group: a sedimentary formation known as the Santa Cruz Mudstone**

Everything else in the first noun group provides information about the head noun, that is about which bedrock. Everything else in the second noun group provides information about the head noun, that is about the formation. We come to learn that it

is a sedimentary formation and we learn its other name. It's important that we know what job, or what other meaning, this other information brings to the sentence.

When we return to the original sentence and highlight the relational verb (is) and the two head nouns (bedrock and formation) we have summarised the sentence.
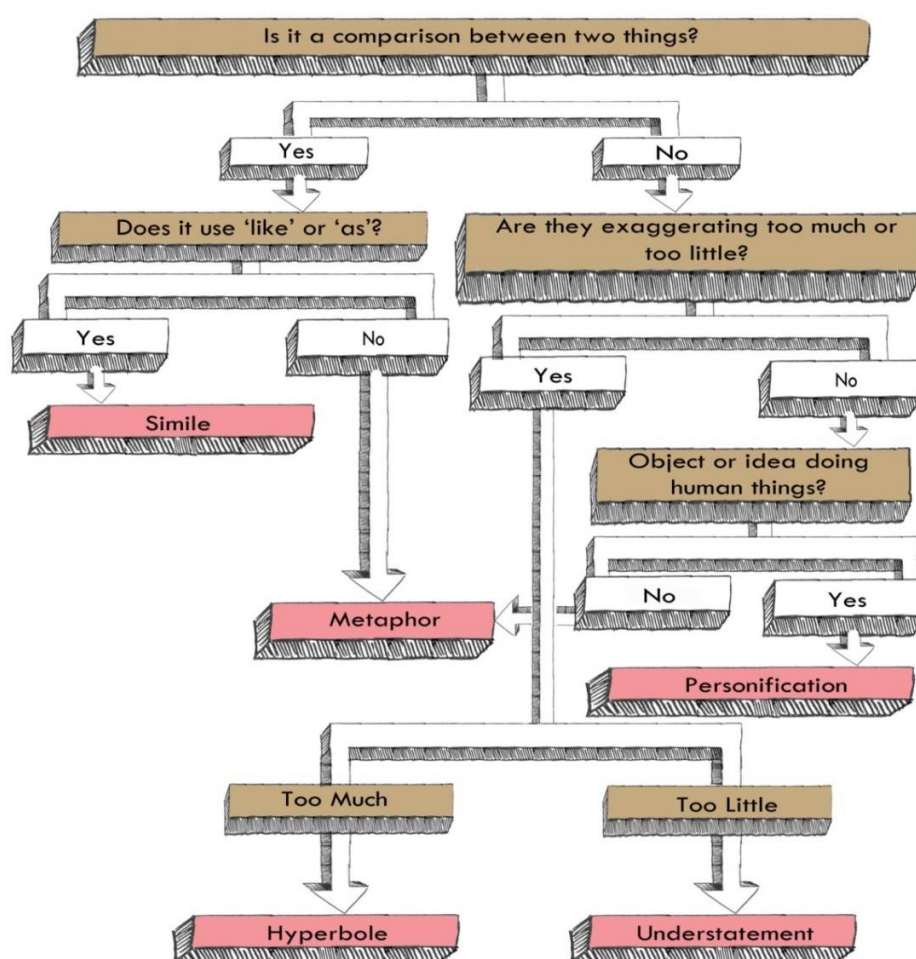
[The bedrock] into which our coast is carved from approximately the end of Almar St (West Cliff) and Ano Nuevo **is [a** sedimentary **formation]** known as the Santa Cruz Mudstone.

The summary of this sentence is 'the bedrock is a sedimentary formation'. Summarising builds readers' expertise with extracting meaning from dense text. Such a skill is very useful for reading science, geography, history and mathematics texts. I urge all science, geography, history and mathematics teachers to teach summarising as part of their class lessons. This is how science, geography, history and mathematics teachers can help all students with the reading task.

Reading Strategy Two: Knowing How Figurative Language Works

Well written literary texts use a range of literary devices, including figurate language. Figurative language is a useful strategy for explaining events or objects in a narrative, especially if the events or objects are routine, mundane or uninteresting. Seemingly simple narratives about everyday events and objects use literary devices. Literary devices bring pleasure to the reading experience as new ways of seeing or appreciating the event or object are offered by the author to the reader. The range of figurate devices used in English is quite wide. Many seem similar, but in reality they each have points of difference. My friend and colleague, Associate Professor Lisa Kervin (see Exley & Kervin, 2013, p. 93), prepared this chart to help readers know

about the literary devices of similes, metaphors, personification, hyperboles and understatements. I acknowledge the artwork by my friend and colleague, Karen Argus from Cairns in Australia.

```
                    Is it a comparison between two things?

            Yes                                    No

    Does it use 'like' or 'as'?          Are they exaggerating too much or
                                                   too little?

    Yes              No                Yes                      No

          Simile                                       Object or idea doing
                                                         human things?

                                            No              Yes

                   Metaphor                         Personification

            Too Much                      Too Little

          Hyperbole                      Understatement
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Source: Exley & Kervin (2013, p. 93)

By way of example, Lisa suggests using a beautiful children's picture book called 'The Black Book of Colours' by Menena Cottin and Rosana Faria (2008). This book is like no other. The illustrations are raised black lines printed on black glossy paper.

I'll circulate some copies of this text so you know what I'm talking about. In this book, the author tries to explain colour to a blind child. Two pages are noted below:

- **Brown crunches under his feet like autumn leaves.**
- **But when the clouds decide to gather up and the rain pours down, then the sky is white.**

Source: Cottin, M. & Faria R. (2008). The Black Book of Colours. UK: Walker Books.

Using the questions in the flow chart, I consider the first line 'Brown crunches under his feet like autumn leaves'. I identify this sentence as a comparison. Two things are being compared: the colour brown and crunched autumn leaves. I follow the 'yes' arrow to the next question. I ask myself, 'Does it use like or as?'. The answer is 'yes' this comparison uses 'like'. We find out that this figurative device is a 'simile'.

Using the questions on the flow chart, I consider the second line 'But when the clouds decide to gather up and the rain pours down, then the sky is white'. This one is a little more complex, so I'm just going to focus on the part that talks about the 'clouds deciding'. I identify that it is not a comparison. I follow the 'no' arrow to the next question. I ask myself 'Are they exaggerating too much or too little?'. The answer is 'no'. I follow the 'no' arrow to the next question 'Object or idea doing human things?'. The answer is 'yes', the clouds did something human, they made a decision. We find out that this figurative device is an example of personification.

Once students know how to recognise and read figurative language, they are able to derive more pleasure from the reading experience. Put simply, things make more sense. Students who have a heightened sense of figurative language can start to use

figurative language in their own writing as well. The pleasure they have with reading can be extended to their pleasure with writing.

Reading Strategy Three: Reading with Ellipses

The third readings strategy I would like to introduce is reading with ellipses. Let's look at a very popular book for young children called 'An Odd Egg' by Emily Gravett (2009). It's a delightful story about a male duck who finds an egg and sits with the egg, hoping it will hatch. I won't spoil the ending for you. Let's read the book together.

The book has only ten sentences, but not all sentences are properly formed sentences. Let's look at the ten sentences again.

1. All the birds had laid an egg.
2. All except Duck.
3. Then duck found an egg!
4. He thought it was the most beautiful egg in the whole wide world.
5. But the other birds did not.
6. All the eggs had hatched.
7. All except for Duck's.
8.
9. Duck waited for his egg to hatch.
10. He waited…and waited…and waited.
11. Until

Source: Gravett, E. (2009). *An Odd Egg*. **London: MacMillan Children's Books.**

This book has all the hallmarks of a seemingly simple text .There's not a lot of words on the page. The complexity is that some sentences are complete in and or themselves, Other sentences have crucial elements missing. The reader is forced to fill in, or complete, the missing elements. These gaps, or missing elements are called ellipses. Let's look at sentence 2 as an example:

2. All except Duck.

Source: Gravett, E. (2009). *An Odd Egg.* **London: MacMillan Children's Books.**

'All except Duck' does not make sense on its own. This sentence has no verb, so we don't know what's happening. As readers, we have to fill in the ellipsed element. I suggest the sentence should be 'All except Duck **_had laid an egg'_**. I used my understanding of sentence 1 to complete the ellipsed element of sentence 2. A number of other sentences need to be completed and it is up to the reader to make this link. I've added what I would put into the ellipsed sentences in the box below . The underlined italics are my ideas for making meaning of the sentences.

2. All except Duck **_had laid an egg_**.
5. But the other birds did not **_think //_** **_it was the most beautiful egg in the whole wide world_**.
7. All except for Duck's **_egg had hatched_**.
9. He waited…and **_he_** waited…and **_he_** waited.

I realise I've used some short children's books today. Narratives for older students also use ellipses. Help students develop a keen eye for ellipses. If they are more aware of this need to be actively involved in the reading process, they will come to

enjoy their experiences with literature. They will relish the opportunity to be the reader that works with the author and the text to make a higher level of meaning.

Conclusion

Thank you for your time today and for allowing me to talk about the PISA data. I hope the three reading strategies give you some guides for the important role of the teacher in scaffolding students to summarise non-literary texts, engage with figurate language and actively read around the text to make meaning of sentences with missing elements. I wish you well in your ongoing journey. It is my hope that Indonesian students continue to be the happiest students on the planet in this new era of curriculum reform. If you can achieve both, you will have achieved something no other country has achieved.

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HOW CAN HISTORY LEARNING CONTRIBUTE TO CITIZENSHIP EDUCATION IN DUAL SUBJECTS SYSTEM? - CASE JAPAN -

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1. Introduction - Challenges to Social Studies

Since Social Studies came into existence as a school subject in the Course of Study in 1947, citizenship education has been its main goal. Citizenship is regarded as the qualities needed in order to act as a citizen in the international community, such as awareness of being a maker of the peaceful and democratic state and society, and attitude and ability to respect each other's personality, to fulfill social obligations and responsibilities, to consider in various aspects and to make fair judgements.[1]

However, the partial revision of the Course of Study in 2015 has introduced a dual subjects system adding a new subject responsible for citizenship education, which is called a special subject Morality. To be precise, Morality as an education area had been existing since the Course of Study's revision in 1955. But it had been a minor presence as it didn't had a status of subject, that is taught by professional teachers, and it had only one hour per week in timetable, which was often transferred to other activities. By making Morality a subject, the phrase "as the foundation to live better" was added to its goal of cultivating morality, which made the nature of the moral education clearer. The meaning of this change is explained in the commentary on the history of this Course of Study's revision as follows; In the society in which globalization progresses, and science and technology develop, the new subject Morality is expected to foster ethics, abilities in dialogue, cooperation and judgement,

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[1]Ministry of Education, Culture, Sports, Science & Technology Course of Study for Elementary School: Social Studies, 2008, p14.

and practical motivation necessary for a maker of the society.[2] It's quite obvious, that these qualities overlap in many parts with the contents of citizenship, that is expected to be cultivated in Social Studies.

About the contents of Morality, the order of the four columns and the interpretations of the moral values included in each column have changed slightly, but there is no big change as a whole. The four columns are "mainly about myself", "mainly about relation with others", "mainly about relation with groups and society" and "mainly about relation with life, nature and something sublime". Each column overlaps with learning in Social Studies, especially the third column "mainly about relation with groups and society" does. The difference between Morality and Social Studies is, that the former focuses on thinking how to live as an individual, and the latter gives weight to knowing about social systems not only in the current home country, but also in the past, and in other countries.

On the condition of these different roles of Morality and Social Studies, and also of their placement to grades, how can history learning contribute to citizenship education? After confirming the position of history learning in schools in Japan, some theories of history learning and their implication of citizenship education will be investigated in the following sections.

2. Position of citizenship education and history learning in Japanese schools

History learning is implemented as a field of Social Studies in elementary and junior high school, and as a sub-subject of Geography-History in senior high school.

In elementary school. Social Studies is an integrated subject, and the 6th grade students do a "chronological and complete Japanese history learning". That means, the contents of history learning are organized as from Antiquity through Middle Ages

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[2] Ibid, pp1-2.

till Modern Times, and politics, economy and culture for each era. Junior high school has a more detailed "chronological and complete Japanese history learning" taking into account the world-historical background through the 7th and 8th grade. And there are "world history" and "Japanese history" in senior high school, as sub-subjects of Geography-History, which are taught in "chronological and complete" style each.

Until the 1989 revision of the Course of Study, there had been Social Studies in senior high school, too. Although the subjects organization had been changed, there had been a "world history" and a "Japanese history" in "chronological and complete style" as sub-subjects of Social Studies, except for the occupation period after WWII. And by the 1989 revision, "world history" and "Japanese history" became sub-subjects of Geography-History, which doesn't contain "citizenship" in its goals, but "awareness and competence needed for Japanese". That's why Geography-History is not really regarded as a subject, that implements citizenship education.

Since 1955 revision, Morality has been existing as an educational area in elementary and junior high school. And by 2015 partial revision, it became a special subject, but it continues to be implemented only in elementary and junior high school. Senior high school has "ethics" as sub-subject of Civics, that is expected to carry out moral education as well.

3. Traditional theories of citizenship education in history learning and their problems

The core idea of the traditional theories of citizenship education in history learning was, that students should know the whole flow of history correctly, because it points out the future of the society and the way of life in it. There are two kinds of such traditional theories. The one is based on so called "empire view of history", and the most famous theoretician is Sokichi Tsuda. Tsuda's theory of history learning is regarded as the one, that is supported firmly by political right wingers, and as a prime

mover of dissolving Social Studies in senior high school by 1989 revision. The other one is a marxism theory of history learning. This had been proposed by some nongovernmental organizations for decades after WWII. After the collapse of Soviet Union and the end of the Cold War, it has been supported by less people openly, but probably still by political left wingers.

According to Tsuda, the main learning subjects are historical persons and their acts. Students concretely understand, what the persons did, what kinds of incidents they caused and what kinds of situations resulted from it. Accumulating this kind of understanding makes it possible, that "students recognize the process, how the Japanese people maintained the living conditions inherited from the previous and made new situations giving changes in each period of the past, with what kinds of mentality, knowledge and act, which reached today through the years and made current situations." And this is the purpose of history learning for him. History is considered not as changing process in a straight line, but as a thing like matryoshika doll. The life of people of the former era makes the base of the life of the next era. Save and change occur in this framework, that is spread and inherited by the next era's people. Tsuda thinks, history develops in this matryoshika doll way, and therefore the things, that existed in the starting point, when the history of our country began, have been kept until today. This means in particular, that "we were politically united by the imperial family, that came from our interior, and became a nation, and that it continues until today, although there were a lot of big changes in the political system, social organizations and daily lives." And as this view of history is adopted, history learning should make students "recognize the historical origin" of Japanese people's life, that is a "nation with permanence". And "unification of the nation by the imperial family" as the whole flow of history should indicate a continuation of

"unification of the nation by the imperial family", and the necessity to gain the attitude of respecting the imperial family, that is needed for a member of the country.[3]

In the marxism history learning theory, the main subjects of learning are productive force and relations of production of each era. Students should learn, that if productive force develops and become inconsistent with the relations of production, the latter will change in order to fit to the new productive force. Accumulating this kind of understanding, they recognize, that the human history progresses through "the stages of development as primitive communism, ancient slavery, feudalism, capitalism, socialism and communism". One of the important goals of history learning is to know this "historical law". Another important goal is, to be able to foresee the coming society and choose the way of life suitable to it. The direction of history's development is already decided, and if the science has made it clear, the coming society and era can be drawn on its extension. That means, history points out, how we should act and what kind of society we should build. If we are living in a capitalistic society, we are going to have a socialistic one next. In order that the current society will change in that direction, its members are expected to contribute for developing productive force, and to gain socialistic sense as well. [4]

These two theories of history learning have different ideas about whole flow of history, but both of them are similar in terms of trying to make students gain an insight into the coming society and the way of life in it, by teaching a certain whole flow of history. And this has to be considered as a wrong citizenship education. A whole flow of history is not a historical fact, but a way of watching, which is projected on the past from a certain position of values, and therefore it doesn't directly point out what the next society is going to be. It's us, people living now,

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[3] Ikeno, Norio, Problems of the argument over independent history education on "positivistic history" - criticism of theory of history education by Sokichi Tsuda – in: Social Studies Research Collection, vol. 34, pp89-99, 1986, pp95-97.
[4] Moriwake, Takaharu, Theory and methods of Social Studies lesson's construction, Meiji-tosho, 1978, pp73-74.

instead, who discuss and decide together what kind of society should be the next, and determine individually how to live in it, considering its systems and rules.

4. New theories of history learning for citizenship education

Theories of history learning for citizenship education, which can overcome the problems of those traditional ones, have been raised. "History learning in reflecting on norms" and "critical history learning" are two of the new types.

- **Theory of history learning in reflecting on norms**

Theory of history learning in reflecting on norms, which aims at understanding the norms in the modern society, and its social order and problems as well, is raised by Umezu Masami. Norms should be reflected on, in order to be aware, that they make the normal and common attitudes, sort out the acts and persons deviate to them, and constructs discriminations in this way.

Umezu starts from the recognition, that the modern society is "a society, in which social relations continually break up". In this kind of society, multiple norms battle with each other, and certain ones will be accepted by the majority and become the common sense, which gives the opportunity for finding out and sorting out a minority acting abnormally, who becomes a target of correction or elimination. In the schools by now, norms have been regarded as "the given way of behaving to be followed by the members of the country and society", and implanted into students' mind together with concrete attitudes, not only through Morality but also Social Studies inclusive of history learning. This kind of education can not train students to be able to recognize, that social discrimination and elimination are produced in complicated forms every day by the act of norms. Students should obtain an "ability of reflecting on norms", in order to live in "a society, in which social relations continually break up". [5]

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[5] Umezu, Masami, Developing a history lesson aiming to foster reflective thinking ability: developing the unit "molded japanese nationals: norms of modern urban community and the mass society". In: Journal of Educational Research on Social Studies, vol73, pp1-10, 2010, p2.

The recognitions, that will be got through history learning in reflecting on norms, consists of five elements; "narrations of norms", "interaction over narrations of norms", "characteristics and background of the society, in which norms are narrated", "formation of order" and "construction of social problems". And the basic learning process is: "1. stage for decoding narrations of norms in a certain era", "2. stage for analyzing formation of social order by act of norms, connected with the social structure and system of the era", "3. stage for critically investigating social relations made by norms and social problems resulted from them" and "4. stage for reflecting on the norms and re-coursing the students' acts by students themselves. Umezu, on the base of this theory, developed a history learning unit "Being formed <Japanese nation>: norms in modern city and mass society". The knowledges and recognitions to be gained are as follows: [6]

1. In the era of Taisho and at the beginning of Showa (around 1912 to 1920s), the norms of gender roles, labor, health, study, family connected by love, time discipline etc. were produced as multiple narrations mainly in large cities like Tokyo.

2. In this period of Taisho and the beginning of Showa, the Japanese society changed on a large scale, where industrial revolution (industrialization), metropolitan development, emergence of the consumer society, growth of salaried workers layer (new middle of the city) etc. were observed.

3. In the change of the era, the norms of urban life were spread by government, companies, industries, schools, mass media etc. Those norms were accepted mainly by the public, whose core is salaried workers layer and their family, accompanying contradiction, confrontation or conflict, and fixed and maintained in the society, and gave an order to the society, because the public voluntarily practiced the way of life and act suitable for the norms.

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[6] Ibid, pp3-5.

4. People, being on the basis of the norms of urban life, became "the Japanese nation" suitable for modern country.

5. The norms of urban life of the era classified "the Japanese nation" into ordinary and special persons, elegant and vulgar persons, useful and useless persons and so on, and produced relations with imbalanced powers among people.

6. People's daily behavior and interaction based on the norms of the era unexpectedly produced minorities, that were discriminated and eliminated.

According to Umezu's theory, fostering the ability of reflecting on norms is a goal of history learning. And regarding this goal, he states, that it is "an important goal especially for the learning about modern history, where the process, that the norms of the modern country and civilization produce its "nation", appears conspicuously." This statement could be considered as valid, if history learning should give weight on understanding of the establishment of the norms, that prescribe the current society indeed, and the social order and problems as well. But if norms, that possibly prescribe the society in the future, should also be learned in order to prepare for the future life, then older eras and foreign countries' history should be considered as learning subjects as well. In this meaning, Umezu's theory^ should be modified with a longer and wider range.

Through learning history in reflecting on norms, students would get the awareness of the problem, that they can "become an accomplice in discrimination at any time" indeed. Then, what should they do as a citizen in a society, where the existing norms form a social order and produce certain social problems? In other words, what does Umezu mean with "ability to reflect on one's own acts as a possible accomplice, and to reconstruct them", which he thinks the students should get through history learning? Isn't it an ability to relativize the existing norms, or to choose other norms, in order to form a new system or policy, that can solve the social problems, or to modify the current system or policy in this direction? If the students are expected to

obtain this kind of ability, Umezu's theory of history learning can not be considered as effective enough.

2) Theory of critical history learning

History learning, that not only reflects on norms, but also reconstructs them, and on top of that, reconstructs not only norms, but also beliefs, that individuals have internalized, and political acts and systems as externalization of beliefs and norms as well, is proposed by Ikeno Norio.

He claims, that the whole Social Studies learning inclusive of history learning should offer the students the opportunities for reflective inquiry into social system and ideals to investigate the reasons of their existence and to search for better one. That means, cultivating the base of ability to make society is the purpose of Social Studies learning. The reason is, that one, who lives in the modern society, needs a power to resist reification. [7]

The modern society is a democratic society, where its members make various aspects of it in various forms. Although they do it by themselves, those aspects appear as certain systems and order to them, just as they have been made. The society members have no other choice than to accept them. The society is something made by people, but appear as an objective reality. This kind of phenomenon is called "reification". Usually money and products in the economic field are given as common examples, but might and state in the political field and family in the social field are also examples of reification. All of the things, that we think exist as something "natural" and objective in the society, are result of a reification. Making society is implemented in beliefs as individual's inside and in norms immanent in the society, and in acts as individual's outside and in system and order of the society. Reification occurs also in

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[7] Ikeno, Norio et al., Development of history lessons to raise the citizens of modern democratic society. In: Research Result Report under Grants-inAid for Scientific Research, 2004, p91.

these two sides. Beliefs and norms, and acts and system/order, these are reinficated, become something "natural", and oppress us individuals. In order to live as an autonomous citizen, we need an ability to replace the reinficated beliefs and norms, and the reinficated acts and system/order into the process of making society, and remake them into something we can satisfy with. [8]

Being based on this idea, Ikeno brings up four types of Social Studies learning: A. making society in beliefs as individual's inside, B. making society in acts as individual's outside, C. making society in norms immanent in the society, and D. making society in system and order of the society. [9]

And he developed some history learning units on the basis of type A. One of them is a unit for world history "Is it allowed to use force?". The unit's goals and the outline of the learning process are as follows: [10]

The unit's goals

1. Students can question their own belief like "It's allowed to use force", "It is not allowed to use force" etc.

2. Students realize the three frameworks on using force, or three beliefs in using force, and recognize, that they can analyze conflicts in the world community using these frameworks.

3. Students analyze a concrete example, using force by USA against Afghanistan, where these beliefs confront with each other, investigate facts supporting those beliefs and logics used to justify them, and organize the facts and logics using Toulmin's schema.

4. Students make their belief clear and reflect-able using Toulmin's schema, in order to be able to reconstruct their belief and act on the basis of it.

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[8] Ibid, p94.
[9] Ibid, p93.
[10] Ibid, pp195-196.

The outline of the learning process

Introduction: bringing up problems and making beliefs clear

Stage I: analyzing the idea of Belief 1 <exercise the right of individual self-defense>

Stage II: analyzing the idea of Belief 2 <exercise the right of collective self-defense>

Stage III: analyzing the idea of Belief 3 <refuse using force>

Conclusion: examination and reconstruction of own belief

And the knowledges and recognitions to be gained are as follows: [11]

1. People with the belief, that USA has to attack Afghanistan by itself, think, that a country has the right to exercise individual defense, if its people's interests and life have been threatened by unilateral attack from the other countries. This is a way of thinking, that gives the top priority to national security.

2. Pearl Harbor is an example of the cases, that a country exercised individual self-defense, because its people's interests and life were threatened by unilateral attack.

3. People with the belief, that USA has to attack Afghanistan not by itself, but in cooperation with allies, under approval of the international community, think as follows: 1. Every country has the right to use force collectively, if the unilateral attack is a problem, that influences many countries in the world. 2. Using force individually can lead to a country's excessive behavior, or to a situation of "bellum omnium contra omnes" through a chain of retaliations, and both of cases are international problems. That's why a country should use force within a collective order. This is a way of thinking, that gives the top priority to international security.

4. Gulf War is an example of the cases, that the collective self-defense was exercised under approval of the UN, in order to maintain the whole world's interests, and to avoid the situation of "bellum omnium contra omnes".

5. People with the belief, that none of the countries inclusive of USA should not use force against Afghanistan, think, that using force, in whatever way it's implemented, kill people, and lead to a chain of retaliations and to a loss of many

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[11] Ibid, p198.

human lives. This is a way of thinking, that gives the top priority to respect for human life (human life's security).

6. Cuban Crisis is one of the cases, that using force was avoided, although there was a unilateral threat or attack from other countries.

As above, the world history learning unit "Is it allowed to use force?" makes its learning subject from USA's attack against Afghanistan, aiming that the students recognize the three beliefs over using force, belief giving the top priority to national security and approving of exercising individual self-defense right, belief giving the top priority to international security and approving of exercising collective self-defense right, and belief giving the top priority to human life's security and approving of refusing using force, and that the students reconstruct their own belief on the basis of those.

Understanding the three beliefs over use of force and reconstruction of own belief on the basis of those are what are directly aimed at in this unit. And USA's attack against Afghanistan is used as a concrete material to investigate those three beliefs. From this point, it would be not very far to where USA's national defense system, and the norms, that are behind it, are investigated and reconstructed by the students. This simple assumption would indicate, that the four types of history learning probably should not separately realized into lessons, but they should be applied in close cooperation, or in integration if possible. In this way, it would be possible for the students to investigate not only the three beliefs, but also the norms, that are supported by various persons with one of the beliefs, and the national defense system, that is established on the basis of the majority's belief and norm, and to reconstruct their own country's defense system. For example, the Self-Defense Forces of Japan, in which the norm of limiting using force to exercising individual self-defense right has been supported by the majority, the Forces of USA supported by the majority's norm, that allows exercising collective self-defense right, and small countries like the Vatican, that don't have their forces because of the norm, that is negative toward

using force, could be dealt with in the lesson. Students can know the backgrounds and processes of establishing these systems, investigating the conditions, that make them possible, and reconstruct their own country's national defense system. Four types in cooperation or integration could realize history learning for citizenship education in a more rich way.

5. Problems to be solved

How should history learning be put into citizenship education in dual subjects system? If the theory of critical history learning by Ikeno can be considered as valid and effective, how should it be applied? It depends on how to treat the four terms of belief, norm, act and system/order. They can be classified into two pairs. Belief and act are something individual, while norm and system/order are something collective. Acts are appearances of beliefs, and system/order is made on the basis of the norms supported by the society's majority. In this meaning, the individual and collective pairs of the terms could be separately treated. On the other hand, both pairs are also closely connected with each other in real processes in the society. Norms are collective beliefs, that are kept in mind and expressed by the majority, and system/order is something, that was produced in order that certain acts can be implemented or prohibited stably. In this point of view, all of the four terms should be treated in integration. According to the two different ideas about their treatment, there are two possibilities of application of Ikeno's theory of citizenship education.

1. All of the four types are applied only for history learning in Social Studies

2. Type C and D for history learning in Social Studies, and A and B for Morality

Considering the characteristics of the two subjects, the second option seems to be appropriate. The subject Morality gives importance to thinking about the way of individual life. In the column "mainly about relation with groups and society", for example, the learning subjects are the beliefs as ways of individual life like law-abiding spirit, sense of public morality, fairness, equity, social justice. Applying Type A and B for Morality, students can investigate those beliefs, and corresponding acts

as well, and recognize, that these are reinficated and should be replaced into a process of making society. And Type C and D are applied for history learning in Social Studies, and students can learn to replace the reinficated norms and system/order into a process of making society, and to remake them into something they can satisfy with.

However, if the teacher licensing and training system is taken into consideration, the first option would be preferred. The number of units available for Morality at the university is not enough to train the students for constructing history learning based on any theory. And besides, Morality is a special subject and not taught by professional teachers, but by homeroom teachers, even in junior high schools. On the other hand, there are much more units available for training over Social Studies in junior high school, so the students could get more professional instructions about the theory of critical history learning and the way of its realizing into lessons, investigating the characteristics and problems of the traditional and other types of theories inclusive of Umezu's theory of history learning. In this case, a fundamental question would be raised: Is the dual subjects system necessary and appropriate for citizenship education at all?

In any of the cases above, the "chronological and complete" contents organization should be reconsidered, whether it should be replaced with a thematic organization of various beliefs and norms, acts and systems/orders, if history learning should contribute to citizenship education more effectively.

CONSTRUCTING A STANDARDIZED TEST

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Abstract

This paper is aimed at describing what a standardized test is and how it is constructed. A standardized test should yield good validity and reliability as well as practicality. This kind of the test is considered as a good instrument of measurement. Constructing a standardized test requires some steps. These steps lead to getting good validity, realibility, and practicality of the test. The only valid and reliable test can be an interpretable mesurement.

Keywords: Test, Validity, Realibility, Practicality

1. Introduction

Testing has been side by side with teachers. This implies that, one of them, teachers use tests (teacher-tailored tests) in almost every occasion in their academic routines. They may test their students regularly, for example, monthly, termly and/or annually. However, there are at least two fundamental questions arise in line with the teacher-tailored tests, that is "Are the tests valid?" and "Are the tests reliable?". Most teachers do not really care about reliability of their tests, but they implicitly care about validity of their tests. This is because they usually devise tests on the basis of what they have taught without thinking the consistency or stability of the test. Therefore, they very often do not feel confident if they have to answer some fundamental questions related to the ways they rank their students. This is mainly because their tests do not have any information on reliability.

Validity and reliability of tests are fundamentally important. This is because if the tests are not valid and reliable, then the results of the tests are not interpretable. This

means that the tests should have validity and reliability in order that the results can be used as interpretable measurements.

This paper is generally concerned with a test which has good validity and reliability. This kind of test is generally known as a standardized test. This is because a standardized test is, among others, a valid and reliable test. The focus of this paper will be on constructing a valid and reliable test. Therefore, this paper will first of all begin with a short description on what a standardized test is, and then it will describe the ways that should be done in line with getting validity and reliability of a standardized test, and finally it ends with some conclusions.

2. A Standardized Test

The term "test" is a simple and widely used but it paradoxically somewhat vague. Ahmann and Glock (1981) generally define a test so broadly as to include some evaluation procedures that yield only verbal descriptions of student traits, and specifically, it is nothing more than a group of questions to be answered or tasks to be performed. Unlike Ahmann and Glock, Cronbach (1970) provides a bit more specific definition. They claim that a test refers to any systematic procedures for observing procedures for observing a person's behaviour and describing it by means of a numerical scale or a category system (Cronbach, 1970). Furthermore, Brown (1987) defines a test even more specific than those described earlier. He defines a test as a method of measuring a person's ability or knowledge in a given area. All these three definitions at least provide one idea that a test is an instrument that can be used for the purpose of measurement.

A standardized test is generally considered as a good test. A good test, according to Harris (1969) and Brown (1987), has to have three characteristics – reliability, validity and practicality. In line with three characteristics, Harris (1969) claims that reliability refers to stability of test scores, validity concerns with the questions "What precisely does the test measure?" and "How well does the test measure?", and

practicality relates to economy (cheap), ease of administration and scoring, and ease of interpretation. However, Brown (1987) provides information on these three characteristics a little bit different from those claimed by Harris. He says that a reliable test is a test that is consistent and dependable, validity is the degree to which the test actually measures what it is intended to measure, and a test ought to be practical within the means of financial limitations, time constraints, ease of administration, and scoring and interpretation.

Among those three characteristics, practicality is considered not really a fundamental pre-requisite. This is because if a test, for example, is expensive, difficult to administer, score and interpret does not affect the reliability and validity the test itself. Therefore, practicality may, to some extent, be neglected, but reliability and validity of test in any condition cannot be avoided. This is because a test as an instrument has to be valid and reliable in order that the results can be interpretable. Therefore, Adkins (1974), Kline (1975), Ahmann and Glock (1981), Gronlund (1988), and Rust and Golombok (1989) claim that a good test must be reliable and valid.

In line with reliability and validity, Rust and Golombok (1989), and Hieronymus, Lindquist and France (1988) provide clearer definitions than Harris (1969) and Brown (1987) do. Validity is concerned with whether the test is measuring what is supposed to measure (Rust and Golombok, 1989; and Hieronymus, Lindquist and France,1988). Reliability is concerned with the extent to which test scores measure "true" variance and is expressed numerically in the form of a reliability coefficient ranging from 0 – 1 (Hieronymus, Lindquist and France,1988).

In short, a standardized test as a good test should be valid, reliable and practical. However, practicality may possible be neglected but not validity and reliability. In other words, a standardized test must at least be valid and reliable.

3. Constructing A Standardized Test

Constructing a standardized test is equivalent to constructing a good test. Constructing a good test should be done scientifically reasonable and widely acceptable. Besides, a good test must have distinct features that make it different from bad one. It must be reliable and valid. Therefore, to determine the merit of any test, Downie and Health (1974) claims that test results must be subjected to an item analysis. The analysis of test item, as Downie and Health further claims, leads to three kinds of information: (1) difficulty of the item (p) – proportion of individuals who answer an item correctly, (2) the discrimination index of the item (r) – a measure of how well the item separates two groups (good and poor ones), and (3) the effectiveness of the distracters – how the incorrect responses in the multiple-choice item are working. The results of analysis of test item finally provide information of reliability and validity of the test.

But, before describing how to get a reliable and valid test, first of all, general ways of constructing a test will be described. In constructing tests, there may be slightly different steps that have to be taken. This is because different tests may require different prerequisites, e.g. constructing a norm-referenced test may have different steps from constructing a criterion-referenced test.

In general, among others, Harris (1969), Walsh and Bezt (1995) and Sofendi (1998) suggest general ways of constructing a good test.

Harris (1969) proposes seven general steps in constructing a test. The steps are (1) planning the test, (2) preparing the test items and directions, (3) reviewing the items, (4) pretesting the materials, (5) analyzing the pretest results, (6) assembling the final form, and (7) reproducing the test.

Unlike Harris, Walsh and Bezt (1995) only claims six general steps in constructing a test. They are: (1) beginning with a careful, detailed definition of the attribute,

construct or characteristics to be measured, (2) developing test items that are related to the content (i.e. definition), (3) administering the items to a preliminary sample of subjects – the subjects in this group should be representative of the population of subjects for whom the test itself is intended, (4) refining the items, refining the items means eliminating items that do not have the properties we had hoped for and selecting items that have particularly desirable properties, through item analysis (to find the item difficulty and item discrimination) and expert judgment (to get information on the appropriateness of test item(s), (5) administering the revised test to a new sample of subjects, and (6) examining the evidence for reliability and validity, and compute normative data.

However, sofendi (1998) claims more steps than those proposed by the two earlier experts. He suggests ten general steps that should be done in line with constructing a test. The steps are as follows: (1) identifying and classifying objectives and areas, (2) selecting and determining the test type, (3) determining the total number of test items and test length, (4) deciding the levels of cognitive domains and weighing the test items, (5) devising the test items, (6) asking for experts' judgements on appropriateness and difficulty levels of test items, (7) revising the test items, (8) trying out the test, (9) analysing the results, and (10) producing the final test.

The above three general steps proposed by Harris (1969), Walsh and Bezt (1995), and Sofendi (1998) can be summarised into five very general steps. They are preparing, devising, trying out, analysing and producing the test. All these steps are ultimately aimed at finding out the validity and reliability of the test. For example, preparing and devising the test are aimed at getting a test draft. This test draft is then tried out to get some data that will be used to find out the validity and reliability of the test in the analysing step. If good validity and a good reliability coefficient of the test have been obtained then the final form of the test can be produced.

As this paper focuses on the validity and reliability of standardized test, therefore, the ways of getting the validity and reliability will be explored further.

Validity of test items can be obtained by asking for experts' judgements. Experts' judgments can be obtained before the test is tried out. However, before asking for experts' judgments, the test maker should first of all devise ranks/classifications of appropriateness and difficulty levels of test item so that the experts can give reasonable judgements on the test items. The validity of the test items may be different from one kind of test to another. However, in general, according to Rust and Golombok (1989) there are five kinds of validity can be obtained from one test. They are (1) face validity - it concerns the acceptability of the test items, to both test user and subject, for the operation being carried out, (2) content validity - it examines the extent to which the test specification under which the test was constructed reflects the particular purpose for which the test is being developed, (3) predictive validity - it is the major form of statistical validity and is used wherever tests are used to make predictions, (4) concurrent validity - it is statistical in conception and describes the correlation of a new test with existing tests which purport to measure the same construct, and (5) construct validity - it is the primary form of validation underlying the trait related approach to psychometrics.

Reliability of a test, according to Rust and Golombok (1989) can be obtained through one of four techniques. The four techniques are (1) Test-Retest Reliability - it involves administering the test twice to the same group of respondents, with an interval between the two administration of, say, one week. This would yield two measures for each person, the score on the first occasion and the score on the second occasion. A Person product-moment correlation coefficient calculated on these data would give us a reliability coefficient, (2) Parallel Forms Reliability - two versions of a test are linked in a systematic manner and are intended to measure the same construct (e.g. 2 + 7 in the first version of an Arithmetic test, and 3 + 6 in the second).

Two tests constructed in this way are said to be parallel. To obtained the parallel forms reliability, each person is given both version of the test to complete, and we obtain the reliability by calculating the Pearson product-moment correlation coefficient between the scores for the two forms, (3) Split Half Reliability - it involves administering the test once. Then, each paper (a test) is randomly split in two, e.g. odd-numbered items and even-numbered items or other splits, to make half-size versions of the test. So, for each individual two scores are obtained, one for each half of the test, and these are correlated with each other, again using the Pearson product-moment correlation coefficient to get the reliability of half of the test. To obtain the whole test, we apply the Spearman-Brown formula, and (4) Inter-Rater Reliability or Inter-Marker Reliability - when different markers of the same essay tend to give different marks, or different interviewers may make different ratings of the same interviewee within a structure sets of ratings respectively using the Person product-moment correlation coefficient between the scores of the two raters.

In line with a standardized test as experts claim as a good test, the test must be valid and reliable. The test can generally be considered valid and reliable if it contains at least four out of five types of validity (face validity, content validity, predictive validity and construct validity), and a reliability coefficient from 0.90 to 1.

The following is an example of how to get the realiability coefficient of the test: Calculating Reliability Coefficient of a Test by Using a Split-half Method

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
X	Y	x	y	Zx	Zy	ZxZy	x^2	y^2	xy
20	12	7	2	1.61	0.54	0.8689	49	4	14
18	16	5	6	1.15	1.62	1.8637	25	36	30
16	10	3	0	0.69	0.00	0.0000	9	0	0
15	14	2	4	0.46	1.08	0.4968	4	16	8
14	12	1	2	0.23	0.54	0.1242	1	4	2
12	10	-1	0	-0.23	0.00	0.0000	1	0	0
12	9	-1	-1	-0.23	-0.27	0.0621	1	1	1
10	8	-3	-2	-0.69	-0.54	0.3726	9	4	6
8	7	-5	-3	-1.15	-0.81	0.9315	25	9	15
5	2	-8	-8	-1.84	-2.16	3.9744	64	64	64

$\sum X=130$ $\sum Y=100$ Sx=4.34 Sy=3.71 $\sum ZxZy=8.6947$

$\sum x^2=188$ $\sum y^2=138$ $\sum xy = 140$

X=13 Y=10

Notes:

Column 1: odd-numbered items

Column 2: even-numbered items

Column 3: Deviation of each of X scores from the mean (e.g. 20 -13 = 7)

Column 4: deviation of each of Y scores from the mean (e.g. 12 – 10 = 2)

Column 5: standard deviation of x (column 1), (e.g. 7 : 4.34 = 1.61)

Column 6: standard deviation of y (column 2), (e.g. 2 : 3.71 = 1.54)

Column 7: product of the two Z scores (e.g. 1.61 x 0.54 = 0.8694)

Sx (4.34): the standard deviation of x or the standard deviation of column 3

Sy (3.71): the standard deviation of y or the standard deviation of column 4

The Person Product-moment Correlation Coefficient $\quad : r = \dfrac{\sum Z_x Z_y}{N}$

The Spearman-Brown Formula $\quad : r_{tt} = \dfrac{2\ roe}{1 + roe}$

The scores of ten individuals on two variables, X and Y (columns 1 and 2). Beneath each of these is the mean. In column 3 is the deviation of each of the X scores from the mean of X, and in column 4 we find the deviation of each of the Y scores from the mean of Y. Beneath these two columns are the standard deviations of the columns. In columns 5 and 6 are the standard scores for each of the scores in columns 1 and 2. These were obtained by dividing each score in column 3 by Sz (4.34) and each value in column 4 by Sy (3.71). Here we are using the usual formula for Z. $Z = x/s$. Column 7 is the product of the two Z scores, the product of the values in columns 5 and 6. These are summed, and the Pearson r is obtained by the following formula, which describes r as the mean Z score product:

$$r = \frac{\sum Z_x Z_y}{N}$$

By substituting into this formula, we obtain:

$$r = \frac{8.6947}{10} = 0.869 \text{ or } 0.87$$

$$r_{tt} = \frac{2\ (0.869)}{1 + 0.869} = 0.93 \text{ (this is the reliability coefficient of the test)}$$

4. Conclusions

Having described briefly what a standardized test is and how to construct a standardized test, two conclusions can be drawn, that is (1) a standardized test as a good test must be valid, reliable and practical but practicality, to some extent, can be neglected, and (2) validity and reliability of standardized test can only be obtained through reasonable steps in its construction.

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SUCCESS IN LEARNING ENGLISH: THE STUDENTS' DEFINITION

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Abstract

Individual learner differences and success in learning English are not new topics. Many researches were conducted to find out the personal characteristics of learner that make one learner more successful than another. Defining success is a difficult, but every student has their own definition of what success in learning English is. Inspired by Mardiah (2015) research about success in second language learning, this paper is aimed in describing the definition of success in learning English from students' point of view and their arguments behind it. The respondent of this research is Public Health students of STIK Bina Husada Palembang who took English subject. The definitions are classified into three categories; know the basic rule of the language, speak fluently like native speaker, and use the language to communicate. The definition and its argument reflect the students' goal in learning English.

Keywords: Success, Learning, English

1. Introduction

Second language (L2) learners vary on a number of dimensions to do with personality, motivation, learning style, aptitude and age. There are two basic possibilities regarding which aspect of SLA is affected by individual learner factors. One is that differences in age, learning style, aptitude, motivation, and personality result in differences in the route along which learners pass in SLA. The other is that these factors only the rate and ultimate success of SLA.

In the study on predicting student success with the Learning and Study Strategies Inventory (LASSI), Hedricks (1997) discovered that motivation and attitude were the best predictors of student academic achievement. Attitude has close

relationship with motivation. Brown (2007) states that second language learners benefit from positive attitude and that negative attitude may lead to decreased motivation. The students who have positive attitude toward English and its culture are expected to be able to master English better than the students who have negative attitude toward English, because they will have stronger motivation to learn a language, while students who have negative attitude toward a language will do the opposite. The students who like to study English will study harder than students who do not like to study English; hence, attitude becomes important factor in language learning. For this reason, the learners should build good attitude in the teaching and learning process; the positive attitude toward English will help the students themselves in mastering it well, and if the students have negative attitude toward English, they will be indifferent toward English.

While in Alsayed study (2003) determining successful language learners was done on basis of the subjects' IELTS scores. So, is having the highest score in TOEFL or IELTS the descriptor of a successful language learner? Clear definition of success in learning English is needed, not to measure the learners' characteristics but to help us understand learner differences in learning. Whose definition of success? The definition that comes from the students themselves.

2. Theoretical Background

Gardner (2006) insists that students' attitude towards the target language group will affect their success in learning that language. A student, who does not like the native speakers of English or views his/her own culture superior to the English speaking culture, can walk into a foreign language classroom and quickly generalize his dislikes; he or she will dislike school, teacher, book, homework, etc. Students can have either negative or positive attitudes towards learning English. If their attitudes are positive, they will show an interest in learning English. On the other hand, if their attitudes are negative, they will dislike learning English or even feel reluctant to learn

it. Thus, it can be argued that attitudes towards learning a language may influence performance in the language.

Learning will be facilitated if the student holds positive attitudes towards what he learns including the language and this, in turn, will affect the student's performance in that language.

The good language learner

There have been a number of attempts to specify the qualities of the 'good language learner'. Ortega (2013) stated the good language learner will:

1. Be able to respond to the group dynamics of the learning situation so as not to develop negative anxiety and inhibitions;

2. Seek out all opportunities to use the target language;

3. Make maximum use of the opportunities afforded to practice listening to and responding to speech in the L2 addressed to him and to others-this will involve attending to meaning rather than to form;

4. Supplement the learning that derives from direct contact with speakers of the L2 with learning derives from the use of study techniques (such as making vocabulary lists)-this is likely to involve attention to form;

5. Be an adolescent or an adult rather than a young child, at least as far as the early stages of grammatical development are concerned;

6. Possess sufficient analytic skills to perceive, categorize, and store the linguistics features of the L2, and also to monitor errors;

7. Possess a strong reason for learning the L2 (which may reflect an integrative or an instrumental motivation) and also develop a strong 'task motivation' (i.e. respond positively to the learning tasks chosen or provided);

8. Be prepared to experiment by taking risks, even if this makes the learner apper foolish;

9. Be capable of adapting to different learning conditions.

3. Method

This is a descriptive qualitative research. The participant of this research were all fourth semester students of Public Health Science who took English subject in academic year 2015/2016 STIK Bina Husada Palembang. They were all 32 participants.

What is the definition of success in learning English and what arguments base the definition are two questions being answered in this research. The data was obtained by asking the students to answer two open questions: Do you have your own definition about success in learning English? if yes, what is it and why do you define so?. They answered them in written form. These self-report data then are grouped into their categories.

4. Result and Discussion

From the written response, there are various definitions and arguments were obtained. In the following discussion, some answers from the students were quoted as it is. There were no editing process given to their content, structure or language. The data were grouped into three main definition; 1. Know the basic rule of the language, 2. Speak fluently like native speaker, and 3) use it to communicate. There are also exceptions in the data and is grouped into other responses.

Knowing the basic rule of the language

The first definition, knowing the basic rule of the language, was defined by one student. The emphasis is on knowing the basic rule of the language is given on grammatical rules and linguistics components. Such success is defined below

(1) *Grammar is very important to know. Because when we want to talk in English, we must use the right grammar. If we use the wrong grammar, the meaning of our sentences will be wrong too. Grammar is the basic formula to*

learn English. The example of grammar are like plural nouns,passive voice, question tags, personal pronoun, also too either, and etc. The first thing in success in learning English is when we can use the right grammar

(2) Success in learning english is practice anything, like pasive or active english.

(3) If you just started learning English, you first need to know some basic rules of the language. Developing a solid foundation in English grammar will not only help you create your own sentences correctly but will also make it easier to improve your communication skills in both spoken and written English

Speaking fluently like native speaker

Speaking fluently like native speaker is defined by one of the students, her definition was:

(4) I am confident that my skills in terms of writing English sentences would be better. Also my ability to speak like native and understand conversations in English can be increase.

Using English to Communicate

There were not all students stated that success in learning English means able to speak like native speaker and knowing the basic rule of the language. Most of them, can fulfill their needs of communication is success. For them, using English to communicate such as defined below:

Success in learning english for me if i can use this language to communication with foreign people and many places. For example, it is used in business, travelling, computer language, movie, and so on.

(5) Success in learning English is , if the person is able to speak in the English language with verbal or transcription. Based on that definition success in learning English is the people able to understand , create and use words to communicate with others. Because if some one just able to used a language with oral or just write sentences it's just a part of mastering a language like

active or passive language. So, if someone had succeed learn english he or she able to communicate to another people with active or passive language.

Others

Out of the above three groups of definition, there are students who stated their answer in different ways, like (7), (8), (9) below:

(6)

uccess in learning English, according to me is a learning experience that we think are necessary effort or struggle and sacrifice that truly, who could not come suddenly without sooth and sincerity.

(7)

es, because in my opinion , success of learning English does not depend on the intelligence , but rather relies on the motivation and diligent effort , painstaking (diligently) continuous learning .

(8) success is the achievement of objectives in learning English and can apply it in life everyday.

5. Conclusion and Remark

Success is the accomplishment of an aim or purpose. So, when defining success in learning English, it means the accomplishment of the learning purpose itself.

Learning English involves the acquisition of the knowledge of English, this is a commonsense view of learning that has implications for how to teach, individual differences in defining success in learning English tell us to set the standards by ourselves. Why do we force the students to reach high standard when their definition of success in learning English only involve in simple communication in easy every day need? Why do we ask them to get 450 in TOEFL test when success is not laid based on their definition.

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THE CORRELATION BETWEEN READING HABIT AND READING COMPREHENSION ACHIEVEMENT OF 12^TH GRADE STUDENTS OF MA. PP. QODRATULLAH LANGKAN

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Abstract

The main objectives of this study are to find out; 1) how is the students' reading habit, 2) how is the students' reading comprehenaion achievement, 3) is there any significant correlation between reading habit and reading comprehension of 12th grade students of MA. PP. Qodratullah. The writer used descriptive quantitatif design to describe the data. The population of the study was five classes of 12th grade students of MA. PP. Qodratullah. The sample of this study was 168 students. The writer used questionnaire (Janthong, 2010) and reading test to collect the data. The test was administered once as post-test. Before the post-test was administered to the sample students, the validity and reliability of the instruments were estimated. The result of the test were analyzed by using Pearson Product Moment in SPSS (Statistical Package for Social Science) 16.0. From the analysis, it was showed that the t-obtained was 0.309. It could be concluded that there was no significance correlation between the two variables since the t-obtained was higher than 0.05. The factors that influnced this condition were; 1) the misperception of the students toward good reading habits, 2) students preferred to read for pleasure (comics, newspapers, sport magazines), 3) the students preferred to read for pleasure, while the tests of this research were taken from reading for academic purpose materials. However, building a good reading habit is essential to be recommended because it is very important to develop the students' reading comprehension achievement.

Keywords: *Reading habit, reading comprehension achievement*

1. Introduction

In learning English, there are four skills that they are listening, speaking, reading, and writing. Eventhough, reading comes as the third skill in the recent curriculum of 2013, reading is considered as the most important skill. It is supported by Patel and Jain (2008, p.13) that reading is most useful and important skill for people. This skill is more important than speaking and writing.

According to Nunan (2006, p.69), reading is a set of skills that involves making sense and deriving meaning from printed word. It means that reading is a process to establish the reader's comprehension which involves making sense and

deriving meaning from printed word with different purposes. Meanwhile, Patel and Jain (2008, p.13) state that reading means to understand the meaning of printed words i.e written symbols. Reading is an active process which consists of recognition and comprehension skill. Lone (2011, p.1) says that reading as the ability to recognize, and examine words or sentences and understand the information within. Further, he adds that reading is a cognitive process of understanding a written linguistic message and to examine and grasp the meaning of written or printed characters, words or sentences. Palani (2012, p.92) continues that reading is a process of thinking, evaluating, judging, imagining, reasoning, and problem solving. In short, reading is an active process which involves making sense and deriving meaning from printed or written word as a means of understanding what has been read.

Collins and Collins (2002, p.9) say that reading is an essential skill, perhaps the most important skill, taught in schools. There are many reasons to clarify the important of reading skill, especially, English language. In this case, Rahman (2004, p.1) states that English is the number one library language of the world, a vast majority of world's library resources are in English, and the biggest publishing industries of the world publish books in English. Overall, it will be impossible to pursue meaningful higher education without the reading skill of English. Meanwhile, Patel and Jain (2008, p.13) clearly state that reading is an important activity in life with which one can update his or her knowledge. Reading skill is an important tool for academic success. Moreover, reading is regarded as the most dominant skill in learning any subject because the ability to read is not only performance to pronounce the passage but also the understanding of the message from a passage or text. Meanwhile, Schoenbach, et.al (2012, p.19) state that it is a complex process of problem solving in which the reader works to make sense of a text not just from the words and sentences on the page but also from the ideas, memories, and knowledge evoked by those words and sentences.As a means of problem solving, reading is considered as an important skill to be taught.

According to Pang, et.al (2003, p.6), reading is about understanding written texts. It is a complex activity that involves both perception and thought. Reading consists of two related processes: word recognition and comprehension. Word recognition refers to the process of perceiving how written symbols correspond to one's spoken language. Comprehension is the process of making sense of words, sentences and connected text. Based on Department for Education and Skills (2005, p.2) states that reading comprehension is an essential part of the reading process. Nunan (2006, p.71) adds that reading comprehension refers to reading for meaning, understanding, and entertaiment. It involves higher-order thinking skills and is much more complex than merely decoding specific word. Therefore, as the students read they have to understand what the have read as a part of their reading process because the aim of reading is comprehension.

There are several issues related to reading habit and reading comprehension achievement. Cha, Ko, and Tse (2008, p.2) stated that home environment positively correlates with children's reading comprehension achievement. It has been revealed that positive attitudes and high motivation are associated with reading achievement and reading habit.According to Zwiers (2004, p.3), reading habits more clearly describes the automatic and unconscious processes that are involved in constructing meaning from text. Thus, by this activity the readers can improve their reading ability. Meanwhile, Shen (2006) identifies reading habits, as how often, how much, and what the readers read (in Annamalai and Muniandy, 2013, p.33). It means that to get good understanding about what is read people need to read a lot. Reading a lot refers to the frequency of reading as well as the average time on reading and amount reading materials being read. Moreover, Patel and Jain (2008, p.114) say that reading habits not only help the student to get knowledge and wisdom from the cultural of heritage, but are also very helpful in passing for leisure period. It is supported by the research done by National Endowment for the Art of USA (2007, p.3-4), it is proved that habit of daily reading, for instance, overwhelmingly correlates with better reading skills and higher academic achievement. According to Elias and Ingram

(1977, p.23), the child who is unfamiliar with the reading experience, for example, whose home is devoid of reading materials, who has never been read to, or who has never come to see reading as a thing of important in his environment may lack such a realization even after entering school.

The purpose of this study is to describe the reading habit and reading comprehension achievement of 12th grades students of MA.PP.Qodratullah. Findings from this study will provide insights into the reading behaviours of these students. More importantly, constant reading will help students in academic achievement.

2. Theoretical Background

Concept of Reading

Richards and Renandya (2002, p.273) state that reading, then, is a skill which is highly valued by students and teachers. According to Nunan (2006, p.69), reading is a set of skills that involves making sense and deriving meaning from printed word. In short, reading is a process to establish the reader's comprehension which involves making sense and deriving meaning from printed word with different purposes.

According to Manzo and Manzo (1995, p.9), the act of reading is said to be composed of two parts: the process and the product. The process refers to the functions, or operations, that ones goes through in deriving meaning, whereas the "product"-or more appropriately "products" refers to the actual information and insights reached as a result of reading. Meanwhile, Collins and Collins (2002, p.8) say reading is a mental process. Although the eyes are involved in sending information about print to the brain, the brain performs the real act of reading. Then, reading is a mental process which involves deriving meaning and sending information about print to the brain till being the real action of reading.

Concept of Reading Habit

According to Andrew (1903, p.121), a habit, from the standpoint of psychology, is a more or less fixed way of thinking, willing, or felling acquired

through previous repetition of a mantal experience. It means that, a habit is a mental process as a means of thinking. Moreover, Wood and Neal (2007, p.843) state habits are learned dispositions to repeat past responses. They are treagered by features of the context that have covaried frequently with past performance, including performance locations, preceding actions in a squence, and particular people.

According to Zwiers (2004, p.3), reading habits more clearly describes the automatic and unconscious processes that are involved in constructing meaning from text. Then, reading habit refers to the automatic process as the readers read the textual material and deriving meaning unconsciously. Zwiers (2004, p.3), adds comprehension habits are the split-second thought that kick in constantly to help a proficient reader actively construct meaning. Then, by building reading habit will constantly help the readers construct meaning actively. On the other side, Patel and Jain (2008, p.114) state that reading habits not only help the student to get knowledge and wisdom from the cultural of heritage, but are also very helpful in passing for leisure period.

3. Method

In this study, the writer implements *Descriptive Quantitative method*. This research is classified as a descriptive quantitative method because this type of research involves either identifying the characteristics of an observed phenomenon or exploring possible correlation among two or more phenomena (in Leedy, 2001, p.191). The researcher used this method because he wanted to describe the data and analyzed them based on the problems and objectives of the study. The procedures were, first, the writer measured the students' reading habit by using questionnaire, second, the writer used reading test to find out the students' reading comprehension. After that the writer made correlation between two variables by *Pearson Product Moment in SPSS 16* based on the result of questionnaires and test.

Population and Sample

Fraenkel (2012, p.91) states that population is the larger group to which one hopes to apply the result. Furthermore, Creswell (2012, p.142) adds that it is a group of individuals who have some common characteristic that the researcher can identify and study. In this case, the target populations were 12th grade students of MA. PP. Qodratullah.

The sample of this research was taken by using purposive sampling technique. According to Leedy (2001, p.219), in purposive sampling, people or other units are choosen, as the name implies, for a particular purpose. It is supported by Singh (2006, p.91) that the purposive sampling is selected by some arbitrary method because it is known to be representative of the total population, or it is known that it will produce well matched groups. The writer chose the samples based on the different of knowledge background. Thus, the sample was chosen to correlate their reading habit and their reading comprehension achievement. The total number of the samples are 168 students of 12th grade students of MA.PP.Qodratullah.

4. Result and Discussion

Validity Test

Fraenkel, et. al (2012, p.147) state that validity has been defined as referring to the appropriateness, correctness, meaningfulness, and usefulness of the specific inferencesresearchers make based on the data they collect.Then, to find out the validity of questionnaire, the writer analyzed the data based on the theory and judgement of the experts by using Pearson Product-Moment coeficient in SPSS 16. Meanwhile, the researcher applied the Pearson Product-Moment coeficient to know the validity of the test.

In this study, the writer did try out the test items to 12th grade students of MA. PP. Qodratullah Langkan. The items were reading test and questionnaire. The reading test consisted of 50 questions, while the questionnaire consisted 20 question items. Pearson Product Moment in SPSS 16was used to find out the validity of

reading test and questionnaire. According to Basrowi (2007, p.24), if the result of the test shows the rcount is higher than rtable (0.381), it means that the items is valid. Then it was found that there were 42 questions for reading test and 15 questions for questionnaire considered valid.

Reliability Test

Another characteristic of a good test is relability. According to Fraenkel, et. al (2012, p.154), reliability refers to the consistency of the scores obtained—how consistent they are for each individual from one administration of an instrument to another and from one set of items to another. Cronbach Alpha was used to find out the reliability of reading test, while the writer used Split Half method to find out the reliability of questionnaire. Fraenkel and Wallen (2012: 163) state that the score is considered reliable if the score of significance is at least or preferably higher than 0.70. Therefore, it was found that the reading test score was 0.974 and the questionnaire score was 0.904 (<0.70). it meant the items were reliable for the real research.

Analysis on Students' Reading Habits Questionnaire

In this study, the questionnaire items were given to the samples of 12th grade students of MA. PP. Qodratullah Langkan that consist of 168 students. Th questionnaire comprised 15 questions item which dealt with their reading habits. From the result of students' questionnaire, the writer found that the mean score was 55.58 with the standard deviation was 7.942. The minimum score was 36 (5 students), and the maximum score was 69 (9 students). There were 46 students had a very good reading habit (27.4%), the majority of them had a good reading habits 109 students (64.9%), and only a few number of students had an average reading habit 13 students (7.7%), at last, none of them had a poor and very poor reading habit.

Analysis on Students' Reading Comprehension

After computing the students' reading comprehension achievement test, the writer found that the students' mean score for their reading comprehension achievement was 39.55 with the standard deviation was 13.062. There were 2 students had good reading comprehension achievement (1.2 %), 18 students had average (10.7%), the majority of them 148 students had poor reading achievement (88.1%), and none of them had excellent reading achievement. The minimum score of this term was 12 (2 students), and the maximum score was 80 (1 student).

Normality Test

Normality test was used to know whether the population model which becomes the sample of the research from each variable procedures, there was still possibility that the standard deviation in the data from the result calculation was still not normal. Therefore, by using Kolmogorov Smornov in SPSS version 16.0, it was be known whether the deviations in the measurement of the samples from each variables were still normal or not. Based on the analysis of the questionnaire, the result was 2.058. The p-output (Asymptotic significance) was 0.367. It means that the data distribution was normal because the p-output (Asymptotic significance) was higher than mean significant different at 0.05.

Meanwhile, based on the analysis of the reading test, the result was 2.058. The p-output (Asymptotic significance) was 0.115. It means that the data distribution was normal because the p-output (Asymptotic significance) was higher than mean significant different at 0.05.

Homogeneity Test

Homogeneity test was used to know the population variances which becomes the sample of the research from each variables. Although the sample was taken procedurally through purposive sampling procedure, there was still possibility that

the variances from the result calculation was still not homogeny. Therefore, by using Chi-Square Test in SPSS 16.0, it was known whether the variance in measurement of the sample from each variable still homogeny or not. Based on the analysis of the questionnaire, the result was 60.286. After consulting Chi-Square table with df 23, on the 0.05 level significant, the p-output (Asymptotic significance) was 0.078. It means that the data distribution was homogeny because the p-output (Asymptotic significance) was higher than mean significant different at 0.05. Meanwhile, based on the analysis of the reading test, the result was 82.000. After consulting Chi-Square table with df 24, on the 0.05 level significant, the poutput (Asymptotic significance) was 0.115. It means that the data distribution was homogeny because the p-output (Asymptotic significance) was higher than mean significant different at 0.05.

Hypothesis Testing in Measuring Significance Correlation

To find out the correlation of students' reading habit and their reading comprehension achievement, Pearson Product Moment was applied. It was found that the correlation between the two variables was .000 with significance level .309. It meant that there was a very weak correlation between the students' reading habits and their reading comprehension achievement. Therefore, the correlation was not significant (sig.2 tailed = .309 or > 0.05).

5. Conclusion and Remark

In this study, the writer concluded that there was low correlation between 12th grade students' reading habit of MA. PP. Qodratullah and their reading comprehension achievement. This phenomenon was caused by several reasons such as; 1) the misperception of the students' point of view in their comprehension toward good reading habit, 2) the students wanted to look good, though they were expected to answer the questionnaire honestly, and 3) the students preferred to read for pleasure, while the tests of this research were taken from reading for academic purpose materials. In fact, this study showed that the majority of 12th grade students of MA.

PP. Qodratullah had good reading habits (65%), but they had low reading comprehension achievement (86.5%). Consequently, the alternative hypothesis(Ha) is rejected and the null hypothesis (H0)is accepted. It means, the correlation between the students' reading habits and their reading comprehension achievement was not significant.

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ENGLISH TEACHING IMPLEMENTATION IN INDONESIAN *PESANTRENS*: TEACHERS' DEMOTIVATION FACTORS

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Abstract

This qualitative inquiry is aimed at analysing demotivation factors of teachers in Indonesian *Pesantrens*(Islamic Boarding School) in implementing EFL teaching. The research is appropriately undertaken as a qualitative research with a case study approach. The research sites for this study are two *Pesantrens* in Jambi, one of Indonesian Provinces. Eight English teachers were involved as the participants to providebroader perspectives of the participants in relation to the EFL teaching. The researcher usedthree kinds of instruments in collecting the data; interview, focus group discussion, and document review. The researcher conducted the observation, interviewed the teachers, held focus group discussion, and collected related documents to support the data.To assess the trustworthiness of the research, the researcher did triangulation, member checking and reflexivity. The findings describe working condition (financial matter and working overload); curriculum (rapid changing of Indonesian curriculum and lack of teaching and supporting materials); facilities (classroom temperature and over-crowded classroom); students (lack of basic knowledge and lack of motivation).

Keywords*:*Indonesian, EFL Teacher, Implementation, and Demotivation Factors

1. Introduction

Demotivation studies of teachers have been a thought provoking theme for educational researchers for years(Spear, Gould, & Lee, 2000; Dinham& Scott, 2000; Zhang, 2007; Addison &Brundret, 2008; Kiziltepe, 2008). The previous studies mainly discussed that the demotivation factors which significantly contributed to the quality of education, teaching and learning process, and graduate quality were rigged on the area of students' lack motivation, limited sources of teaching and learning materials, insufficient salaries, big classes, and curriculum matters (Johnson, 2000).

These studies are considered significantly useful for both the betterment of education system and evaluation to consider a new educational policy and/or regulation.

In the area of EFL (English as a Foreign Language), teachers demotivation factors also become one of popular research focuses (Johnson, 2000; Mukminin, Muazza, Hustarna, & Sari, 2015; Tziava, 2003; Aydin, 2012;Lynche, 2008; Fattash, 2013; Hettiarachchi, 2013; Soureshjani&Riahipour, 2012). Some of the studies show that the demotivating problems of Teachers of English are related to teaching profession, curriculum, working condition, students and their parents, colleagues and school administrators, and physical conditions (Aydin, 2012; Fattash 2013; Johnson, 2000).

Although there are plenty of studies in relation to the topic of English teachers' demotivation factors, there are a few research results published in context of Indonesian EFL. One of the few published results isresearch by Mukminin, Muazza, Hustarna, & Sari (2015) which found that students' lack of proficiency in English and motivation, limited facilities, and overloaded classrooms are among the factors of English teachers' demotivation.They also offered policy recommendation in accordance with their findings; providing teaching media, providing satisfying language learning facilities, and facilitating Indonesian teachers of English with EFL trainings and seminars. With few published research on the topic, it is important that the continuity of the research on the similar topic "Teachers' demotivation factors".

The current study proposes the teachers' of English demotivation factors toenrich and broaden research horizons and sources in the context of Indonesian English teaching and learning process. Additionally, this study was conducted in Indonesian *Pesantrens* (Islamic Boarding School). P*esantrens* in Indonesia have been significantly contributing to Education across the country since pre-Indonesian Independence time. As the oldest Indonesian education system, *Pesantrens* have historically implemented EFL as one of compulsory subjects in their curriculum (Habibi&Sofwan, 2014). Thus, the research is purposed to deeply analyze and elaborate factors of teachers' of English demotivation in two Indonesian

*Pesantrens*seen from the teachers' perspectives. Further, the research is hoped to significantly contribute to EFL development, Indonesian educational system, and Islamic education around the world.

2. Method

The research was appropriately undertaken as a qualitative researchwith a case study approach. Qualitative research is a kind of educational research in which the researcher focuses on the views of participants. The goal of conducting a qualitative study has historically been "to explore, explain, or describe the phenomenon of interest" and a case study is one of the qualitative traditions (Creswell, 2007; Patton, 1990). It is commonly used to understand people's experiences and to express their perspectives. Meanwhile, according to Johnson and Christensen (2008), a case study is a form of qualitative research that is focused on providing a detailed account of one or more cases.

This research utilized the qualitative method within a case study in order to describe or elaborate the research problems in relation to teachers' demotivation factors in Indonesian *Pesantrens'* EFL.The study utilized *interview, focus group discussion (FGD), and document review* as the instruments of data collection. The interview sessions were conducted for three weeks in December, 2015 with all the participants. The FGD sessions were held twice in two different places, FGD 1 in *Pesantren*Aljauharen and FGD 2 in *Pesantren* Ass'ad. The interview and FGD sessions were carried outin Bahasa Jambi to give the participant a free room to argue and opine and recorded with a smarthphone, Lenovo K4 Vibe note. Further, the documents were obtained by asking them from the administration staff working in the two *Pesantrens*and other resources.

The analysis of the data from the interview and FGD were transcribed, codified using an online qualitative application Atlas.ti, divided into themes and elaborated. The document data were reviewed to support all data from interview, FGD, and observation.

To establish the trustworthiness of the study or to verify the accuracy of the data, findings, and interpretations, several measures take to insure the trustworthiness of the data collected (Creswell 2007). Further, the trustworthiness of the research was assessed using triangulation, member checking, and self-reflection.Triangulation is a method used by qualitative researchers to check and establish validity in their studies by analyzing a research question from multiple perspectives (Patton, 1990).In addition to the triangulation, The researcher transcribed the interview excerpts. After transcribing the data, the researcher gave it back to the participants that have been interviewed to make sure what they said are right, as a system of checks of the data or member checking (Patton, 1990). In qualitative research, self-reflection is the attempt of researchers to explicitly identify their biases, values, and personal interest about their research topic, process, and access to the research participants (Creswell, 2007).

Sampling procedure of this research is both purposive. In purposive sampling, the reseacher specifies the characteristics of participants and then tries to locate individuals who have those characteristics (Creswell, 2007). Theories say that for qualitative research, the number of participants is not definite; they can be one or more (Creswell, 2007; Merriam, 1990). Patton (1990) stated that the participants in qualitative research are from 5 participants.The participants of the research were 8 English teachers (interview and FGD using) teaching in two Indonesian *Pesantrens*. In the research principle ethics, respect for persons requires a commitment to ensuring the autonomy of research participants where autonomy may be diminished and to protect people from exploitation of their vulnerability. The dignity of all research participants must be respected. Adherence to this principle ensures that people will not be used simply as a means to achieve research objectives (Mack, Woodsong, Macqueen, Guest, & Name 2005). In this research, names of the participants are a pseudonym in order to keep the participants confidentially and make them feel well- being as the participants.

Table 1.Research group participants.

No	Code	Age	School	Teaching Experience (Years)	Educational Qualification
1	T1	54		25	BA in Economics
2	T2	45		20	BA in Language Education
3	T3	35	Aljauharen	15	BA in Education
4	T4	32		7	BA in English Teaching
5	T5	49		23	BA in Language Education
6	T6	47		20	BA in Religion Education
7	T7	36	Ass'ad	15	BA in Language Education
8	T8	27		4	BA in English Teaching

Findings

The findings show working conditions, curriculum,and students and their parents are the demotivating factors in English teaching and learning in *Pesantren*s of Jambi, Indonesia.The main goal of this research was to investigate the demotivating factors among Indonesian *Pesantrens*'(Islamic Boarding Schools) teachers in teaching English as a foreign language at two*Pesantrens* in the city of Jambi, Indonesia. Due to the fact that every factor is involvedly implicated, it was difficult to jump to the conclusion which factors have more significant impacts than other factors leading to the teachers' performance in Teaching English as a Foreign Language, demotivation factors. However, through Glaser and Strauss's (1967) in the constant comparative method, four important and implicated themes presented in this research were;

Table 2. Themes and subthemes

No	Theme	Subthemes
1	Working Condition	1. Financial problems
		2. Teaching workload
2	Curriculum	1. Rapid changing of curriculum
		2. Lack of teaching and supporting materials
3	Facilities	1. Classroom condition
		2. Overcrowded classroom
4	Students and their parents	1. Lack of Students Motivation
		2. Students' Limited Knowledge of English

Working Condition

The findings demonstrated that the subject encountered certain problems pertaining to the demotivation factors that are related to the working condition in *Pesantrens*. This factor is triggered by the monthly cash which the teachers bring to home monthly and teaching hours that they have to face weekly.

Six out of eight participants are not yet government employees and five of them have not been certified. They usually earn approximately $150a month, the stipend which is under the Jambi minimum monthly wages, $200. These facts are revealed by almost all teachers in the interview session:

> "Teaching is very dedicated job here in our school. We have to teach 5 days a week. However, we still have a matter of financial. I can't afford the bills with the salary I earn from the *Pesantren*, paying my children schools, electricity, running water, food, and other daily needs. The result is, I must work hard to fulfill the needs, *Ngojek* (driving a motorbike as a public transportation), doing fishing in *Batanghari*river, and other jobs which could support our life" (T3)

> "One thing that the authority should really pay attention at is our payment. I am no civil servant. My salary is not sufficient to pay our bills. Such a pity thing to tell the truth but that is the truth. Many people say, if you want money, don't be a teacher. However I love being a teacher. Hoping every deed will be blessed by Allah, the Almighty God" (T6)

In the FGD session, all teachers almost agree on the payment that they earn from the institution is not sufficient for their daily need. Some teachers said that they have to do extra works to get more money to pay the bills:

"I think all agree on the financial matter that we face. It truly demotivates us to teach here in *Pesantrens*. We do hope that we will be given attention [from the authority]" (FGD 1)

"It is not all about the money but it is one of many factors demotivating us, teachers, in teaching. We have to do other jobs to pay our bills. As a consequence, we do not have full consents in doing our profession as teacher" (FGD 2)

However, teachers who are government employees do not have problems with the finance due to the more income they earn than contracted teachers get from Indonesian government, salary and other fringe benefits:

"The income we get from our boss [Indoensian government] is enough for us. It includes salary and other extra money. Furthermore, as certified one, I also get my certification money. It is a double salary" (T1)

The interview, FGD, and documentation data above indicated that one of the demotivating factors emerged for most teachers in Jambi *Pesantrens* is regular income. The teachers suggest that the government or related authorities pay more attention to the problems by giving more attention to solving the problems.

Beside the financial matters faced by the teachers, over workload is undeniably being one the major problems in teachers' teaching demotivation of English Language Teaching in Indonesian *Pesantrens*.There are 353 students with ten classes in PesantrenAljauharen meaning there are 10 classes. In addition, there are more than 1000 students in Pesantren Assad with 33 classes. One of the programs of these two *Pesantren*requires their students to have Languages (Arabic and English)

courses as parts of their program besides regular English subjects in line with Indonesian National Curriculum. This workload becomes one of the factors demotivating teachers of English to do their job, teaching English:

> "I teach many classes. Here, in Ass'ad, there are more than a thousand students. We have to teach at night and in the morning as it is a part of the *Pesantren* programs. I believe it also becomes demotivation factors for us. Many things to do for our programs in *Pesantrens"*.(T7)

> "I think one of the problems in our *Pesantren* is the teaching workload. I teach more than 20 hours a week. Additionally, I have to do my extra works. It is such a tiring day for me though. However my dedication to teaching cannot be doubted". (FGD 1)

Curriculum

There are two main teachers' demotivating factors in regard to the curriculum implementation of English Language Teaching in these two *Pesantrens*. They are; the rapid changes of the curriculum and lack of teaching and supporting materials.

Indonesian Education curricula change rapidly. It is one of the problems in teaching situation of Indonesian *Pesantrens*. IndonesianPesantrens commonly promote two kinds of curricula; National curriculum which is implemented in morning time and Religion curriculum at night time, including these two *Pesantrens* (Habibi&Sofwan, 2016). The teachers in the FGD and interview sessions revealed:

> "We can't follow the change of the Indonesian curricula. This year [2015], there are two changes; 2013 curriculum and KTSP (2004 curriculum). We are confused what the government actually want us, teachers do. We have to again and again read the regulation. in addition, the trainings on the newest curriculum is not sufficiently available" (FGD 2)

> "I personally don't have any idea. I have to keep updating with our ministry policy. In our duty as teachers we have to do what our boss orders including the curriculum implementation. and I am sometime demotivated because of the regulation" (T4)

The phenomenon of the rapid and dynamic curricula changes has directly affected negatively onthe administration to providing teachers with teaching and other supporting materials in relation to the teaching and learning in English classes. It unfortunatelyalso becomes one of teachers' demotivating factors in Jambi *Pesantrens* English Language Teaching:

"I don't have many supporting and teaching material in accordance with the latest curriculum that e implement in this school, too bad, sometime I feel a bit lazy to teach in the classroom. We need preparation in teaching. I am not a kind of a teacher who can teach without learning or teaching materials" (T6)

"Teaching and other supporting materials are still problems in our school. I think we all are in the same boat about this problem. I hope we can gain our ability to solve the problems by ourselves" (FGD 1)

Facilities

Another important issue demotivating Indonesian *Pesantrens* in teaching Englishas a foreign language at two *Pesantrens* in the City of Jambi was facilities including the weather in the classrooms. Withmore than thirty students in one classroom and with no coolers there, teachers found it difficult to transfer their knowledge to their students. Participants in this study informed in FGD and interview:

"I really feel hot in the classrooms. The hot classroom is always a major problem which I face every time I enter the rooms, especially when the sun shines in the middle of the day" (T8)

"The students feel the heat. With more than 40 students in a room; what could be expected. I really feel bad about the condition of the classrooms because there are no coolers. Should there be any coolers, they are not functional" (FGD 2)

Beside the classrooms' temperature, the overcrowded room is also the problem faced by both the teachers and students. An ideal language classroomshould

not have more than 30 students in the room. However, in these two *Pesantrens*, there are more than 40 students in one classroom. One of the participants revealed:

> "The students are many in one room of the class. There are around 40 to 50 students in one room which is too crowded. We can't maximally manage to transfer information and knowledge. I hope there will be solution from the school side and other related stake holders" (T1)

Students

One of the classic and common themes in relation to the teachers' demotivation factors in education that alsoappeared from this current research interview and FGD datawas students' limited basic knowledgeof English language. All interviewees inthis research informed that students' limited basic knowledge in English language was a major andeverlasting problem demotivating the teachers to teach English as a foreign language in those two *Pesantrens*. Some of the teachers reflected in the interview sessions:

> "The students make me feel a bit discouraged because of their basic knowledge of English. They did not pay attention to English. May be because they don't like it. This factor certainly demotivates me to teach English" (T5)

> "I have been teaching here for more than twenty years, never do I find students who have a good English as their basic knowledge. However, it is our responsibility to make them good in English" (T2)

Some of the teachers realize that their job is to make their students to be good in English language. In addition, the teachers also discussed the same idea from the LGD sessions as emerged from the interview sessions:

> "we believe that the limitation of the students' basic knowledge is among the factor demotivating us to teach in English classroom.

However, we agree on our responsibility to make them able to speak English well in thier preparation to face global competition" (FGD 1)

The commitment of teachers to their profession was also put in doubt because of what was seen as students' lack of motivation to learn English in the language classes. This factors emerged in the interview and FGD sessions:

"I have ever asked my niece who apparently is one of the students in my school and she said that she does not like English because of many things. This answer is also a form of students lack motivation in English learning and certainly effects on the teachers' motivation to teach English" (T3)

"We enter the classrooms with almost all of the students have low rate of motivation to learn English. It is maybe because we do not teach them in appropriate ways. I hope we are not demotivated, but we do. Engaging student with fun activities will be the problem solving. Our lacks of ability in making English to be fun to learn is the real holdbacks" (FGD 1)

Some of the teachers argue that the problem actually relies on their ability to make the students to be motivated in attending the English process of teaching and learning. However, they still feel demotivated because the students do not have enthusiasmin learning English in their classes.

3. Result and Discussion

From this study, it is revealed that *Pesantren*s teachers' demotivation factors are mostly in relation to the externalfactors which practically decreaseteachers' motivation in teaching English to their students. The factors are working condition which includes the financial matter and working overload; curriculum which refers to rapid changing of curriculum and lack of teaching and supporting materials; facilities that are classroom temperature and over-crowded classroom, and students which have lack of basic knowledge and motivation.

Firstly, the findings demonstrated that the subject encountered certain problems pertaining to the demotivation factors that are related to the working condition in *Pesantrens*. This factor is triggered by the monthly cash which the teachers bring to home monthly and teaching hours that they have to face weekly. The fact that most teachers are contract employee becomes a salient factor influencing their income as teacher. Beside the financial matters faced by the teachers, work workload is undeniably being another major problem in teachers' performance English Language Teaching in Indonesian *Pesantrens*. There are many classes that they have to teach regularly in a week. Overwhelmingly, they also prepare all materials and lessons plan by themselves.

Secondly, Indonesian Education curricula change rapidly. It is one the problems in teaching situation of Indonesian *Pesantrens*. Indonesian Pesantrens commonly promote two kinds of curricula; National curriculum which is implemented in morning time and Religion curriculum at night time, including these two *Pesantrens* (Habibi&Sofwan, 2016). Furthermore, the phenomenon of the rapid and dynamic curricula changes has directly affected negatively on the administration to providing teachers with teaching and other supporting materials in relation to the teaching and learning in English classes. It unfortunately also becomes one of teachers' demotivating factors in Jambi *Pesantrens* English Language Teaching.

Another important issue demotivating Indonesian *Pesantrens* in teaching English as a foreign language found at these two *Pesantrens* in the City of Jambi was facilities including the weather in the classrooms. Withmore than thirty students in one classroom and with no coolers in the rooms, teachers found it difficult to transfer their knowledge to the students.

The last factor revealed in this current study is the students. Two of the classic and common problems in teachers extrinsic factor demotivate teacher in teaching languages across the worlds are students' limited basic knowledge ofthe languages and lack of motivation in the activity. All interviewees in this research informed that

students' limited basic knowledge and motivation were major problems in their classes influencing their mood and motivation in doing their job negatively.

There are plenty of research have explored and presented teachers demotivation factors in education in general and specifically in teaching English as a foreign language and revealed several theme findings and discussions such asstudents who are demotivated (Addison &Brundrett, 2008; Aydin, 2012; Chambers,1993; Fattash, 2013; Johnson,2000; Kiziltepe, 2008; Linares et al., 2009; Lynch, 2008; Mukminin, Muazza, Hustarna, & Sari, 2015), overload of working (Addison,Brundrett, 2008;Aydin, 2012; Dinham& Scott, 2000; Doyle &Kim 1999; Spear et al., 2000), classrooms which are overcrowded(Lynch, 2008; Willows, 2011), salary (Doyle & Kim 1999; Johnson, 2000; Spear etal., 2000; Tiziava, 2003),and facilities limitation (Aydin, 2012; Dinham& Scott, 2000; Doyle & Kim 1999; Hettiarachchi, 2013; Lynch,2008; Johnson, 2000; Mukminin, Muazza, Hustarna, & Sari, 2015) However, there were no prior studies which have focused specifically on the demotivating factors among*Pesantrens* (Islamic Boarding School) teachers in teaching English as a foreign language. In addition, *Pesantren*s as the oldest educational institutions in Indonesia have long history in implementing the teaching of languages (Arabic and English) in their curriculum (Daulay, 2009)

4. Conclusion and Remark

The goals of this current research are used to explore and present the demotivating factors among Indonesian *Pesantren*s teachers teaching English as a foreign language. We found four salient and implicated themes.They are *working condition* (financial matter and working overload); *curriculum*(rapid changing of Indonesian curriculum and lack of teaching and supporting materials); *facilities*(classroom temperature and over-crowded classroom);*students*(lack of basic knowledge and lack of motivation).

Policy recommendations and implications can be taken from the findings of this current research. The significance contribution from the authorities in relation to

the teachers' income raise and providing more budgets to new teacher recruitment is significant to be considered. The availability of English teaching and supporting materials and the appropriate and established curriculum should also becoming priority attention of the Ministry of National Education. All stake holders are suggested to build more supporting facilities and limit the student number in one classroom so that the teaching and learning process can run appropriately. Teachers should have way out to boost student motivation and knowledge in the process with the support from educational trainings which hope to be held by all related authorities.

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FOLKLORES FROM SOUTH SUMATERA IN ENGLISH: MEDIA TO INTRODUCE INDONESIAN CULTURE TO INTERNATIONAL WORLD

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Abstract

The objective of this research is to describe culture values which are contained in three folklores from South Sumatera and its functions as a media to introduce Indonesian culture to international world. This research is a library research. The data were gathered by using descriptive method and qualitative approach. As it is well known, Indonesia has a lot of folklores from 35 provinces as precious Indonesian wealth, one of them is South Sumatera Province. There are three folklores from South Sumatera; Legend of Kemaro Island, Legend of Bidar Boats Competition, and Semesat and Semesit. Indonesian folklores in English have role to introduce Indonesian terms, to describe Indonesian culture, and to promote Indonesian places. By reading the English version of the folklores on this website, people from all over the world can comprehend the stories and its culture values.

Keywords: Indonesian folklores, South Sumatera, culture values, functions

1. Introduction

Culture has a very large definition so that everyone can interpret it from many points of view. There are two kinds of culture, universal culture and local culture. People can learn culture by seeing directly communities in some regions. Besides, we can learn a culture by reading folklores from all over the world.

Since folklore has many definitions, no one can define it clearly and succinctly. Based on Wikipedia, the most common definition of folklore was that it represented 'oral tradition', or traditions that have been transmitted in an oral manner. In the past, folklore was generally focused on traditional stories and songs. (https://en.wikipedia.org/wiki/Folklore).

According to Sims and Stephens (2005:1) folklore is presented in many kinds of informal communication, whether verbal (oral and written texts), customary (behaviors, rituals) or material (physical objects). It involves values, traditions, ways of thinking and behaving. It is about art. It is about people and the way people learn. It helps us learn who we are and how to make meaning in the world around us.

Meanwhile, Noyes (in Kuper and Kuper, 2004:375) stated that folklore is a metacultural category that is used to mark certain genres and practices within modern societies as being not modern. By extension, the word refers to the study of such materials. More specific definitions place folklore on the far side of the various epistemological, aesthetic and technological binary oppositions that distinguish the modern from its presumptive contraries. Folklore therefore typically evokes both repudiation and nostalgia.

In this research, folklore is seen as a fictive traditional story that is created from a thought of human being, telling a life journey in a region with moral lesson about how to interact with others. Folklore is defined as stories that originated orally and have no authors. In Indonesia, folklore is known as *cerita rakyat*. Its origins are probably an oral culture, with a range of hero stories that was associated with forms of theatre, and it is transliterated to a written culture. Folklore in Indonesia are closely connected with mythology. There are several genres of Indonesian folklores, such as tales, legends, epic, fable, and myth.

Indonesia has a lot of folklores from 35 provinces as precious Indonesian wealth, one of them is South Sumatera Province. It is located in the southern part of Sumatra island, east of the Bukit Barisan Mountains with Palembang as its Capital.

2. Culture Values in the Legend of Kemaro Island

Legend of Kemaro Island is a about love story between Princess Fatimah and Tan Bun An who tragically ended. Tan Bun An was a Chinese young man. He went

to many places to do some business. After travelling so long, he finally got a partner from a kingdom in Palembang. Because of his dedication, diligence, and loyalty, the king and the queen really liked him. Tan Bun An fell in love with Princess Fatimah, a daughter of the king and the queen.

The king and the queen asked Tan Bun An to give many golds and jewelries as a requirement to marry their daughter. Tan Bun An sent a letter to his parents in China. He asked them to send him what Princess Fatimah's parents asked. After waiting for a few months, a big ship arrived to Palembang and brought nine jars. Tan Bun An thought that the nine jars were filled out with golds and jewelries. When he checked them, he was very dissapointed. He saw rotten vegetables only in the jars. With full of anger, he threw out the jars to the river one by one. But when he was going to throw out the last jar, it fell to the ship floor. He was very surprised when knew that there were many golds and jewelries in it. Apparently, his parents covered the gold and jewelry with vegetables to avoid pirates. Without thinking it over, he directly jumped to the river. Princess Fatimah worried about her husband's safety. Before she jumped, she told her guards not to wait for them if they didn't come back in ten minutes.

After waiting for so long, the guards concluded that Princess Fatimah and Tan Bun An had died. Suddenly, a land appeared from the river. The land was getting large and formed an island. People named it 'Kemaro Island' that means a land that is always dry like 'Musim Kemarau' (dry season). It is because the land is is never wet, even though in rainy season.

From the *Legend of Kemaro Island*, we cand find three Indonesian culture values. *First*, it is about politeness. This character was shown by Tan Bun An when he first came to the kingdom. We can see the character from the following citation.

He planned to stay for several months. He came to the palace to meet the king. He wanted to ask the king's permission.

(http://indonesianfolklore.blogspot.co.id/2009/09/legend-of-kemaro-island.html)

Second, it is about friendliness. Indonesian people are well-known by their friendliness. This character was shown by the King and the Queen when they first time welcomed Tan Bun An. Here is a quotation about it.

"I will let you stay here and do this business. but remember, you have to share your profit. You have to give half of your profit to the kingdom," said the king. (http://indonesianfolklore.blogspot.co.id/2009/09/legend-of-kemaro-island.html)

Third, it is about dowry. In Indonesia, giving a dowry to a bride is an obligation for every groom. Srimulyani (2015:317-318) stated that Dowry in Indonesian language is called as '*mahar*' or '*mas kawin*'. Although, it is said as *mas kawin* (gold of marriage), in reality, the local practices in some Indonesian ethnic communities, it is not always in kind of (gold). In indonesia, some of dowries are in the form of money, jewellery or others, such as '*seperangkat alat sholat*'(a set of materials for prayers).

In the *Legend of Kemaro Island*, the King asked Tan Bun An to give dowry as a requirement to marry his daughter, Princess Fatimah. This part was narrated as follow.

"I will let you marry my daughter. But there is one thing you have to do. Give me nine big jars filled with gold," said the king. Tan Bun Ann wrote a letter to his parents in China and told them about Siti Fatimah. The parents agreed and sent him nine big jars filled with gold. (http://indonesianfolklore.blogspot.co.id/2009/09/legend-of-kemaro-island.html)

3. Culture Values in the Legend of Bidar Boats Competition

Legend of Bidar boats competition is a triangle love story among Princess Dayang Merindu, Kemala Negara, and Dewa Jaya. Kemala Negara fell in love with

Putri Dayang Merindu. He wanted to marry Putri Dayang Merindu, he talked to her parents and proposed her. But he was rejected by King Sah Denar (Princess Dayang Merindu's father). King Sah Denar said that Putri Dayang Merindu was enganged to Jaya Dewa.

Kemala Negara could not accept Sah Denar's decision. He challenged Jaya Dewa to fight, but both of them have the same power, no one lost in the fighthing. Princess Dayang Merindu had an idea. She asked Kemala Negara and Jaya Dewa to have river boats competition. They agreed her idea. People gathered along the side of Musi River. They were curious to know who would win the competition and would marry Princess Dayang Merindu.

Kemala Negara and Dewa Jaya started to row their own boat. However, those two strong men could reach the finish line at the same time. When people approached them, they were surprised. Both of them were lying on their boats. They were very tired, they lost their strength and slowly died. Putri Dayang Merindu was very sad. Her heart was broken due to the death of two men who loved her. She never thought it would happen. She said that she just wanted to die. She asked her parents to divide her body into two parts. One part was buried with Kemala Negara's body, and one part was buried with Dewa Jaya's body. She wanted to be fair to both of them. People were touched by her decision. To commemorate the incident, people always have river boats competition in Musi River. The word '*Bidar*' was from '*biduk lancar*' or swift river.

From the *Legend of Bidar Boats Competition*, we can find three Indonesian culture values. *First*, it as about honesty. This character was shown by Kemala Negara when he tried to give back Dayang Merindu's comb that he found in the river. Read the following part.

One day Kemala Negara was walking on the side of Musi River. He saw a comb floating in the river. The comb was very beautiful. Kemala Negara knew that

the owner must be very rich. He wanted to return it to the the owner. So he asked people around. Finally, Kemala Negara met a girl. He knew the owner of comb he had found. The comb belonged to Putri Dayang Merindu, the daughter of Sah Denar. (http://folklore4u.blogspot.co.id/2009/12/legend-of-bidar-competition-folklore.html*)*

Second, it is about Bidar boats competition. It was shown in the following part.

He asked Dewa Jaya to compete. They agreed to have a river craft competition. People were gathered along the side of Musi River. They were curious who would win the competition and would marry Putri Dayang Merindu.

(http://folklore4u.blogspot.co.id/2009/12/legend-of-bidar-competition-folklore.html*)*

Third, it is about a justice. This character was shown by Princess Dayang Merindu when he asked her parents to divide her body into two part so that it woud be fair for both of Kemala Negara and Dewa Jaya who loved her. This part was told as follow.

Putri Dayang Merindu was extremely sad. She never thought that it would happen like this. She said that she just want to die. She asked her parents to divide her body into two parts. One part was buried with Kemala Negara's body and one part was buried with Dewa Jaya's body. She wanted to be fair to both of them.

(http://folklore4u.blogspot.co.id/2009/12/legend-of-bidar-competition-folklore.html*)*

4. Culture Values in Semesat and Semesit

Folklore *Semesat and Semesit* tells about two brothers, Semesat and Semesit. They lived with their father and step-mother. Their stepmother did not like them. She tried to throw away both of them. She hit her own cheek. She told her husband that Semesat and Semesit hurt her. Their father was very angry, he threw away Semesat and Semesit to a jungle.

Semesat and Semesit were sad, they were hungry and thirsty, but there was no food to eat. Suddenly, a bird came and approached them. The bird said, "Whoever eats my flesh, he will become rich soon". Semesat took a stone and hit the bird. A few minute later, another bird came and said "Whoever eats my flesh, he will face hard life but finally he will find happiness.". Semesat gave the first bird to her brother, Semesit, meanwhile he ate the second bird. After that, they continued the journey. They arrived to a kingdom. People said that their king had just passed away. They wanted Semesit to become their new king, meanwhile Semesat continue his journey.

One day Semesat took a fruit in a yard. He thought that the fruit had no owner. People arrested him and brought him to the King Semesit. Unfortunately, the King Semesit could not recognize him anymore. Semesat was punished, a half of his body was buried in a sack of husks that was called '*Bujud Keling*"

A few days later, there was a good news from another kingdom. A princess was looking for her future husband. The King Semesit and his guards went to the kingdom by using a very large ship, but suddenly the ship was shaky. A guard said "My King, if we don't want our ship to sink, you should use a '*Bujud Keling*' with us. Semesit decided to back home and brought '*Bujud Keling*' with them, and they safely arrived in the kingdom. The princess had a contest with a unique rule. Whoever was kissed by her horse, he would become her husband. The princess started riding her horse, surprisingly the horse kissed a sack, not the contestants. The princess asked her guards to open the sack. Semesit told the princess that the man in the sack was only a thief, he thought that he was the winner, he had the right to marry the princess.

The princess still chose Semesat rather than Semesit. Semesit was very dissapointed. Soon, Semesat told Semesit that he was her brother. Semesit regreted what he had done to his brother. Finally Semesat and Semesit lived happily in their kingdom.

From *Semesat and Semesit*, we can find at least two Indonesian culture values. *First*, it is about sacrifice. This was shown by Semesat when he gave the first bird to his brother Semesit, and he just ate the second bird. I quoted it as follow.

"My brother, eat this bird so that you will be a rich man soon. Let me eat this one. It is alright for me to live a hard life as long as the end is happy," said Semesat.

(http://ceritarakyatnusantara.com/en/folklore/60-Semesat-and-Semesit)

Second, it is about patience. This character was shown by Semesat when he was punished by her brother Semesit, but he didn't angry because he knew that Semesit was his brother. We can see this part in the following citation.

The people took him to King Semesit to be punished. King Semesit did not recognize his brother. The King Semesit sentenced him to half body burial in a sack of husks called 'Bujud Keling'. (http://ceritarakyatnusantara.com/en/folklore/60-Semesat-and-Semesit)

5. Functions of Folklores from South Sumatera

The folklores from South Sumatera have some important functions. *First*, folklores from South Sumatera in English have role to introduce Indonesian terms. When people try to translate Indonesian folklores to English version, they will find some Indonesian terms that cannot be translated to English. For Example, in the *Legend of Kemaro Island*, there is the word '*Kemaro*' that means '*dry season*', but people translate '*pulau Kemaro*' as '*Kemaro island*' in English, not '*dry Season Island*'. In the *Legend of Bidar Boats Competition*, there is the word '*Bidar*' that means '*swift river*', but people still translate '*perahu Bidar*' as '*Bidar boat*' in English, not '*swift river boat*'. In *Semesat and Semesit*, there is the word '*Bujud keling*' that means '*sack of husks*'. People still use the terms '*Bujud keling*' in English version rather than '*sack of husks*'.

Second, folklores from South Sumatera in English have role to describe Indonesian culture values. According to Tripungkasingtyas (2016:518) folklore is one of the literary works in particular that can help students to recognize the cultures of the archipelago which are contained in the folklore. As it is explained before, in the *Legend of Kemaro Island* there are three Indonesian culture values, *politeness*, *friendliness*, and *dowry*. In the *Legend of Bidar Boats Competition*, there are three Indonesian culture values, *honesty*, *Bidar boats competition*, and *justice*. In *Semesat and Semesit*, there are two Indonesian culture values, *sacrifice* and *patience*.

Third, folklores from South Sumatera in English have role to promote Indonesian place. There are some places in the folklores from South Sumatera, *Musi river* and *Kemaro island*. *Musi River* is one of South Sumatera icons, with a length reaching 750 kilometers, it becomes the longest river in Sumatera island. Meanwhile *Kemaro island* is one of most popular destinations in South Sumatera. It is located in a small delta of Musi River, it is about 6 kilometers from Ampera bridge.

6. English as an Instructional Language in International Class

English is one of international languages with the highest growth. This condition causes people around the world learning English, either for academic or specific purpose. Sharifian (2009:347) stated that English as International language implies a way of communication across different nationalities.

Nowdays, English is used as an instructional language in many countries, either in ESL class or in EFL class. According to Hasbi (2013:5) English as a second language (ESL) belongs to those whose English is a secondary language used for a particular purpose and in a particular situation. The countries that have English as second language are Malaysia and India. Furthermore, Hasbi (2013:5) stated that English as a Foreign Language (EFL) belongs to those whose English is a foreign language used for a limit purpose and in a limit situation. The countries that have English as foreign language are Indonesia, Bhutan, Iran, Iraq, etc.

Integrating literature such as Indonesian folklores into English Language Teaching (ELT), either into ESL or EFL class will increase students interest in learning English. It is not only because folklore can educate students, but it can also entertain them. Perizade (2015:V) stated that by integrating literature into ELT and knowing how to effectively implement it in their classrooms, teachers will be able to improve their students' English perfomance as well as introduce local and international literature to the leaners. In line with that, Fadhli (2015:198) stated that through Indonesian folktales in translation as learning material in EFL classroom, English teachers can integrate culture knowledge and moral values as well as some language aspects.

7. Conclusion and Remark

There are three folklores from South Sumatera; *Legend of Kemaro Island*, *Legend of Bidar Boats Competition*, and *Semesat and Semesit*. In the *Legend of Kemaro Island* there are three Indonesian culture values, *politeness*, *friendliness*, and *dowry*. In the *Legend of Bidar Boats Competition*, there are three Indonesian culture values, *honesty*, *Bidar boat competition*, and *justice*. In *Semesat and Semesit*, there are two Indonesian culture values, *sacrifice* and *patience*.

Indonesian folklores in English have role to introduce Indonesian terms, to describe Indonesian culture, and to promote Indonesian places. By reading the English version of the folklores on this website, people from all over the world can comprehend the stories and its culture values.

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THE AWARENESS OF ICT USE FOR TEACHING AND LEARNING PROCESS EFFECTIVELY

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Abstract

Information, Communication, and Technologies (ICT) are always influence all aspects of life. The use of ICT has an importance role in work places, business, entertainment, moreover in education. It is as a certain thing which is needed due to support teaching and learning process. ICT can also create student-centered learning setting to be more active and creative. Besides, ICT can also develop the quality, accessibility, and learning motivation in education. Therefore, teachers have a very big role due to know how to integrate the technology into classroom practices. This paper discusses the importance of ICT use, benefits of ICT use, and barriers integration of ICT use in the class-room practiced. Therefore, the main purpose of this study is to develop teachers' and students' awareness of ICT integration due to achieve successful learning.

Keywords: ICT, Important, Effective, Educational Purpose

1. Introduction

The integration of technology in teaching and learning process is not a new idea. Information exchange among some other institutions have realized of its importance. The institutions have implemented the use of technology as well radio and television in the process of teaching. Dawes (2001) emphasized that technologies have potential to promote education for curriculum and give chances for effective communication between teachers and students.

Governments and education systems of the whole world have appreciated the use of information, communication, and technology (ICT) as a necessary issues for improving the effectiveness of teaching and learning (Plump, Anderson, Law & Qualex, 2009). On the other hand, there are still many teachers which are left behind of information, communication, and technology (ICT) use. Teacher did not know how to apply ICT use even they believed the benefits of ICT's integration. Besides,

Balanskat, Blamire and Kefala (2006) also argue that even teachers know the values of ICT use, difficulties also continue to the process of adopting these technologies.

Miller, Martineau, and Clark (2000) stated that technology-based teaching should not be as a principle in all classes yet commonly it is most provide relevant example and demonstrations, change the classroom orientation, improve flexibility. Therefore, the main purpose of using information, communication, and technology in teaching is to extend better impact to students' performance. As a teacher who teaches in this era, there must some pretension that must be implemented due to achieve the benefits of ICT application in teaching. Therefore, educators, teachers, and school principles must cooperate to overcome any obstacles of ICT integration on teaching and learning.

2. Result and Discussion

The Importance of ICT Use for Educational Purposes

Some studies claim that the use of new technologies in classroom is important in order to provide chance for students to operate in an information Era. Meanwhile, traditional education environments are not suitable to create students to be productive in the today's society workplace (Yelland, 2001). She stated that organizations which do not integrate the use of technologies in institutions cannot prepare their students for twenty-first century life students. The use of ICT in schools or institutions can prepare students to face future development based on well understanding. It means unconsciously students who are thought by ICT skill for each proper understanding are also prepared to face the further developments. Besides, Castro (2003) and Cathere (2000) mentioned that ICT is a learner preparation by developing cognitive skills, critical thinking skills, information access, evaluation and synthesizing skills. ICT is used to improve the efficiency in educational process. Therefore, ICT use is able to develop memory retention, increase motivation and generally deepens

understanding. Additionally, collaborative learning, such as role play, problem solving activities, and articulated projects would be applied by integrated ICT (Forcheri and Molfino, 2000). Therefore, the whole purpose of technology use in teaching is due to give well performance value to teachers and students. Wong, Quek, Divaharan, Liu, Peer, and Williams (2006) stated that technology plays a part in enhancing face-to-face teaching and learning in the classroom. It means the computer use help students to achieve knowledge, reduce direct instruction given, and opportunities to help students for particular needs. According to Grabe and Grabe (2007) stated that students can improve their skills, motivation, and knowledge by applying technology. Therefore, ICT use is crucial for students due to get information and helps them to complete learning task.

Teachers are expected to create well use of modern teaching technology and develop teaching resource effectively. Becta (2004) mentioned there were five factors which can influence students' good ICT use such as ICT resourcing, ICT leadership, ICT teaching, school leadership, and general teaching. He also mentioned that students can integrate technology successfully into education varies from curriculum, place, and class, depending on the manners in which it is applied. Besides, Peck and Domcott (1994) mentioned ten reasons about the importance of technology use in school: (1) individual instruction of technology will be had by the teacher; (2) students must be good at accessing, evaluating, and communicating the information; (3) the quality and quantity of students' thinking and writing in using word professors can be increased; (4) students develop their critical thinking by organizing, analyzing, interpreting, developing, and evaluate their own work by using technology; (5) students' artistic expression can be encouraged by using technology; (6) technology enables students to get many resources outside the school; (7) students will have new and exciting learning experience; (8) become an important part of students' world can make students to feel comfort in using computer; (9)students have opportunities to do meaningful work; (10) students must increase their productivity and creativity.

Benefits of ICT Use in Science Education

Several research studies reported some benefits from ICT use for science learning. Firstly, the benefit is enhancing the encouragement of communication and collaboration in science research activities (Bingimlas, 2009). Students who learn by using ICT can develop their knowledge by collecting and interacting the information with various resources, such as video and image. ICT use has good impact to students in order to be used in primary science education at school (Gillespie and Murphy, 2006). Therefore, in teaching and learning activities students and teachers must be accustomed to socialize internet technology as early as in primary science. They both will know how to earn reference source and means of communication. Furthermore, it will also improve students' learning motivation, clearer thinking, and increase interpretation skill from the data collected.

Al- Alwani (2005) also mentioned the benefit of ICT use in science education is that enlarge the available resources for science teachers. Murphy (1996) summarized five learning outcomes which are resulted by the technology use in the classroom as following: (1) social growing, (2) problem solving, (3) peer teaching, (4) independent work, and (5) exploration. Therefore, ICT is as a tool which can facilitate science teachers to create various materials from information, communication, and technology such as internet. It has some variation methodology and material sources as well sounds or videos. Besides, ICT include some benefits tools which are data capture, multimedia software for simulation, publishing and presentation tools, digital recording equipment, computer projection technology, and computer-controlled (Osborne & Hennessy, 2003).

Barriers of ICT Integration in Education

Although the use of information, communication, and technology has a lot of benefits for some teachers and students in educational sides, (Osborne & Hennessy, 2003) also suggested that we cannot totally depend on that ICT will transform the

science education well. In reality, teachers and students did not apply effective way in utilizing the internet technology when learning and teaching science. They tend to be expert in searching other information rather than receiving facts. Furthermore, they do not aware the importance of world around them, citizenship, and literate community (Pickersgill, 2003, p. 86). Integrating ICT into teaching and learning needs some various difficulty processes. These difficulties are known as "barriers". A barrier is meant as "many difficult situation which has difficult progress in order to reach an objective (Schoepp, 2005, p. 2). As suggested before, here are some barriers which is faced by some teachers and students when collate ICT into education (Becta, 2004). There are two different sides of barriers such as teacher-level-barriers and school-level barriers. Teacher-level-barriers are related a grouped as lack of time, lack of confidence, and resistance to change. While, school-level- barriers are lack of effective training in order to solve technical problems and lack of access to resources. Here are the detail information between teacher-level-barriers and school-level-barriers.

Teacher-level-barriers

Lack of teacher confidence.

Some researchers mention those teachers' barriers in implementing ICT use is because of lack of confidence in teaching. Competence in computer is meant as being able to understand several of computer applications purposes (Tondeur, Valcke, & Van, 2008). A major predictor of integrating ICT in teaching is teachers' computer competence. Teachers tend to be awkward to socialize ICT is just because of the unaccustomed and in confidence with the technology use in their daily life. Basically, little understanding about technology use cannot support students' achievement in gaining information. Therefore, teachers even never try to apply it. According to Becta (2004), he said that the main barrier to the understanding of ICT used by some other teachers' response is because of low confidence. Besides, Beggs (2000) also

emphasized that most of failure fair happened caused by lack of confidence in ICT use. Therefore, teacher has limitation of knowledge about ICT use which makes them not confidence in apply it. Confidence directly relate to teacher competence. Teachers' perceptions of the ability to use computers in classroom also relate to confidence. In the conclusion, well skilled of ICT use is not considered by some teachers. They consider that students perhaps know more than they do. Therefore, teachers afraid of socializing ICT in the classroom with limited skills and experience in the area of internet, computer, and communication. Thus, teachers who understand and aware of the ICT use in the classroom will be confidence and extend it for further teaching and personal work activities.

Lack of teacher competence in ICT use

Lack of competence is one of the barriers which also related to teachers' confidence. Integrating teaching with the ICT practice of the classroom will bring teacher with high confidence of teaching pedagogical. Teacher who has knowledge and skill in using internet, computer and technology will be more enthusiastic with the chances and integration in teaching practices.

Pelgrum (2001) and Al-Oteawi (2002) mentioned that there are some different levels of barriers for one country to another. In developing countries, teachers' lack of technological competence is a main barrier for accepting and adopting ICT in teaching activities. It means even teachers who are living in developing country, they still have difficulties to accept and adopt ICT. Several researchers reported that teachers' lack of ICT is as a main barrier. Besides, it is serious problem due to integrate technologies in science education. According to Empirica (2006) survey reported that teacher who do not use computer in classrooms is claimed as lack of skills teacher. In addition, Pelgrum (2001) stated that primary and secondary school teachers have serious obstacle to use ICT. Mainly, not so many teachers chose to use ICT and media in teaching activities because of their lack of ICT skills.

Resistance to change negative attitudes

Attitude is a positive or negative emotional reaction in a specific situation. While, Fishbein (1967) defined that attitude is the predisposition of a learner to respond an object and class objects consistently in favorable or unfavorable way. Teachers' attitude toward technology use in teaching and learning process is the main factor which must be considered. The success of educational technology implementation in school's program depends on teachers' attitude. The success of technology use in educational setting depends on the teacher attitude in using technology. Thus, teachers' attitude related to the frequency and amount of technology usage. Teachers can provide useful adoption and integration of ICT use in teaching and learning process when positive attitude is insight of their self. Akbaba, Kurubacak (1999) and Huang, Liaw (2005) stated that teachers' acceptance through the usefulness of technology integration is influenced by attitude toward computers. Thus, Knezek and Christensen (2000) stated "the likeliness of teachers integrating technology, and its effective use and implementation, was very much related to the users' attitudes toward the computer and technology". There is positive relation between teachers' computer experience and computer attitudes. Rozell and Gardner (1999) stated that the more experience teachers have with computer, the more they will show positive attitudes toward computer. Gomes (2005) found that the resistance of science teachers to chance ICT strategy use is still serious problem. The resistance from changing common setting of teaching way to using technology in education is as important barriers. It means the main key of teachers' attitude towards the use of technologies is as the understanding of how the technologies will advantage their teaching to the students. In other side, some opinion stated that teachers who do not use technology in their classroom teaching are still in the opinion that there is no significant benefit that they can get. Besides, teachers' consideration that is unlikely to socialize new technologies in the teaching activity if they see no need to change their professional practice. It is also supported by Schoepp's study

(2005) found that, teachers' consideration that there was more than enough technology available, and they believed that they were not being supported, guided, or rewarded in integrating the technology into their teaching activities.

There should be many a many encouragement forces such as the power of new developments, rapid availability, creativity, Internet access, and communication due to change to negative attitude, while there should be discouragement force such as lack of technical support, teacher expertise, time planning (Earle, 2002).

School-level barriers

Lack of time

In the condition, many teachers who have competence and confidence in using computer in the classroom, but they still have obstacle to use little technology in the process of teaching is just because of time limitation, for example, they have difficulties in scheduling the time for each classes to use computer in learning. Therefore, lack of time is also one of a barrier to use ICT. According to Becta (2004) found that there are many aspects for lacking of time problem which existed, such as, time allocation of internet advice, lesson preparation, explore and practice technology use, technical problem and receive adequate training.

Lack of time an important factor related to the application of technologies in science education. Alwani (2005) concluded that lack of time barrier affect the application of ICT in Saudi Arabia because of busy schedule. Besides, Sicilia (2005) found that most Canadian teachers need extra time due to prepare and design materials project which include the use of ICT rather than prepare traditional lessons. Gomes (2005) concluded that the main reason that science teacher do not use ICT in the classroom is because lack of time to accomplish the plans for learning activity.

Lack of effective training

Pelgrum's (2001) found that there were not enough training chances for teacher to use ICT in a classroom environment. Most of teachers are left behind to the technology support due to enlarge teachers' and students' information. Science teacher must be facilitated to the in-services programs related to ICT use. Some teacher who has known how to use ICT will develop their skill by collaborating the previous skill and newest information that they have just got. While the teachers who have no any background skills of ICT use will apply it to the real teaching activities. Teacher education can also play a significant role to provide chance for experimentation with ICT before using it in the classroom teaching.

Providing pedagogical training for teachers is more important than simply training them to use ICT tools (Becta, 2004). Besides, Cox, Preston, Cox (1999) stated that teacher still did not know how to use ICT in the classroom even they had attended the professional development courses using technologies. Instead, they just know how to operate computer and set up printer. Inappropriate teacher training does not help teacher to use ICT in the classroom, but the appropriate teacher training in specific ICT skill is more important (Balanskat, Blamire & Kefala, 2006). Newhouse (2002, p. 45) stated that "teachers need to not only be computer literate but they also need to develop skills in integrating computer use into their teaching or learning programs".

Lack of accessibility

Access to get resources is one of certain barriers which cause teachers to have low intended to integrate new technologies in science education. Therefore, infrastructure and integration access in school is importance condition which must be considered (Plomp, Anderson, Law & Quale, 2009). Besides, home access of technology understanding such as hardware, software, etc are as the main first example due to build teachers' motivation for integrating and adopting technology in

school successfully. Therefore, when teachers have access of implementing technology at home, they will curious to apply it in the classroom. Most of teachers complain that they have difficulties to always access the computers. Computer must be booked firstly before in advance use, in the contrary teacher sometimes forget to do so. Besides, they sometimes could not book them in several times even when they want to do the projects with students. This happened is because of poor organization of resources, poor quality hardware, inappropriate software, and lack of personal access for teacher (Becta, 2004). Therefore, the inaccessibility of ICT resources is not always merely for non-availability of hardware, software, and other ICT material from school.

Barrier to the lack of technology access is different from country to country. In European study for example found that teachers' barrier in different ICT use (Empirica's, 2006). Besides, Pelgrum (2001) concluded that there were four main barrier of accessibility such as, insufficient numbers of computers, insufficient peripherals, insufficient numbers of copies of software, and insufficient simultaneous. Toprakci (2006) also mentioned some accessibility in Turkish school that there were low numbers of computers, oldness or slowness of ICT systems, scarcity of educational software in the school due to implement ICT in science education successfully.

Lack of ICT infrastructure, lack of high quality of hardware, suitable educational hardware, and access to ICT resources are also as the barrier of resources accessibility. Merely, it does not guarantee the successful of ICT implementation in teaching (Balanskat, Blamire & Kefala, 2006). In a conclusion, access limitation to hardware and software resources influence teachers' motivation to use ICT in the classroom (Osborne and Hennessy, 2003).

Lack of technical support

Without technical support and resources in the classroom, barriers cannot be prevented by the teachers due to ICT use. Pelgrum (2001) mentioned that lack of technical support is in the top barrier in the primary and secondary school teacher. Teachers tend to lose their prepared lessons resource when the barriers of technical support happed in the teaching activities. Sicilia's study (2005) mentioned some technical barriers which probably happened such as; waiting for websites to open, Internet connection problem, printer does not running well, malfunctioning computer, and old computer available use. Therefore, she agreed that technical problem is as a major barrier for teachers.

Korte and Husing (2007) stated that teachers are helped when the ICT support and maintenance is used. They will not lose their time due to fix the software and hardware problems. Therefore technical support and maintenance must be handled well in order to decrease the high risk of the technical problems. Teachers are afraid that the technical support will break down during the lesson. Besides, technical breakdowns tend to decrease teachers' motivation to use ICT in teaching activities. Therefore both teachers and students should cooperate together due to decrease the technical support happen.

Gomes (2005) said that technician must be available in the school environment due to integrate the ICT use. Related to previous research mentioned if the technician is available in school, teacher will not judge that ICT integration is as an obstacle in teaching. Toprakci (2006) stated that technical support is one of the ICT barriers integration. He also mentioned that it is a serious problem which must be overcome by every science school teachers. Therefore, teachers must be introduced to the computer technology in science teaching, even they believe that they will experience to the problem of hardware running and technical service (Almohaissin, 2006).

In the conclusion, there are some various barriers of ICT integration among some science teachers around the world. The barriers are lack of computers, lack of quality software, lack of time, technical problems, teachers' attitudes towards computers, poor funding, lack of teachers' confidence, resistance to change, poor administrative support, lack of computer skills, poor fit with the curriculum, lack of incentives, scheduling difficulties, poor training opportunities, and lack of skills in integrating ICT in education (Bingimlas, 2009).

3. Conclusion and Remark

The aim of this paper was to provide information on the importance, benefits of ICT integration and aware through some barriers of ICT integration. ICTs for education refers to the development of information and communications technology specifically for teaching or learning purposes, while the ICTs in education involves the adoption of general components of information and communication technologies in teaching and learning process. The success of ICT integration depends on the available of technology and pedagogical design. ICT use has a positive impact on students' achievement and performance. It provides rich environment and motivation for teaching and learning process. Mostly, teachers have a strong desire for the integration of ICT in education but there are some barriers that they must encounter. There are two different sides of barriers such as teacher-level-barriers and school-level barriers. Teacher-level-barriers are related a grouped as lack of time, lack of confidence, and resistance to change. While, school-level- barriers are lack of effective training in order to solve technical problems and lack of access to resources.

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CURRICULUM OF MULTICULTURAL EDUCATION
IN LOCAL HISTORY

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Abstract

Curriculum is one of tool to achieve the goal of education for a nation that is updated according to the needs and social conditions the country and in line with developments in science and technology. Curriculum must always be able to anticipate the conditions for a dynamic society. Multiculturalism is one issue that should be concern in education since Indonesia is a multiclktural country complete with multicultural problems. Education is a strategic container to stem the multicultural issue. Multicultural education is not onlu education about cuktural diversity but also provide space on education to change perspectives essential monoculture, prejudiced and discriminatory to multiculturalist perspective that value diversity and differences, tolerant and good attitude. In conjuction with teaching history, multicultural education curriculum can be integrated with local history. Multicultural education curriculum in local history study provides an opportunity for local history cultural diversity and understanding of the past be a reflection of the settlement terms of preventif basic and multicultural issue at this time.

Key Words: *Curriculum, Multicultural Education, Local History*

1. Introduction

Education in the history of the human child is one of the most urgent component of life. Since humans interact with this educational activity since that man has managed to realize a wide range of development and progress in all aspects of their lives. Even education is a natural in the development of human civilization. In parallel the educational process is progressing very rapidly, either in the form of methods, means and targets to be achieved. Because this is one of the properties and features of education, which is always forward. And if an education is not experienced and does not cause any progress or even cause a setback it is not called education. Because education is an integral activity which includes targets, methods and means in

shaping human beings and beradabtasi able to interact with the environment, both internally and externally in order to achieve better progress.

The curriculum is often interpreted narrowly, namely as a list of subjects only. Though the curriculum has a much broader understanding and more meaningful. Longstreet and Shane (Hasan, 2012: 135) states that the curriculum is the "construct of that culture". Basically the education curriculum is the answer to the challenges of the society to provide an educational experience that is useful for learners to develop the knowledge, skills, attitudes and values that are useful for future life better. Thus, the curriculum and the curriculum development process is always oriented to the future. With this orientation, the curriculum developers must examine what happened in the past and how this nation resolve the problem. With the future orientation of the curriculum developers should review the existing problems in the life of the nation and society that exists today, the challenge for the present and the future. The study on the curriculum developers define the knowledge, skills, attitudes, values and processes that allow learners to be able to master what was learned from the curriculum in the life of the present and the future.

In the development of the curriculum will always growth following the conditions of local communities and the world community. As the heart of education, curriculum pumping instrumental education to the entire network or aspects of life to answer the challenges of the growing world. Thus the term 'change minister, change the curriculum' to be very reasonable when viewed from the perspective of each character a different education.

To answer the challenges of the world, the curriculum contains material about global issues and solve them based on a global perspective. Not only that, local communities were required to think globally. A global perspective is of course important even encouraged education to avoid narrow thinking. But this is of course a dilemma because on the one hand global perspective erode national identity is an important identity of a nation.

The motto of *Bhineka Tunggal Ika* is an Indonesian national identity which means that the people of Indonesia consist of various ethnicities with its cultural uniqueness. As stated by Geertz (in Kymlicka 2011: viii) that Indonesia is not only the nation's multiethnic (Javanese, Batak, Bugis, Acehnese, Flores, Bali and so on) but also become the arena of influence multimental (India, China, the Netherlands, Portugal, Hinduism, Buddhism, Confucianism, Islam, Christian, capitalist and so on). Indonesia is a nation with the size, significance and different characters through a grand narrative that is historical, ideological, religious or that kind of linked into an economic and political structures together.

Kenaekaragaman local nation and world development is increasingly rapid and complex results in education, through the curriculum, have to work hard at providing a forum for both of them to avoid the decline of national identity, that diversity does not become a reason for the emergence of social classes in the local community and the world, provides an understanding that each ethnicity has an equal opportunity to develop themselves.

Based on that idea, then drafted based multicultural education. Arab descent and the indigenous people or often called natives, have the same right to achieve academic excellence in school. Chinese and natives get the same service in education. And learning the local history in the curriculum, have the space to develop multicultural education. Local history portray that multiculturalism is real and very close to the environment students, making it easier to transfer academic understanding of the importance of equality in multiethnic.

2. Theoretical Background

Curriculum

In the world of education is moving dynamically, curriculum change is not something extraordinary. The curriculum will constantly change or development, as the response of the various changes that occur in the community, whether the changes relating to the social, political, economic, and development in the field of science and

technology. According to Hasan (2010: 1), the term curriculum is a new term in the world of education in Indonesia. When the newly independent Indonesian nation and declared itself sovereign over the territory that was once called the Dutch East Indies education in Indonesia has not used the term curriculum. The term used in the early independence until the sixties was a lesson plan and a list of subjects as a translation of the Dutch terminology leerplan and leervak.

It can not be denied that the literature curriculum subjects mentioned list (list of courses) as one of the initial meaning of the term curriculum. The term new curriculum used in England in the early 19th century (1820) by galsgow University of Latin curere (Tanner and Tanner, 1980; Henderson and Gornik, 2007: 2), which literally means a run but in the early 19th century that changed it means to be a list of subjects. The term curriculum starting to get a wide place in the beginning of the century to 201 (Tanner and Tanner, 1980: 4) after a change in meaning is very different from the notion of curriculum as a list of subjects. The terms of the curriculum began to enter into the world of education in Indonesia of educational literature United States towards the end of the 60s of the 20th century (Hasan, 2010: 1).

With reference to the above opinion, we can see that the term of the new curriculum known in Indonesia in the late 1960s, but the interpretation is still limited which still considers the curriculum as a list of subjects only. Ironically, until now there are many educational practitioners who see nothing more than a series of curriculum subjects, so that when there is a change curriculum so the first time in the highlight is a list of such subjects, not examine the reasons more essential than the change occurs. It can not be denied that the literature curriculum subjects mentioned list (list of courses) as one of the initial meaning of the term curriculum. The term new curriculum used in England in the early 19th century (1820) by galsgow University of Latin curere (Tanner and Tanner, 1980; Henderson and Gornik, 2007: 2), which literally means a run but in the early 19th century that changed it means to be a list of subjects. The term curriculum starting to get a wide place in the beginning

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Multicultural Education

Longer According to the Oxford Dictionary, the term multiculturalism is a deviation from the terms that describe the multicultural society Montreal as a multicultural society and multi-lingual in Canada.

The social conditions of cultural and geographical Indonesia can be demonstrated with a population of more than 200 million people occupying 13,000 large and small islands about 250 languages berbera. In addition they also embrace different religions and beliefs (Wiriaatmadja, 2004: 64). The diversity gives the chance appearance of an endless ethnic issues. In this regard, the multicultural education was born as an alternative medium to minimize the ethnic issue. Because the hakitkatnya challenge of multiculturalism is the recognition of the identity and cultural acceptance of minority groups (Kymlicka, 2011: 13).

Multicultural education not only seeks to make understand the subject matter but also raise awareness to always behave humanist, pluralist democratic dah. This is part of a process, a concept based educational strategies and cultural diversity, the multicultural education explained that the process of development of culture and socialization inculturation. (Yaqin, 2005: 13).

Multicultural education is a series of trust (set of beliefs) and the explanation that recognizes and assesses the importance of cultural and ethnic diversity in the form of lifestyle, social experience, personal identity, educational opportunities of individuals, groups and nations. He defines multicultural education is an idea, movement, education reform and the education process whose sole purpose is to change the structure of educational institutions so that both men and women students, special needs students, and students who are members of racial, ethnic, and culture A variety such will have the same opportunity to achieve academic excellence in school (Banks in Farida, 2005: 4).

Multicultural education (multicultural education) is a response to the development of the diversity of the school population, as demanded equal rights for each group. In another dimension, a multicultural education curriculum development and educational activities for entering various views, history, achievements and concern for those non-European (Hilliard, 1991-1992).

The description of the multicultural education above provides a simple understanding that multicultural education is an education for or about the diversity of cultures in response to demographic and cultural changes in a specific community or the world as a whole. Multicultural education is an attitude of caring and willing to understand (difference) or the politics of recognition is a political recognition of people from minority groups.

Learning Local History

This science provides extensive field of historical studies on cross-cultural communications (across cultural communication) between one community to another

community that became the basis for the integration process of the Indonesian nation. To interpret the history of the Indonesian nation will require an understanding of the locality area in Indonesia which was then known as the local history. Local history is the history of a place or locality a limit determined by the agreement in question chroniclers (Abdullah, 2007: 15). As according Lapian in Hafid (2011: 27) study of local history is a correction of the generalizations that are often referred to in the national history writing.

Local history has a relationship with the national history since it can also be used to document a wide range of local events associated with the national. Or in other words, local history is a collection of pieces of puzzle which when put together will form a perfect and clear picture in this regard is the national history.

Local history has two aspects: Unity in Diversity. In a first aspect of local history includes events limited in relation to the life of each tribe or area. In a second aspect of local history has nothing to do with the historical events of national level. Both aspects are equally important in raising awareness, equality and solidarity as a nation that has the same basic culture. In an effort to raise awareness of the historic, especially local history is not expected to bear the attitude of regionalism or tribalism narrowly but rather the spirit of togetherness (Madjid 2007: 129).

In the study of local history, there are several things to note is the presentation of the material, learning and assessment techniques (Mulyana, 2007: 7). Besides the presentation of material of local history in schools should also refer to the purpose of teaching history in general is to get knowledge of the facts of history, gaining an understanding or appreciation of the past, acquire the ability to evaluate and critique the writing of history, learn the techniques of historical research and learn how to write the history (Brian Garvey and Mary Krug in Mulyana, 2007: 7-8).

The purpose of the establishment of local history in the teaching of history in schools among other learning materials will be more easily absorbed students; learning resources in the area can more easily be used for educational purposes; students familiarize themselves with the environment; students can improve their

knowledge of the region; students can help themselves and their parents in order to meet their needs; students can apply the knowledge, attitudes and skills they have acquired to solve problems found in the vicinity and the students become familiar with the environment (Widja in Hafid, 2011: 26).

Cartwright in Hasan (2007: 188) stated that "Our personal identity is the most important theing we possess". Learning local history became the basis for the development of personal identity, cultural and social students. As for some of the local history is the history of the village of Arab and Kampung Kapitan as a symbol of the presence of ethnic Arab and Chinese in Palembang, the Palembang Darussalam Sultanate, Pulo Kemaro, Palembang songket, history raft house, where the Musi River from the time of Srivijaya until the 21st century now, the Princess Cave in Balfour, relics megalithikum and others.

Through local history, national history is formed. Realization of deep meaning about local history is evident in the Education Unit Level Curriculum (SBC) where schools or teachers have the authority to develop the historical material especially local history. Not only SBC, the new curriculum (Curriculum 2013) thick will be of value investment in each eye pelajarann subjects including history that is synonymous with identity (individual or nation).

3. Method

This study used a qualitative approach. A qualitative approach using data derived from interviews manuscripts, field notes, personal documents, records memos and other official documents. The purpose of qualitative research is to describe the empirical reality behind the phenomena imply a deep, detailed and complete. So the use of qualitative approach in this research is to match the empirical reality with the prevailing theory by using descriptive method. Data this research were selected from the literature that the curriculum of history education, multiculturalism and learning local history.

4. Result and Discussion

Curriculum in Multicultural Education

If likened to the heart and other organs, the curriculum is the heart while multicultural education is one of the important networks that carry blood to a certain body part. The analogy suggests that the curriculum and multicultural education is an important component in education. Multicultural education curriculum answered one of those challenges through large-scale cultural diversity locally, nationally and internationally so that mutual care and respect. That there is no higher culture from other cultures.

Multicultural education course was born out of ethnic conflict because according to historical studies, these conflicts arise due to differences in the physical characteristics of a particular ethnic, different culture and way of life. Adolf Hitler, for example, says that the Aryans are the nation's highest position of other nations; the emergence of social class in Indonesia created the Dutch government that puts indigenous people (the term for indigenous Indonesian) ditingkatan social bottom; ethnic conflict between Dayak and Madurese in Kalimantan and other similar conflicts.

But in the other side, historical study describe how a nation born of a wide variety of ethnic cultures such as Indonesia and other countries Canada, for example; how the world's attention fixed on one occasion when the president of a superpower is a black person, Barack Obama. The events began to erode views on racial discrimination has long been a national and international issues as well as a spirit of minority groups to align their rights with the majority more control of every aspect of life.

In the midle of ethnic diversity of cultural, multicultural education was born as pahwalan for minorities. Education and culture to encourage fresh air that no culture is better. Every human being is born with an equal opportunity to obtain achievements in school, at the level of government services. This gives a different viewpoint and valuable to students, because early on they are given an understanding of the multicultural not criminals who always despised so ignore concerns.

Learning Multicultural Education in Local History

Multicultural education became a vehicle for the state of Indonesia and enforce multicultural society and to recognize the identity of minority groups that are pieces of puzle Indonesian identity. The integration of multicultural education with learning local history, it is expected concern for minorities in every aspect can realize a society free of ethnic conflict that could threaten national unity.

One of the local historical material that can be integrated in multicultural education is the Arab village of Al Munawar in Palembang. Arab ethnic groups have been around in Palembang since the 7th century AD In the Arabic news sources stated that this ethnic group in Palembang layover before continuing its journey to China. Some experts argue that the typical Arab ethnic groups in Indonesia, including Palembang, came from Hadramaut which is located in the coastal area of the southern part of the Arabian Peninsula, which is part of Yemen.

Results of research L.W.C. van den Berg shows that Arabs Hadramaut started coming en masse to the archipelago in the last years of the 18th century, whereas their arrival at the Malabar Coast much earlier. Their first stopover was Aceh. From there then partially spread to Palembang and Pontianak.

In the Sultanate of Palembang Arabs have a distinctive feature compared to other foreigners who settled in Palembang for their services in the economy of the Sultanate of Palembang. While other foreign people by only allowed to stay on the river, they can enjoy living in a relatively dry and warm. It was once reported by Sevenhoeven. This feature has been going on since the reign of Sultan Abdurrahman (1659-1706). At that time the Arabs have the freedom to stay in the mainland for their services in improving the economy of the Sultanate of Palembang. In its report Sevenhoeven also wrote that the proximity of the Arabs by the Sultan also demonstrated by awarding the title of 'pangeran'; whereas the Chinese Muslims, usually tin mine administrator who became a convert, was given the title of 'demang'

Kampung Arab history as a matter of local history and a reflection of the migrants in Palembang can be integrated with multicultural education. That ethnic Arabs since the Sriwijaya has become part of the community of Palembang. All the cultural differences between ethnic Arabs with native communities is certainly a respective ethnic cultures should be respected without being a hindrance to mendapakan the same opportunity as a chance to excel and get an equivalent education services.

5. Conclusion and Remark

The curriculum is the heart of education and change as the update educational needs and treat global issues such as the issue of multiculturalism is based on historical studies is an issue that has been a long time coming. To facilitate this it is present in the multicultural education part of the curriculum to provide learning about behaving humanist, pluralist and democratic as part of a multicultural educational purposes. Learning local history is a learning environment that is closest to the students so as to facilitate the students see real about multiculturalism. In Palembang, for example, learning local history and multiculturalism can be seen from the history of the Arab village. Students can do the work that is directly to see Kampung Arab and studying the history of Arab society. So, learning local history may be the media in multicultural education.

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TEACHER CREATIVITY IN THE CLASSROOM MANAGEMENT

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Abstract

Creativity needs to be done by the teacher in the learning task. With creativity, learning goals would be more easily achieved. Creativity of the teacher in teaching reforms ideas, practices, and educational products. Renewal was about something totally new, combined, or modification of, or the development of new forms of the old to. Classroom management for teachers who do this need modified so that the process learning and teaching fun and students are motivated to learn. Learning component that is directly related to the learning process in the classroom and need to be considered in the management class is primarily instructional materials, media, methods, teacher, student, classroom atmosphere, and arrangement of all components to run. Interaction this raises the learning dynamics. These dynamics can vary its shape and determine the quality and effectiveness of learning. It required creativity in managing classroom teacher in order to target the achievement of goals.

Keywords: creativity, management, classroom management, learning

1. Introduction

Satisfaction of the teacher in the learning process is the implementation of effective learning. Effective learning process is shown by the dynamics of the learning process that leads to a set of learning objectives that change the cognitive, affective and psychomotor. Educational component that are directly related to the learning process are teachers, learners, materials, methods, media, classroom environment, and learning management. Sutikno (2005) said that One of learning management is class management. Class is one room dedicated to the learning process in which all relevant components interact and directed achieve learning objectives.

Classroom management is all the activities of the teacher to make the class and all related classes to achieve a comfortable and effective learning. Classroom management is a series of teacher behavior in its efforts to create and maintain a classroom environment that allows students to learn well. According to Munandar (2002) that perform the necessary classroom management a teachers' creativity in managing all physical and non-physical components involved in the learning process. Creativity is a person's ability to create new things, new ideas from the ideas of the new, modified, association, combination to be a new thing.

In the process of learning often happens that the class dynamics do not lead to the achievement of learning objectives effectively and efficiently. This can affect the success of student learning. Efforts to do are teachers can do things that are creative in managing the class. With the ability of creative teachers, students as subjects and objects enjoy learning because learning new things and getting fun, so as to further enhance the students' motivation.

Creative teacher will always strive to discover new, different and unique in the learning process. Teachers will conduct change on aspects of quality of learning will be implemented, effective, and achieve goals.

2. Result and Discussion

Creativity is the ability to reflect fluency, flexibility, and originality in thinking and the ability to elaborate (develop, enrich) the idea (Bronoswki, 1987). Barron defines creativity is the ability to create something new. Something new here is not meant to be entirely new, but it can also be a combination of elements that have been there before (Afifa, 2007).

Creativity as the emergence of new results into an action. New result emerges from the properties of a unique individual who interacts with other people, experiences, and life circumstances ((Basuki H. , 2010).

From the above definition concluded that creativity is the ability to create or find something new and something or modify existing ones so that the benefits are worth more than previous.

The hallmark of creative teachers are someone do thing or event or ideas that are meant new. New is something that didn't exist before, so the idea, practice or product that original, old but modified so that it appears a new form, different, and unique (Afifa, 2007).

Authenticity (originality) appear high in the expression of ideas or essay, in solving the problem using the original methods. The ability in develop or elaborate an idea (elaboration capabilities) and do everything in a way that is unique. These characteristics can constructively rise in every individual, because every individual has a creative potential (Basuki H. , 2010).

Creativity is the ability to see the possibilities to solve a problem. Creativity is an attitude that demands creative thinking characteristic of an individual with flexibility (flexibility), fluent (fluency) , original (originality), outlining (elaboration) and reformulated (redefinition) which is characteristic of creative thinking proposed by Guilford (Basuki H. , 2010).

Furthermore, according to Terry understanding management is a process or framework, which involves the guidance or direction of a group of people toward organizational goals or intentions are real. Management also is a science and an art. Art is a skill knowledge gained from experience, observation and learning and the ability to use knowledge management (Sardiman, 2004).

Management education is one of the management classes. A room is used for effective teaching and learning processes and to motivate students to learn well within your means. Learning park for formal student is inthe class. Inthis place student can grow and develop their intellectual and emotional potential. Therefore, it is needed that teacher try to make a place that is really comfortable and fun to learn.

Teachers have to prepare lesson plans, but in the implementation class is dynamic and conditional. At one point an orderly classroom, another during class as usual / normal and at other times the class is noisy and uncontrollable. Such conditions affect the achievement of learning objectives namely good learning outcomes.

In a class all aspects of learning to meet and precede, teachers, pupils, methods, media, materials, learning resources interact in the classroom. Meanwhile, the learning outcomes determined also everything that happens in the classroom. Therefore, it is fitting to Be in a good class, professional, and sustainable.

Management is from the word "management". Be translated into management, means the process of using resources effectively to achieve targets. While management is a process that provides oversight on all matters involved in the implementation and achievement of objectives. Classroom management is intent refers to the creation of an atmosphere or condition classes that allow students in the class can learn effectively (Djamarah, 2002) .

Jason and Barry in Sutikno (2005) outlines that classroom management is a skill that must be held by teachers in deciding, understand, diagnose and repair capability to act towards a classroom atmosphere of aspects to consider in the management class are: the nature of the class, the driving power of the class, classroom situation, action selection and creativity.

Classroom management is a set of teacher behaviors in an effort to create and maintain a classroom environment that allows learners achieve learning goals efficiencies or enable learners to learn well (Sardiman, 2004).

Teacher has ability to manage classroom for understanding, diagnosing, determining, and acting. All of those shows main the ability towards the improved classroom atmosphere of aspects that need attention in the classroom management for class properties, the driving power of the class, the class situation, action selection and creative.

Teachers have skill to manage the classroom in order to leverage the potential of the class". "Classroom management is a skill teacher to create a climate conducive to learning and control in the event of an interruption in learning " (Djamarah, 2002).

From the above it can be concluded the opinion that classroom management is an attempt to leverage the potential of classroom teachers to organize learning activities and motivate the students to the learning effective and enjoyable.

Efford of classroom management is viewed as the effort to maintain classroom order. According to the modern conception of classroom management is the selection process that uses a tool that fixed the problem and classroom management situations.

Purpose of classroom management as follow: realizing the situation and condition of the positive class, removes obstacles that could hamper the teaching-learning interactions, providing and arranging facilities and furnishings learning, fostering and guiding students. The purpose of classroom management is the provision of facilities for a variety of student learning activities in a social environment, emotional, and intellectual in the classroom, so that every child in the class can work in an orderly manner so as soon achieved the goal of teaching effectiveness and efficient.

Creativity Teachers in Classroom Management

Creativity of teachers needed in the classroom as a space to manage the process of learning. Mainly, organizing and maintaining class must be done by teacher to make the classroom physically being neat, clean, healthy, moist, fairly light illuminated. Another thing in making the class convenient notes by sufficient air circulation good condition of meubelair laid neatly, and then the number of the student not more than 40 people.

Classes are very dynamic. Managing a class is a challenging job for teachers. Every day teachers are dealing with students throughout the learning process. Variations in the dynamics of the class requires teachers not to rely on what has been done so far, but needed the ability of teachers to develop classroom conditions for learning effective and efficient running smoothly as well as fun.

Creative teacher has many varied alternatives in an effort to involve students with the management approach corresponding to the background of the growth and development of students such as age, social, emotional, behavioral.

There are some teacher approaches need to be done such as : maintaining order through the use of disciplined classroom atmosphere (Authoritarian Approach) create and maintain order through a classroom atmosphere of intimidation (bullying approach), to maximize the freedom of students (Permissive Approach), following the established guidelines, and quality learning plan implemented good (Instructional approach), learners develop behavior desired by reducing unwanted behavior (behavior Changing approach), develop a good relationship interpersonal and socio emotional climate of positive class (socio emotional climate Creation approach), foster and maintain effective classroom organization (Social Systems approach) (Sardiman, 2004) .

All approaches were combined, modified by the teacher according to the circumstances and conditions in the student classroom. At one time the teacher to use and approach focuses on changing behavior, at other times emotional approach to the creation of a social climate, or one day combine several approaches to classroom management.

While the classes are classified in managing the physical, creative teacher will then update them in a classroom setting, creating a comfortable classroom for learning.

Teachers modify the behavior of the student, finding a group problem-solving approach, and find and solve problematic behavior, are three strategies that teachers do in the effort associated with the development of optimal learning conditions.

Creativity of teachers in classroom management are generally divided into two parts, the skills associated with the creation and maintenance of optimal learning conditions (preventive) and skills associated with the development of optimal learning conditions. Creativity is associated with the creation and maintenance of optimal learning conditions consisted of preparedness of teachers in classroom situations, divide attention, focusing the group.

In order to minimize interference problems in a creative classroom management teachers in motivating students to focus on the learning process, showing actions enthusiastic, good at choosing words in improving students' passion for learning, varied in the use of tools or media, teacher's teaching style, creating a pattern of interaction between teachers and students, flexibility in applying predefined rules.

Teacher creativity needed to create and maintain a classroom environment and atmosphere so that teaching and learning can take place effectively and efficiently.

Teachers create and develop relationships with students and teachers make productive group rules.

Creative teacher will know and adjust the internal factors and external factors of students. Internal factors associated with problem student's emotions, thoughts, and behavior. External factors associated with problem students learning atmosphere, student placement, grouping of students, number of students, and so on. Problem number of students in the class will color class dynamics. The more the number of students in the class will be more prone to conflict. This conflict can be prevented by a creative teacher because the teacher would always think about how to attract the attention of students to focus on learning.

3. Conclusion and Remark

The ability of teachers in classroom management is required. Aspect has managed in the classroom is the student with the class and all its activities and its environment. Teachers deal with students every day and class dynamics always vary. Class dynamic will focus on learning objectives effective if the teacher has the ability to be creative in managing. By doing new and different things, students will delight in learning, and the class will be more effective in learning, so that learning goals will be more easily achieved.

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OPTIMALIZATION OF INTERPERSONAL INTELLIGENCE OF EARLY CHILDHOOD IN INTEGRATED STATE PAUD (EARLY CHILDHOOD EDUCATION) IN KUTAI TIMUR REGENCY

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Abstract

These study aimed: (1) To obtain in-depth information of the teachers' approach in optimalization interpersonal intelligence in early childhood in State PAUD (Early Childhood Education) in Kutai Timur Regency, (2) To obtain in-depth information of the methods and strategies used by the teachers in the process of optimalization of interpersonal intelligence in early childhood in State PAUD (Early Childhood Education) in Kutai Timur Regency, and (3) To obtain a deep information on the development of interpersonal intelligence of early childhood in State PAUD (Early Childhood Education) in Kutai Timur Regency. The method performed in the collecting and recording of data include: (1) method of participant observation (participant observation), used as the primary method for collecting data of early childhood interpersonal intelligence in Integrated State PAUD (Early Childhood Education) in East Kutai Timur Regency, (2) the method of significant interview committed to the Principle, teachers, and students of the Early Childhood Education (PAUD) , and (3) documentation method, as a supporting method to obtain data/facts. Data analysis technique used were undergone several stages. First, the data which were obtained from various dah athe characteristics of each. Data obtained from the recording were transcribed and categorized. Secondly, the data which had been transcribed and categorized then were analyzed by using a grouped stage flow model analysis, which begins with (a) data reduction, (b) data presentation, and (c) drawing conclusions and verification. The results showed are as follows: (1) Teachers' approach in the optimalization of early childhood interpersonal intelligence are generally divided into two types, namely classical' and 'individual'., (2) Methods and strategies used in the process of optimalization interpersonal intelligence of early childhood in Integrated State Early Childhood Education (PAUD) in Kutai Timur Regency is storytelling and playing. and (3) Development of interpersonal intelligence of early childhood in Integrated State Early Childhood Education (PAUD) of Kutai Timur Regency, found a significant change which could be seen from those who were timid, shy, could not cooperate, and neglectful to others, become a brave, always cooperate and empathy.

Key Words: Intelligence, Interpersonal, Early Childhood, PAUD Kab. Kutim

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1. Introduction

Intelligence is one of the lead factors that determine the student's success in learning at school. Gadner stated there are eight aspects of intelligence that needs to develop, which are: verbal-linguistics intelligence, mathematic-logic intelligence, kinesics intelligence, spatial intelligence, musical intelligence, intrapersonal intelligence, interpersonal intelligence and naturalist intelligence. The interpersonal intelligence is one of the intelligences that need to be developed at early childhood.

The interpersonal intelligence is the capability of getting in touch with surrounding people, understanding and predicting the feelings, the mood, the intentions of others then respond it in proper way. The lack of interpersonal intelligences would make the behaviors that could not be accepted socially. May Lwin at Suyadi propose that the factor that could take us to higher success is interpersonal intelligence not academic intelligence.

This research aimed to the optimization of interpersonal intelligence because Integrated State PAUD (Early Childhood Education) in Kutai Timur Regency has at least three main characteristics in developing the education, which are: (1) it had a strong bound between one parents to another, (2) it had developed the family gathering program, (3) it had charity day (the children do intaq every friday) and sharing (share and eat the food together).

Research Questions

(a) How was the teacher's approach in the optimization of child's interpersonal intelligence in Integrated State PAUD (Early Childhood Education) in Kutai Timur Regency?

(b) How was the method and strategy that the teacher applied in the process of optimization of child's interpersonal intelligence in Integrated State PAUD (Early Childhood Education) in Kutai Timur Regency?

(c) How was the development of child's interpersonal intelligence in Integrated State PAUD (Early Childhood Education) in Kutai Timur Regency?

2. Method

The approach in this research was qualitative. The researcher took Case Study as the research design, in order to investigate intensively a certain subject or object. The research was conducted at Integrated State PAUD (Early Childhood Education) in Kutai Timur Regency on January until June 2014. The data obtained in this research was primary and secondary data. The primary data was taken directly from informant through participative observation and interview. Meanwhile, the secondary data in this research was documentary data that needed to illustrate the general situation of Integrated State PAUD (Early Childhood) in Kutai Timur Regency, such as: school's vision and mission, students and teachers profiles, syllabus etc.

The source of data in this research were: (1) The Head of Integrated State PAUD (Early Childhood) in Kutai Timur Regency, (2) The teachers of B-2 Kindergarten Integrated State PAUD (Early Childhood) in Kutai Timur Regency and (3) the students of B-2 Kindergarten Integrated State PAUD (Early Childhood) in Kutai Timur Regency.

The data collection obtained by: (1) the participative observation, as the primary method to gather the data about child's interpersonal intelligence in Integrated State PAUD (Early Childhood) in Kutai Timur Regency, (2) the deeply interview method to Principle, teachers and students, (3) the documentary, as the supporting method to obtain data/facts.

The data analysis technique used was divided into several stages. First, the data which had taken from various sources, which were direct observation, field note and interview, classified according to its each characteristic. The data from recording

were transcribed and categorized. Second, the categorized data was analyzed by using a group stage flow model analysis, which begin with (a) data reduction, (b) data presentation (c) drawing conclusion and verification.

In order to assure the validity of data, the researcher checked it through validity test which was suggested by Moleong, there were: (1) credibility, (2) transferability, (3) dependability, (4) conformability.

3. Result and Discussion

- **The teacher's approach in optimization of child's interpersonal intelligence in Integrated State PAUD (Early Childhood Eductaion) in Kutai Timur Regency**

Based on PAUD's syllabus, the interpersonal intelligence's indicators which highlighted in this research were: (1) easy at making friends, (2)be cooperative, (3) willing to share, (4) showing empathy and (5) capable to mediate. There are many approaches which teacher could applied in making child get ease in interpersonal intelligence indicator, such are: classical and individual approach concept. The classical approach is delivered when all children sit together at class and listening to the information that teacher said, it has focus on large group. Meanwhile, the individual concept has focus on small group or a child according to each child's capability which is different one to another.

A fascinating situation was captured when teachers welcome the student's arriving to school and at story telling session. Students had less tension and more relax by friendly attitude from teacher. It also happened when story telling session, all students was taken along by teacher's story and paid attention. The students itself by classical or individual said that what they saw in the beginning
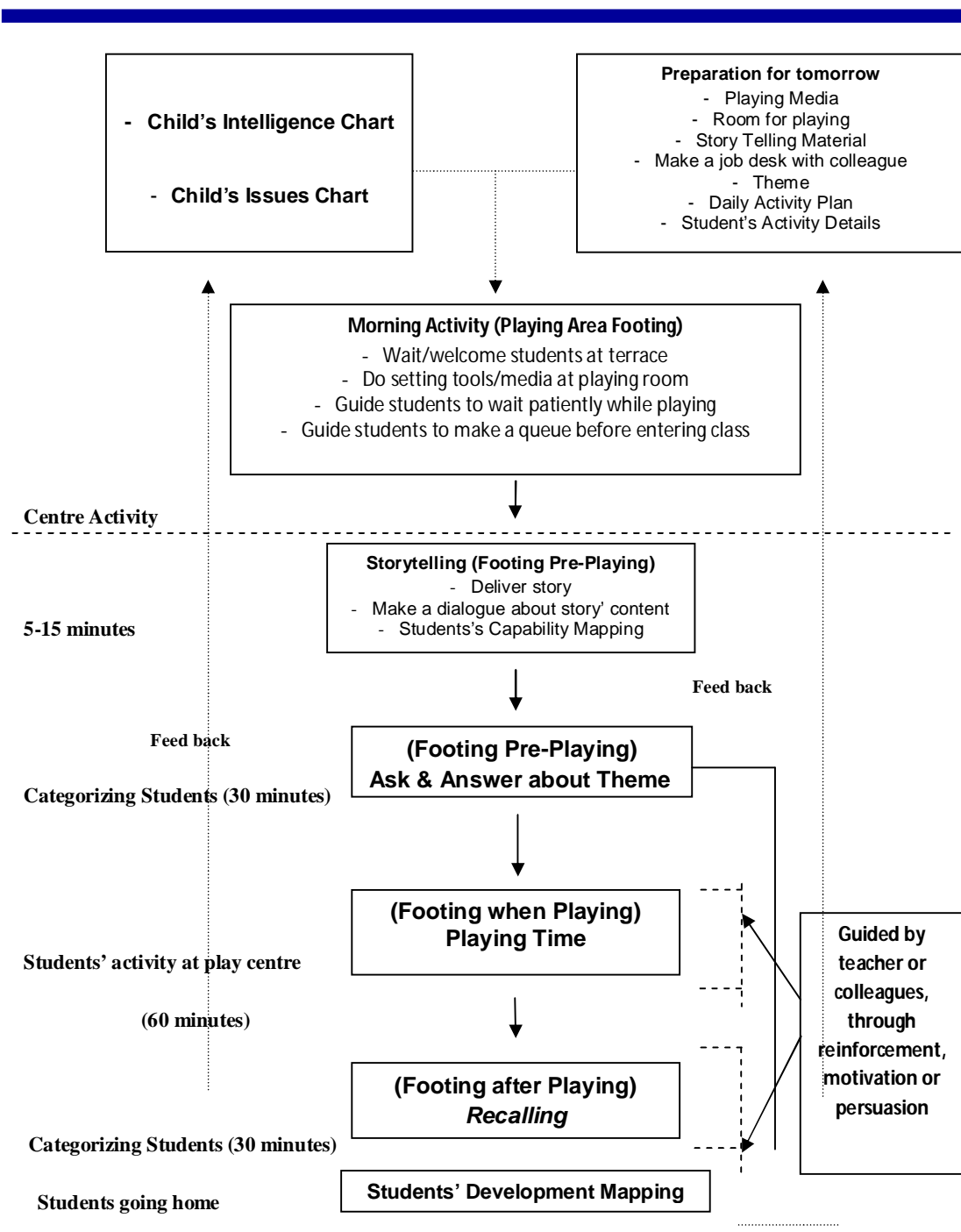
of the class was not a part of learning, they enjoy it. They enjoyed story telling so much, even better with interactive dialogue and supporting task that had a connection with the story theme. It is what we called constructivism, one of contemporary psychology models that has a concept that learning is all about construct the knowledge from within, not being poured to child's mind.

The suitable learning process for PAUD's students is through constructivism approach, especially in positive behavior learning way. Story telling is the door for us to enter the children world, where emotion involvement, understanding and mental involvement between the story teller and listener happened. The game's context which is understandable by students, gave a big chance for teacher to develop students' right brain as presented in dialogue between researcher and 5 children. Through game, students could explain their needs without have to worry.

- **The method and strategy in the process optimization of child's interpersonal intelligence in Integrated State PAUD (Early Childhood Education) in Kutai Timur Regency**

The method and strategy was developed by teachers of Integrated State PAUD (Early Childhood Education) in Kutai Timur Regency was focus on "story telling" method and "playing" method. The chosen method was meant to develop all kinds of intelligences, included linguistics intelligence, mathematic/logic intelligence, science intelligence, spiritual intelligence, emotion intelligence etc. In form of storytelling, teacher communicates to students by dialogue, asking and answering question about the story content, discuss the good and bad behavior from the characters in story. All methods are purposed in playing activity, as we know children are love to study through playing, but still in learning context.

Here are the illustration of teacher method and strategy in learning activity in optimization of child's interpersonal intelligence. The upper ends of this pattern was a proper preparation in playing media or tools, theme, daily activity plan, the selection of stories that would be delivered and the activity details that was prepared for students choose later.

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┌─────────────────────────────┐        ┌─────────────────────────────────────┐
│                             │        │   Preparation for tomorrow          │
│  - Child's Intelligence     │        │   -  Playing Media                  │
│    Chart                    │        │   -  Room for playing               │
│                             │        │   -  Story Telling Material         │
│                             │        │   -  Make a job desk with colleague │
│  -  Child's Issues Chart    │        │         -  Theme                    │
│                             │        │         -  Daily Activity Plan       │
│                             │        │   -  Student's Activity Details     │
└─────────────────────────────┘        └─────────────────────────────────────┘
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Morning Activity (Playing Area Footing)
- Wait/welcome students at terrace
- Do setting tools/media at playing room
- Guide students to wait patiently while playing
- Guide students to make a queue before entering class

Centre Activity

Storytelling (Footing Pre-Playing)
- Deliver story
- Make a dialogue about story' content
- Students's Capability Mapping

5-15 minutes

Feed back

Feed back

(Footing Pre-Playing)
Ask & Answer about Theme

Categorizing Students (30 minutes)

(Footing when Playing)
Playing Time

Students' activity at play centre

(60 minutes)

(Footing after Playing)
Recalling

Guided by teacher or colleagues, through reinforcement, motivation or persuasion

Categorizing Students (30 minutes)

Students' Development Mapping

Students going home

Picture 4.1. Method and Strategy of Integrated State PAUD's Teacher (Early Childhood Education) in Kutai Timur Regency in Interpersonal Intelligence

a. **Teacher's method and strategy to make students have a good interpersonal intelligence at " easy at making friends" indicator**

It already said that it is natural for children to make a friend. Making friends' competency for early childhood is not a big deal, sometimes children could make a friend anywhere, places like Mall or supermarket. However, teacher's strategy to ask students for welcoming or waiting their classmates to come to school while playing made a care feeling between students.

To introvert students, teacher's touch by "welcoming classmates" strategy made they became open hearted and trained to had sense of belonging. Their openness by welcoming and accepting their friends was inherent at daily school's life. Sense of belonging grew along which made sympathy toward their friends. Through this method, various aim of development process or the way of child's thinking could be formed.

"Easy at making friends" was one of the prequalifications of early childhood's (3-4 years old) learning success indicator which had been through the process by emphasize on interpersonal intelligence. The process that student had experienced at class (indoor) and outside the class (outdoor) reflected in student's performance in their daily school's life.

b. **Teacher's method and strategy to make students have a good interpersonal intelligence at " sharing and be cooperative" indicator**

The main characteristics of be cooperative are respect each other and share the feelings. Children (3-4 years old) basically started to show their desire to socializing. Sometimes, children brought their habit at home which was"self-centered" attitude to school or neighborhood. This attitude sometimes was missed by their parents and it considered as something usual. It is not a good

thing. Teachers at school should find a way to handle it so it wouldn't disturb the optimization process which had prepared.

The interesting strategy or method which developed by teachers as *nurturant* (continued/follower) from "welcoming students in the morning" strategy was established the students being leader in rotation before entering class. Teacher themselves was included in queue and stand close to the students who had self-centered attitude. It would give the students the real model how was the cooperative atmosphere built. That strategy would place self-centered students brought to cooperative culture. It concluded that learning to be cooperative with friends should be the top priority in associated surroundings.

c. **Teacher's method and strategy to make students have a good interpersonal intelligence at "showing empathy" indicator**

The child's interpersonal intelligence optimization at showing empathy concerning others feelings' indicator was developed by teachers almost all the time by storytelling method. The stories about independence heroes, prophet, knight legend was the effort to give the role model concerned virtue values. As yet storytelling method is always applied by many people unconsciously. Some people said it was a fail method, but it didn't happen in Integrated State PAUD. It is caused by the teacher's constructive dialogue which aimed to "empathy" character forming. The setting which PAUD went through was by adjusting the ability of children's attention centralization, which is not more than 15 minutes when storytelling, could be interesting investigation.

d. Teacher's method and strategy to make students have a good interpersonal intelligence at "capable to mediate" indicator

According to KBBI (Indonesian Great Dictionary) mediator means be intermediator, to reconcile, to separate a fight. The mediator is capable to dip deeply into the braided of relationship with others because they could feel their internal feelings. Based on the explanation above, this interpersonal intelligence indicator was much higher than the others indicators. Integrated State PAUD's teacher method in developing ability to mediate began by various stories or story that aim to the resurgence of children's empathy toward the characters in the story or story itself. Next, the discussion between teachers and student will be held to talk about the feelings of characters in story. It emphasize on students' thought based on their feelings. During the dialogue, the mapping of child's ability was made by the teacher carefully.

The story's setting which culminated in student's activity and suitable theme also teacher's mapping result became the reference to student' categorizing based on play centre.

- **The Development of Child's Interpersonal Intelligence**

Based on the first and second observation's result, researcher did re-check classification to the justification which had stated above. It is noted that there were several students who showed the interpersonal intelligence improvement, especially at 5 indicators (easy at making friends, be cooperative, willing to share, showing empathy and capable to mediate).

From 23 students who had been observed at B-2 group, there were 5 students who had significant interpersonal intelligence development. They were Fila, Fira, Marta, Alan and Adnan). Three of them (Fila, Fira and Marta) showed 2-3 indicators of interpersonal intelligence (easy at making friends, be cooperative and willing to

share), the rest only showed 1-2 indicators and yet didn't show the ability of showing empathy and be mediator. These 5 students had been interviewed according their way of thinking specially. Here is the background of 5 students' subject.

Table 4.1. Subject's Background Who Became The Focus of Observation

Names	Parents	Position in family	Siblings	Age	Age Distance between siblings	Parents' social and economic background	Residence	House member
Fila	Complete, father as civil employee	1st child	-	5 y.o, 6 months	0 year	Upper class	Elite	3
Fira	Complete, father as civil employee	1st child	1	5 y.o, 5 months	2 years	Upper class	Elite	4
Marta	Complete, working in prívate sector	1st child	-	5 y.o, 2 months	0 years	Upper class	Elite	5
Alan	Complete, father as civil employee	1st child	-	5 y.o, 9 months	0 years	Average	Housing	7
Adnan	complete, father as prívate employee	1st child	-	5 y.o, 6 months	0 years	Average	Rent house	5

At the beginning all 5 interview subjects experienced stammering at Integrated State PAUD surrounding, except Marta. Since the first time entering school, she looked easy at making friends, independent, brave, willing to share with others and cooperative. Whereas the other 4 subjects still afraid walked alone to school yard or hall where all their friends gathering and asked their mother for

accompany. During the first week, they keep cried when their parents didn't follow them to school yard, but in second month there was an improvement.

The child's interpersonal intelligence based on 5 indicators which was the focus of this research developed. The following table would display the development of child's interpersonal intelligence into some phases, first month, second month and third month.

Table 4.2. Subject's Interpersonal Intelligence Development During Observation

Observation	Interpersonal Intelligence				
	Easy at making friends	Be cooperative	Willing to share	Showing empathy	Capable to mediate
First Month					
Fila	V	-	-	—	-
Fira	V	-	V	—	-
Marta	V	V	V	—	-
Alan	—	V	—	—	-
Adnan	—	—	V	—	-
Second Month					
Fila	V	V	V	V	-
Fira	V	V	V	V	-
Marta	V	V	V	V	-
Alan	V	V	V	—	-

Observation	Interpersonal Intelligence				
	Easy at making friends	Be cooperative	Willing to share	Showing empathy	Capable to mediate
Adnan	V	V	V	_	-
Third Month					
Fila	V	V	V	V	V
Fira	V	V	V	V	V
Marta	V	V	V	V	V
Alan	V	V	V	V	-
Adnan	V	V	V	V	V

4. Conclusion and Remark

Conclusion

1. Teacher's approach in optimization of early childhood interpersonal intelligence at Integrated State PAUD Kutai Timur Regency generally divided into 2 types, which were "classical" and "individual" approach.

2. Teacher's method and strategy in process of optimization of early childhood interpersonal intelligence at Integrated State PAUD Kutai Timur Regency were storytelling and playing. The five minutes storytelling method by interesting style of delivering it succeeded impressing the students. There were 4 play centers as students learning place, which were preparation centre, beam centre, creativity and art centre and role play centre.

3. There was a quite significant improvement in development of early childhood interpersonal intelligence at Integrated State PAUD Kutai Timur Regency. At the first time they were scared, shy, uncooperative and also didn't care toward

each other but those attitude changed into brave, always cooperative and showing empathy. These changes were not only occurred while at school but also showed by children in their neighborhoods. Different from others, the "capable to mediate" indicator only could be done by they who already had the ability to easy at making friends, showing empathy, cooperative and willing to share.

Suggestion

1. Reflection is needed in every learning process. The reflection in each ending of learning by teachers and colleagues showed there was interpersonal intelligence attainment activity. Based on Gadner the socializing ability would able to help completing the early childhood's development.

2. The optimization of early childhood interpersonal intelligence could help the educators, teachers, parents to diagnosis, settle the aim and interpersonal intelligence developing activity, establish the strategy, relevant learning source and learning needs and how to evaluate it.

3. For PAUD's teachers, this research result could used as reference in gaining information about the indicators that influenced the early childhood interpersonal intelligence.

4. For parents and educator, this research result could used as reference to understand the characteristics that had relation to the optimization of early childhood interpersonal intelligence and to help improving the family lives, school, and society' climate engaging in early childhood's characteristics.

5. For researcher, this research only discovered a little part of the optimization of early childhood interpersonal intelligence. By the means, researcher highly hopes the next researcher could develop more, like how to formulate the developing model of multiple intelligence at kindergarten and formulate the standard of early childhood's education service.

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THE COMPARISON OF USING JUMBLE WORDS AND WORD ORDER TECHNIQUES TOWARD STUDENTS' GRAMMAR MASTERY

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Abstract

Grammar is one of basic language components to produce an appropriate sentence formally. Many students are difficult to understand grammar because of the technique which is used by the lecturer is not interesting; the students never practice their understanding in written; and learning technique which is used by the lecturer is inappropriate with the subject. The objectives of this research are: to find out the students' score in using jumble words technique; to find out the students' score in using word order technique; to find out the students' score of grammar mastery; to find out the students' result of comparison of using jumble words and word order techniques toward students' grammar mastery. The researcher conducts stratified random sampling design and pre-test and post-test control group design as research instrument. The result of hypothesis test on test phases both provides the different result which using significant degree 5%, where t_{count} is higher than t_{table} on the analysis data of post-test with t_{count} =2,26 and t_{table} =2,02. It sows that The students who are taught by jumble word technique have higher score. In conclusion that jumble words technique is more effective than word order technique in teaching grammar mastery.

Keywords: Grammar, Jumble Words, Word Order

1. Introduction

Grammar is one of the three main components of language that could be defined as the whole system and structure of a language which is usually taken by consisting of syntax and morphology. Grammar is regarded as an obligation or a set of rules accounting to construct a sentence. To analyze people whom have good education with whom do not have education are from their spoken and written. If they use good grammar, it means that they have good education. Hence grammar is always used in the formal forum such as: in the government, in the company, in the school etc. Unfortunately, the teaching atmosphere in learning process does not encourage the

students to master deeply what they have learned (grammar). Theory focus frequently causes them do not reach a maximum result of learning aim. Moreover, an inappropriate technique applying in learning process engenders the students hard to master teaching's aim especially grammar course. Meanwhile the teaching time is also usually bad; it is proved by many students who do not have interest in learning process during the class. They almost gets wrong in united some words into good sentence and tenses using is not accurate when the students are asked to write some simple sentences. It can be summed that the students are difficult to apply their ideas to arrange some words into precise sentence.

From the problem above, the researcher offers two techniques to solve the students' problem and increase their grammar mastery. Therefore, in this research, the researcher will employ jumble words and word order techniques to measure students' grammar mastery.

2. Theoretical Background

Jumble words technique is one of puzzle game technique that divides a sentence to be some words or phrases randomly while students are asked to arrange the words to bring the sentence back. Mulyati (2007) defines that jumble word is borrowed from the English language which means the act, fight, and struggle. This word is used for a kind of word game, where the game is to arrange the letters that have been randomized into an appropriate sentence. Whereas Fatmawati (2009) defines that the jumble word is a learning game in groups by matching question cards with answer cards that have been provided in according with the exercise. The researcher gets a point of view that jumble words is a word puzzle game technique that gives students a group of scrambled words and requires students to unscramble them to make a correct sentence which correlate to the text and also to motivate the students interest of the text itself. This technique can be done by two or four students in a group. In

this tehcnique, the students are hoped able to rearrange the letters of the sentence or the sentences of discourse that the structure has been scrambled beforehand. Through this tehnique, the students are able to compete to construct a sentence of words available. This technique can also train students to be active.

While word order technique is a technique that can help students to understand in arranging sentences correctly and deeply. In many languages, including English, word order plays an important part in determining meanings expressed in other languages by inflections. Gill (2010) acknowledges that:

Word order is as an inflected language like Latin; the order of the words is less important than the ending in terms of determining how each word functions in the sentence. A Latin sentence can be written subject first followed by the verb, followed by the object, just as in English. This form of sentence is referred to as SVO.

From the statement above, word order tehcnique can be concluded as the way to arrange some words into a phrase, clause, or sentence which is accordance with English grammar basic rule, Therefore the phrase, clause, or sentence are followed good or correct either in grammar or meaning.

Based on two tehcnique above, the researcher compares them to examine which one is better to increase the students' grammar mastery in teaching process. The researcher provides a conceptual framework as follows:
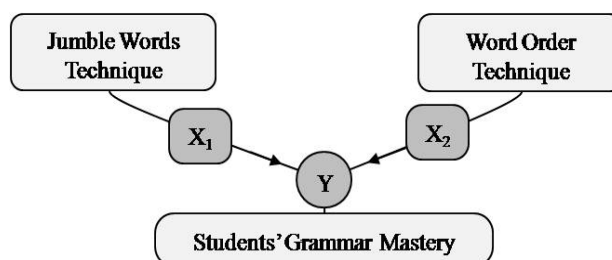
In this research, the thinking framework is jumble words and word order techniques as independent variable and grammar mastery as dependent variable. Colander, David (2013) states a conceptual framework is an analytical tool with several variations and contexts. It is used to make conceptual distinctions and organize ideas. Strong conceptual frameworks capture something real and do this in a way that is easy to remember and apply.

Based on the figure above, the researcher assumes that jumble words technique is more effective than word order technique to influence students' grammar mastery. The achievements of grammar mastery will be got differently by students in using jumble words and word order techniques. It is happened because in learning process, the using of technique has to agree with the learning subject. Beside the using of jumble words will increase student's grammar mastery, they will also be motivated and given the first expectation about the arranging the scrambled words of sentences. With knowing what will be discussed about structure in the sentences, the students will be curious and have desire to arrange the sentences automatically. Even though, they have similarity but in each game has different ways. Jumble words technique will help students to identify structure of sentences by arranging the scrambled words to be unscrambled words in sentences correctly while word order technique will encourage students to arrange some words to be good phrase, clause or sentence which is followed by their own rules. Hence, it can be concluded that jumble words technique is more effective than word order technique.

3. Method

This research is quantitative research in employing comparative study. Quantitative research aims to determine the relationship between one thing (an independent variable) and another (a dependent or outcome variable) in a population. The researcher conducts stratified random sampling design which two groups that will be population which are chosen randomly and each group will be given a pre-test. The

researcher will use quasi experimental design where the researcher will act the treatment into kinds of design such as experimental class I and experimental class II which every class will be tested by employing pre-test and post-test to measure whether any significant alteration of understanding grammar by treating both techniques in learning process. Furthermore, the researcher employs Jumble Words Technique in the experimental class I and Word Order Technique in the experimental class II. The paradigm can be described as follows:

Table 2. Quasi Experimental Design

Group	Pre-Test	Treatment	Post-Test
Experiment Class I	O_1	X_1	O_2
Experiment Class II	O_3	X_2	O_4

Source : Sugiyono (168)

Note:

X_1 : The treatment which employs jumble words technique

X_2 : The treatment which employs word order technique

O_1 and O_3 : Pre-test

O_2 and O_4 : Post-test

The population of this research is all English Education students at second semester in Muhammadiyah University of Metro which the population consists of two classes. The population of the research is consisted of 44 students at second semester in Muhammadiyah University of Metro with different level as follows:

Table 3. The Characteristic of Population

Classes	Characteristic of Students			
	The Huge Mastery	The Sufficient Mastery	The Limited Mastery	Total
A1	5	14	3	22
A2	5	13	4	22
Total				44

Source: the grammar lecturer at English Department in Muhammadiyah University of Metro

The table of the characteristic of population above describes the three levels mastery of students. That can be seen from two classes, the sum of students in the mastery levels among classes is almost same. Although there are a bit differences in the sum of students in its each mastery levels but it can say that the students' grammar mastery of its classes are homogenous.

The next is about the sample which is gotten from the population as a representative. Singh (2006) names sampling is indispensable technique of behavioral research; the research work cannot be undertaken without use of sampling. The researcher determines the sample of the research which is taken from the population. The sample is taken by using a sampling called stratified random sampling. The sampling is done with the steps as follow:

a. The researcher asks the data to the expert (lecturer) how many students who are categorized the huge, the sufficient, and limited mastery.

b. The researcher will divide them dispassionately base on their mastery which each number of huge, sufficient, and limited students' mastery will be divided into two classes.

c. The number of students' gender also will be divided dispassionately which each classes are fulfilled by the same number of girl and boy students.

Finally, the researcher finds that A1 is as an experimental class I and A2 as the experimental class II. The experimental class I receives treatment that students' grammar mastery through jumble words technique and experimental class II through word order technique. Then, the researcher takes all students of A1 class and A2 class as samples. Therefore there are 44 students as samples where 22 students are in the experiment class and 22 students are in the experimental class II.

4. Result and Discussion

The result of hypothesis test on test phases both provide the different result which using significant degree 5%, where t_{count} is higher than t_{table} on the analysis data of pre-test with numeral $t_{count} = 2,06$ and $t_{table} = 2,02$. Meanwhile, on the analysis data of post-test also shows the same result that t_{count} is higher than t_{table} where $t_{count} = 2,26$ and $t_{table} = 2,02$. But both of them have different conclusion where they have significant different interval. The interval of pre-test is $2,06 - 2,02 = 0,04$ and if it is rounded, the numeral will be 0,0 (zero). It shows that the result of pre-test between the use of jumble words technique in the experiment class I and word order technique in the experiment class II is same. The hypothesis accepted is H_0. And then, the interval of post-test is $2,26 - 2,02 = 0,24$. It proves that the hypothesis of post-test is accepted which t_{count} has significant different result to t_{table}. Base on the different result between experiment class I and experiment class II toward the learning result, it can be concluded that jumble words technique is better than word order technique in teaching grammar mastery.

A fruitfulness of the technique in influencing a skill can be seen by the score of the students. In this research, the researcher has determined a passing grade of the students' grammar mastery is 60 (sixty) base on the expert's suggestion and curriculum of English Department in Muhammadiyah University of Metro. Based on the data analysis of pre-test shows that the number of students who did not pass the grade in experiment class I is 8 or about 36,4% and the number of students who passed the grade is 14 or 63,6% of 22 students. Meanwhile the number of students who did not pass the grade in experiment class II is 11 or about 50% and the number of students who passed the grade is 114 or 50% of 22 students. Then, after there is a treatment of the students, based on the data analysis of post-test shows that the number of students who did not pass the grade in experiment class I are 3 or about 13,6% and the number of students who passed the grade is 19 or 86,4% of 22 students. While the number of students who did not pass the grade in experiment class II are 6 or about 27,3% and the number of students who passed the grade is 16

or 72,7% of 22 students. In following to the number of the students who passed the grade, it can be concluded that the jumble words technique which is taught in experiment class I is better than the word order technique which is taught in experiment class II. Furthermore in ensuring that jumble words technique is really better that word order technique, the researcher compares the interval between the score mean of pre-test and post-test in experiment class I and pre-test and post-test experiment class II. The interval between the score mean of pre-test and post test in experiment class I is 69,8 - 59,3 = 10,5. Meanwhile the interval between the score mean of pre-test and post-test in experiment class II is 62,3 – 52,5 = 9,8. In following to the score mean result above, the jumble words technique is proved that it is better than the word order technique.

The result shows that jumble words technique can increase the students' grammar mastery higher than the word order technique. It is caused that the jumble words technique is not monotonous learning system which only explain material to the students, but it is combined by jumble words or game to rearrange the words becoming correct sentence. With the result that the students enjoys that activity and the material can be understood and absorbed well by the students. It is in the same manner as the expert's definition that the jumble word is a learning game in groups by matching question cards with answer cards that have been provided in according with the exercise.

5. Conclusion and Remark

Based on the research objective, the researcher concludes that there are some explanations of the successful treatment to increasing the students' grammar mastery by applying jumble words and word order techniques as follow: *1)* the students' average score in using jumble words technique has increased. It can be looked at the average score of pre-test about 59,32 that has become about 69,77; *2)* the students' average score in using word order technique is able to regard as a technique which

can influence excalation the students' grammar mastery that is proved by providing the pre-test average score about 52,50 that has become 62,27; *3)* the students' score of grammar mastery has been raised by utilizing two different appropriate techniques; *4)* the result of comparison of using jumble words and word order techniques toward students' grammar mastery shows that jumble words technique is better than word order technique. The average score of jumble words technique in experiment class I that is about 69,77 is higher than the average score of word order technique in experiment class II that is about 62,27. Meanwhile, the comparison result which support that jumble words technique is quite better than word order technique is hypothesis test which shows that t_{count} is higher than t_{table} that is 2,26 > 2,02 with significant degree is 5% *(look at G-Table),* thereby the hypothesis is accepeted.

The researcher gives an explanation of some benefits in practicing the jumble words technique in teaching grammar such as: *1)* jumble words technique can motivate the students to master grammar because it is combined as game, thereby the students is not boring to following learning process in the class; *2)* the students always practice their understanding about grammar writtenly by arranging the jumble words to become correct and appropriate sentence; *3)* the technique can enrich the students' grammar understanding in analyzing the structure of sentence and phrase deeply; *4)* it can steer the students to be active students in learning grammar.

In spite of the benefit, there are some weaknesses of this technique that should be solved such as: 1) the process needs long time to apply that tehcnique in the class; 2) the practicer will feel difficult to supervise all groups in the class at the same time if the students are divided into some groups in applying it in the learning process.

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USING DOUBLE ENTRY JOURNALS TO IMPROVE READING COMPREHENSION AND DESCRIPTIVE WRITING ACHIEVEMENTS

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Abstract

This research aimed at investigating whether or not there were significant differences in reading and writing achievements between the eighth graders who were taught by using Double Entry Journals and those who were not. Sixty students were purposively chosen as the subjects and divided into experimental (N= 30) and control groups (N= 30). The data were collected by means of tests and questionnaire and statistical analysis. The results showed that the t-value of the students' reading comprehension achievement in the experimental group was 11.575, and the t-value between the two groups was 5.982. Meanwhile, the t-value for writing achievement in the experimental group was 4.429, and the t-value between the two groups was 1.345. The contributions of each aspect of reading comprehension and writing were also presented. The results indicated that Double Entry Journals were mostly effective for improving reading comprehension achievement but were not effective for writing.

Keywords: reading, writing, double entry journals.

1. Introduction

Adolescents entering the adult world in the 21st century need literacy to cope with the flood of information. If a student is good at reading and writing, it is easier for him/her to learn other academic subjects (Vacca, Vacca, & Mraz, 2014).

Based on the data from World's Most Literate Nations (Miller, 2016), Indonesia was in 60th rank out of 61 countries. Moreover, In Indonesia, there were still 441,045 illiterate people aged 15-24, and 11,254,788 illiterate people aged 15

years and older (UNESCO Institute for Statistics, 2015). It means that, even in this global era, illiterate people do still exist for both younger and older generation. In other words, literacy is still an issue in Indonesia.

Reading skill, as one of the literacy skills, is very important for the success in school and work. It is the basis of nearly all learning, and a basic requirement to progress in life since it is not only necessary for students to learn language and study literature, but also to learn other subjects (Geske & Ozola, 2008, p.71). The main purpose for reading is to comprehend the ideas in the material. Without comprehension, reading would be empty and meaningless (Gunning, 1996).

Unfavorably, the fact shows that reading proficiency level of the Indonesian students is still low. Based on the survey conducted by Programme for International Student Assessment (PISA) in 2012, the reading proficiency level of the Indonesian students was at 60th place out of 65 (OECD, 2012). The score of the students' ability for the overall reading scale was 396 that was below the OECD average score which was 496 (OECD, 2012).

A study conducted by Yani (2010) at SMA Negeri 21 Palembang found that 89% students had difficulties in English reading comprehension because they lacked of vocabulary, 65% of the students had problems in comprehending the texts because they only knew little about English Grammar, 45% of the students had difficulties in finding specific information, and 41% of the students had difficulties in making summary. Moreover, Diem and Novitasari (2012) found that reading comprehension achievement of fifth graders in Palembang was still low. The mean score of the English reading comprehension achievement test was only 30.30 These conditions lead to a serious problem as literacy increases job opportunities and access to higher education

Writing skill is also important; it is closely related to reading skill. It is through reading students get the ideas about what need to be explored and help them to

become better writers (Kingwell & Clark, 2002; Krashen, 1993, p. 32). Glazier (1994) contends that being able to write in English is essential in college, and it probably will be an asset in the career. Furthermore, the 21st century is regarded as a period called the Age of composition (Yancey, 2009, p. 5). In other words, writing has become the core of communication in this era. It allows people to participate fully in today's society. It is a complex process that is essential for extending learning, thinking and communicating with others (Dunsmuir & Clifford, 2003). It means that through writing, students can broaden their knowledge, be more critical, and get more engaged with others .

However, writing is considered as the most difficult skill of the four skills. For numerous EFL learners, English writing appears to be challenging (Harmer, 1992). In terms of fluency, Nunan (1999) maintains that producing a coherent, fluent, extended writing piece is likely the most difficult thing in language since the reader has to comprehend what has been written without asking for clarification or relying on the writer's tone of voice or expression. Additionally, Richards (1999) conveys problems in writing as follows: students have a hard time to get started and feel overwhelmed by the task, they struggle to organize and use mechanics of writing, to keep track of their thoughts, besides they also have to struggle to develop their ideas fluently. As the results, students' writing achievement becomes low.

Farooq, Hassan, and Wahid (2012) who conducted a study in four colleges in Pakistan and involved 245 students found out that the students got difficulties in writing English due to lack of vocabulary, poor spelling, L1 interference and a poor understanding of grammatical structure. These then hinder them when they are asked to write. In addition, Kartini (2010) who did a study at SMPN 1 Palembang, Indonesia, showed that the mean score of students' writing achievement was 30.60 categorized as low.

According to the 2013 Curriculum, the students are required to be able to use language as a means of communication in oral and written form (Mendikbud, 2014). It means that writing should be given an equal priority as speaking. But the fact is,

writing is often neglected. Alwasilah (2009) claims that writing is the most neglected skill in language education in Indonesia. The instruction only focuses on grammar and theories of writing, and the students do less practice. The instruction does not cover much for writing, the students do not practice enough and they are not aware of the importance of writing. Then they have problems when they are asked to write because they are not accustomed to it. As the result, the writing achievement of the students is low and far from expected.

Based on the facts presented above, English reading and writing skills are very important and the students need to master those skills in order to succeed in their life. The students need to get used to reading and writing and get trained with strategies for those two skills. Therefore, to solve these problems, good teaching media and strategies are needed by English teachers in teaching and learning process especially for teaching reading and writing skills.

2. Theoritical Background

Double entry journals strategy is one of the strategies that can be used for teaching reading and writing. It enables students to record their responses to text as they read. Students write down phrases or sentences from their assigned reading and then write their own reaction to that passage. The purpose of this strategy is to give students the opportunity to express their thoughts and become actively involved with the material (Joyce, 1997).

Double entry journals improve students' comprehension, vocabulary, and content retention. This interactive strategy activates prior knowledge and present feelings, and promotes collaborative learning. It fosters the connection between reading and writing as students are able to "reply" to the author as they write their responses (Weaver, 2004).

Some findings of previous studies showed that double entry journals strategy can enhance students' ability in reading and writing as this strategy integrates reading and writing skills (Tuan, 2010; Roltgen, 2010; Amin, 2012; Sarma & Rosa, 2014). This strategy has been found to be an effective and productive means of arousing interest in writing, which, at the same time, develops fluency of expression. It also helps students to become aware of why they wish to communicate their ideas and to regard writing not only as a means of personal expression, but also a dialogue in written language with the reader. Double entry journals strategy also provides students with good opportunities to improve their writing skill individually and good chances to record their thoughts and feelings (Spaventa, 2000).

The researcher chose the eighth grade students of SMPN 1 Indralaya Utara as the sample for some reasons. Firstly, based on the data of the English achievement on the students's final exam in the first semester of academic year 2015/2016 which was held in December 2015 for the eighth grade students, there were only 45 out of 130 students who reached the national standard passing score (2.67). It means that only 36% percent of the students at SMPN 1 Indralaya Utara reached the standard. Secondly, writing was also a problem for the eighth grade students of SMPN 1 Indralaya Utara. The results of the writing test that the researcher gave to the students showed that 82% of the students could not reach the passing score. Lastly, the results of interviewing two teachers at SMPN 1 Indralaya Utara revealed that the students still had problems in reading and writing. The teachers mentioned that the students had problems in comprehending short texts, even comprehending a single sentence. The same thing happened to writing. When the students were asked to write a simple descriptive text about a person, an animal, an object or a thing, they only wrote some words with inappropriate grammar and they mostly had limited ideas and had problems in organizing the ideas.

Based on the explanation above, the researcher was interested in conducting a research entitled "Using Double Entry Journals (DEJ) to Improve Reading

Comprehension and Descriptive Writing Achievements of the Eighth Grade Students of SMPN 1 Indralaya Utara". This research was aimed to find out whether there was any significant improvement and difference in reading comprehension and writing achievements of students who were taught by using Double Entry Journals and those who were not. In addition, the researcher also wanted to figure out the students' perception towards the use of double entry journals.

3. Method

Research Design

In conducting the study, the researcher used quasi experimental research method and the research design was non-equivalent control group design. The experimental group and the control group were administered pretests and posttests but the treatment was only given to the experimental group. The students of experimental group got the treatment intensively by using the Double Entry Journals through 20 meetings of teaching and learning activities.

Population and Sample

The population of this study was all the eighth grade students of SMPN 1 Indralaya Utara in the academic year 2015/2016, with the total number 127 students from 4 different classes. Two classes were involved in this study, the VIII.D was the experimental, and VIII.C was the control group. They were selected based on the following criteria: the class was taught by the same English teacher, the students have similar or closely similar in terms of total numbers of students (30 students for each class),and third, the mean scores of English achievement in students' report were almost the same.

Data Collection

To collect the data, two kinds of instruments were used: tests and a questionnaire. Both experimental and control group were given pre- and post-tests of reading comprehension and writing tests. The students were given a reading comprehension test to measure their ability in reading comprehension. For the writing test, they were asked to write a short descriptive text with the topics provided. There were two raters who evaluated writing tests by using scoring rubric. Then, the questionnaire which was in the form of semi-closed- ended question was administered to the experimental group after giving the post-tests to get their feedback concerning the use of double entry journals in teaching reading comprehension and writing.

Validity and Reliability

The content validity for reading and writing tests were used. In this research, to know whether the topic of reading and writing tests given were valid or not, the 2013 curriculum and experts judgment were considered.

To check the validity and reliability of the reading comprehension test, the reading test had been tried out. The researcher then took 40 valid reading comprehension items for the pretest and posttest.

To check the reliabilty of the students' writing test, inter-rater reliability was used. It is the extend to which two or more individuals (rater) agree with the consistency of implementation of rating system. There were two raters involved in scoring the writing test. The raters were chosen based on some criteria: 1) a graduate from Strata two of English study program; 2) having more than three years teaching experiences, and 3) achieving TOEFL score above 525. The result showed that there was a significant correlation which means that the measurement was reliable.

The students' reading and writing tests were checked by the raters. Then, the paired sample t-test was applied to see whether there was significant difference in the

pre-test and post-test of reading comprehension and writing achievements of experimental group. Independent sample t-test was used to see the significant difference in post-test between experimental and control group in both reading comprehension and writing achievements. In addition, stepwise regression was conducted to analyze the contribution of each aspect of reading comprehension and writing to the reading comprehension (total) and writing (total).The computation was conducted by using SPSS 20.0. Then, to analyze the data from the questionnaire, simple percentage analysis were applied

4. Result and Discussion

The findings consist of descriptive statistics and statistical analyses of the reading comprehension and writing tests, and the results of questionnaire.

Table 1
Results of Reading Comprehension and Writing Achievements

Variables	Score Interval	Level of Achievement	Control				Experimental			
			Pretest		Posttest		Pretest		Posttest	
			f	%	f	%	f	%	F	%
Reading Comprehension	86-100	Very good	1	3	1	3	1	3	6	20
	71-85	Good	2	7	3	10	2	7	6	20
	56-70	Average	3	10	2	7	8	27	14	47
	41-55	Poor	16	53	18	60	13	43	4	13
	0-40	Very Poor	8	27	6	20	6	20	0	0
	Mean		49.067		51.200		54.467		71.900	
	Std.Deviation		13.352		13.689		12.910		13.522	
Writing	86-100	Very good	-	-	-	-	-	-	-	-
	71-85	Good	2	7	4	13	3	10	3	10
	56-70	Average	5	17	8	27	3	10	11	37
	41-55	Poor	7	23	9	30	11	37	12	40
	0-40	Very Poor	16	53	9	30	13	43	5	17
	Mean		43.312		50.792		43.500		56.000	
	Std.Deviation		16.144		17.697		16.055		11.685	

In terms of reading comprehension, Table 1 shows that in the pretest of the experimental group, 6 students (20%) were in very poor category, 13 students (43%) students were in poor category, 8 students (27%) were in average category, 2 students (7%) were in good categorya and one student (3%) were in very good category. In the

posttest, none of the students were in very poor category, 4 students (13%) were in poor category, 14 students (47%) were in average category, 6 students (20%) were in good category, and 6 students (20%) were in very good category. Meanwhile, in the pretest of the control group, 8 students (27%) were in very poor category, 16 students (53%) were in poor category , 3 students (10%) were in average category, 2 students (7%) were in good category, and 1 student were in very good category. In the posttest, 6 students (20%) were in very poor category, 18 students (60%) were in poor category, 2 students (7%) were in average category, 3 students (10%) were in good category and 1 student (3%) was in very good category.

In terms of writing, in the pretest of the experimental group, there were 2 students (7%) in good category, 5 students (17%) were in average category, 7 students (23%) were in poor category and 16 students (53%) were in very poor, category. In the posttest, 4 students (13%) were in good category, 8 students (27%) were in average category, 9 students (30%) were in poor category and 9 students (30%) were in very poor category. Meanwhile, in the pretest of control group, 3students (10%) were in both good and average categories, 11 students (37%) were in poor category, and 13 students (43%) were in very poor category. In the posttest, 3students (10%) were good category, 11 students(37%) were in average category, 12 students (40%) were in poor category, and 5students (17%) were in very poor category.

The questionnaire consisted of 10 open-ended questions which aimed at investigating the students' perception towards the use of double entry journals in learning reading and writing. To answer the questions, the students were asked to choose the options and reason for the option they had chosen.

Table 2
The Results of Open-Ended Questionnaire

	F	%	Questions
			1. Do double entry journals improve your motivation in learning English? Choose the reason or write your own!
Yes	30	100	a) Because by using double entry journals I enjoy learning English more than before b) Because double entry journals make me eager to learn English. c) Other :_____
No	-	-	a) Because double entry journals are not interesting b) Because double entry journals make me bored and tired c) Other :_____
			2. Do you have more fun in learning English by using double entry journals? Choose the reason or write your own!
Yes	30	100	a) Because I can learn any words I want to learn about b) Because I can share my thought or comment with others. c) Other : _____
No	-	-	a) Because DEJ are boring. b) Because Double entry journals are not easy. c) Other :_____
			3. Do double entry journals help you in remembering the materials better? Choose the reason or write your own!
Yes	30	100	a) Because I can remember the ideas of the text better. b) Because I can better organize what I have learned from the text. c) Other : _____
No	-	-	a) Because I cannot recall what I have learned from the text b) Because DEJ are boring. c) Other : _____
			4. Do double entry journals help you in comprehending the text? Choose the reason or write your own!
Yes	30	100	a) Because double entry journals help me in finding the main idea of the text easily. b) Because double entry journals help me in answering the comprehension questions easily c) Other : _____
No	-	-	a) Because double entry journals do not help me in getting the main idea of the text easily. b) Because double entry journals do not help me in answering the comprehension questions. c) Other : _____
			5. Do double entry journals encourage you to look for personal meaning in what you read? Choose the reason or write your own!
Yes	27	90	a) Because I can relate the ideas in the text with my experience. b) Because I can engage with the text better. c) Other : _____
No	3	10	a) Because I cannot find the connection between the text and my experience. b) Because Double entry journals are too difficult. c) Other : _____
			6. Do double entry journals help you enhance your vocabulary? Choose the reason or write your own!
Yes	30	100	a) Because I can find a lot of new vocabulary in double entry journals that I never find before. b) Because I need vocabulary to understand and to write a text.

			c) Other : _____
No	-	-	a) Because double entry journals are making me confused b) Because I do not need vocabulary. c) Other : _____
			7. Do double entry journals improve your writing skill? *Choose the reason or write your own!*
Yes	30	100	a) Because I can write better. b) Because I can get ideas to write. c) Other : _____
No	-	-	a) Because writing is always hard to do. b) Because I still have no idea what to write about c) Other :_____
			8. Do double entry journals encourage you to write more? *Choose the reason or write your own!*
Yes	30	100	a) Because Double entry journlas give me more chances to practise writing not only at school but also outside the class. b) Because I can get ideas what to write about c) Other : _____
No	-	-	a) Because I am still unfamiliar with double entry journals. b) Because Double entry journals are too difficult to be applied c) Other :_____
			9. Do double entry journals give you opportunity to express your ideas? *Choose the reason or write your own!*
Yes	30	100	a) Because I can write whatever I thought about the text. b) Because I can use my own words. c) Other : _____
No	-	-	a) Because I have problems in vocabulary. b) Because I do not know what to write about c) Other : _____
			10. Do double entry journals help you in developing your creativity in writing? *Choose the reason or write your own!*
Yes	30	100	a) Because I can write any ideas that come into my mind b) Because DEJ lead me to think of new ideas c) Other : _____
No	-	-	a) Because I have problems in interpreting the ideas b) Because DEJ are not challenging. c) Other : _____

In questions number one to four, all the students chose positive responses. For question 1, 17 students (57%) chose option a, and 13 students (43%) chose option b. In question number 2, 22 students (73%) chose option a, and 8 stduents (27%) chose option b. Next, for questions number 3, 21 students (70%) chose option a and 9 students (30%) chose b. For question number 4, 18 students (60%) picked aoption a and 12 students (40%) picked b. For question number 5, 27 students (90%) chose positive responses and 3 students (10%) chose negative responses. These 3 students gave negative response and chose option a, meaning that they still have problems to

make connections between the text and their experience. For questions number 6 to 10, all the students answered yes and they mostly (59%) chose option a. In general, it means that most of the students perceived Double Entry Journals strategy as a useful strategy in learning English. All the students agreed that Double Entry Journals could improve their motivation and give them more fun in learning English. In terms of reading compehension nearly all the students gave positive responses. Through the activity of choosing phrases from the text and writing their comments in double entry journals, it helped the students remembering the materials better, comprehending the text, encouraging the students to look for personal meaning, and enhancing vocabulary. In terms of writing, all of the students agreed that Double Entry Journals could improve their writing. Through Double Entry Journals they could get ideas on what to write about, express their feelings or ideas, and encourage them to write more.

Before analyzing the data, the researcher measured the normality and the homogenity of the test. since all the p-values of the normality and homogeneity tests were higher than 0.05, it could be concluded that all the data of reading comprehension and writing tests were normal and homogeneous.

Table 3
Results of Paired and Independent Samples t-test of
Reading Comprehension and Writing

Variables	Paired T-Test								Independent T-Test		Gain
	Experimental				Control						
	Mean		Mean Diff Pre and Post Exp within	T-value and sig. (pre- and post cont within)	Mean		Mean Diff Pre and Post Cont within	T-Value and sig.(pre- and post exp within)	Mean Diff	T-value and sig. post-test (exp and cont)	
	Pre-test	Post test			Pre-test	Post test					
Reading$_{Tot}$	54.467	71.900	17.433	11.575 000	49.067	51.200	2.1333	1.409 .169	20.700	5.892 .000	7.179
Writing$_{Tot}$	43.500	56.000	12.500	4.429 .000	43.312	50.792	7.480	2.333 .027	5.208	1.345 .185	1.179

Table 3 indicates that there was a significant difference between the pretest and posttest of the students' reading comprehension achievement in the experimental group. The results of paired sample t-test showed that the t-value was 11.575 and sig.value (2tailed) was lower than 0.05. It means that there was a significant difference in reading comprehension achievement before and after the students were given the treatment. On the contrary, there was no significant difference in reading comprehension achievement in the control group because the t-value was 1.409 and sig.value (2tailed) was higher than 0.05.

Furthermore, the results of independent sample t-test in the reading pretest showed that there was signifcant difference between the posttest experimental and control groups in reading total since the t-value was 5.892 and sig. value (2tailed) was higher than 0.05. It means that there was a significant difference in reading comprehension achievement between the eighth grade students of SMPN 1 Indralaya Utara who were taught by using Double Entry Journals and that of those who were not.

In terms of writing, it indicates that there was a significant difference in students' pretest and posttest writing achievement in the experimental group. The results of paired sample t-test show that the t-value was 4.429 and sig.value (2tailed) was lower than 0.05. Meanwhile, there was also a significant difference in writing achievement in the control group. The t-value was 2.333 and sig.value (2tailed) was lower than 0.05.

Moreover, the results of independent sample t-test in the writing posttest showed that there was no significant difference between the experimental and control groups in writing (total) since the t-value was 1.345 and sig. values (2tailed) was higher than 0.05. It means that there was no significant difference in writing achievement between the eighth grade students of SMP N 1 Indralaya Utara who were taught by using Double Entry Journals and that of those who were not.

In addition, stepwise regression was conducted to analyze the contribution of each aspect of reading comprehension and writing to the reading comprehension (total) and writing (total).

Table 4
Summary Statistics of Stepwise Regression Analysis of Each Aspect of Reading Comprehension and Writing

READING ASPECTS	R	R^2	Change Statistics R^2 Change	Sig. F Change
1. Inference	.907[a]	.823	.823	.000
2. Inference, Details	.974[b]	.948	.125	.000
3. Inference, Details, Cause Effect	.987[c]	.974	.026	.000
4. Inference, Details, Cause Effect, Vocabulary	.994[d]	.988	.015	.000
5. Inference, Details, Cause Effect, Vocabulary, Main Idea	.999[e]	.999	.011	.000
WRITING ASPECTS				
1. Grammar	.898[a]	.806	.806	.000
2. Grammar, Content	.952[b]	.906	.100	.000
3. Grammar, Content, Mechanics	.979[c]	.959	.053	.000
4. Grammar, Content, Mechanics, Organization	.992[d]	.985	.025	.000
5. Grammar, Content, Mechanics, Organization, Vocabulary	1.000[e]	1.000	.015	.000

The results of stepwise regression analysis showed that *inference* (82.3%) gave the highest contribution to the students' reading achievement, followed by *details* (12.5%), *cause effect* (2.6%), *vocabulary*(1.5%), and *main idea* (1.1%).

In terms of writing, the five aspects of writing were also improved. *Grammar* (80.6%) gave the highest contribution to the students' writing achievement, followed by *content (10%), mechanics (5.3%), organization (2.5%)*, and *vocabulary (1.5%).*

Discussion

This section presents the interpretation of the study based on the findings of the study. Based on the results of paired sample t-test in reading comprehension achievements, there was a significant difference in reading comprehension between the students' pretest and posttest results in the experimental group. Six students were in very good and good category, respectively, and 14 students were in average category. Unfavorably, four students (13%) were still in poor category. It needed all the extra effort to improve these four students' reading achievement as they had the lowest ability in English reading comprehension and at the same time, they were reluctant to learn and were not paying much attention during the treatment. But in general, the results indicated that the use of double entry journals in teaching reading comprehension to the students of SMPN 1 Indralaya Utara had improved the students' reading comprehension achievement.

Furthermore, based on the results of independent t- test, there was a significant difference in reading comprehension achievement between the students who were taught by using Double Entry Journals and those who were not. It indicates that double entry journals strategy is an effective strategy to be used in teaching reading comprehension. It is supported by Miller and Veatch (2011) that state "Double entry journals are ideal for the students". The strategy offers flexibility to the students that the students can interact with the text in a way that is relevant to the students.

In terms of writing, based on the results of paired-samples t-test, it showed that there was a significant difference in writing after the students were given the treatment. Three students were in good category, and 11 students were in average category. Unexpectedly, There were still 17 students in poor and very poor category. This might happen because they needed extra time to catch up with writing. The lack of vocabulary, grammar, and mechanics hindered them in writing. But in general, the results indicated that the use of double entry journals in teaching writing for the experimental group had improved the students' writing achievement.

However, there was no significant difference in writing achievement between the students who were taught by using double entry journals and those who were not. It means that double entry journals strategy was not effective for teaching writing. This could happen because of some reasons. First, both groups are in the same school level. There is a chance that the students in the experimental group unintentionally shared what they learned during the treatment with their peers in the control group. Second, it takes more time to improve writing skill as it is the hardest skill for the learners. Cali and Bowen (2003) explain that the only way to develop students' writing ability is ask them to always practice. Since the researcher only had a chance to teach for 20 meetings (6 weeks), the time for the students to practice were very limited. Third, students still have a very limited knowledge in writing aspects. This limited knowledge troubles them when they are asked to write. As the researcher had limited time, the researcher did not have much time to get them pratice with writing aspects in details.

The results of the questionnaire showed that most of the students were motivated to learn reading and writing through double entry journals. The students agreed that Double Entry Journals could increase their reading and writing achievements. It can be seen from the students' posttest of reading and writing in experimental group which improved significantly after the treatment. All of the students agreed that they were motivated to learn reading and writing in English class. It was in line with previous studies which said that double entry journals

encourage students' motivation and a sense of accomplishment (Miller & Veatch, 2011).

In addition, the results of stepwise regression analysis showed that *inference* gave the highest contribution to the students' reading comprehension achievement followed by *details*, *cause effect*, *vocabulary*, and *main idea*. This might happen because the students were trained more with *inference* through double entry journals. Readers who make inferences use the clues in the text along with their own experiences to help them figure out what is not directly said. Through reading and writing double entry journals, they practise to use ideas from the text and then added their own ideas. In other words, they practised to get involved actively with the text they read.

In terms of writing, All the five aspects of writing gave contribution to the students' writing achievement. Grammar gave the highest contribution to the students' writing achievement, followed by *content*, *mechanics, organization*, and v*ocabulary*. Grammar could give the highest contribution to the students' writing achievement because during the treatment, the students were taught on how to make good sentences, with appropriate grammar. Because when they want to express their ideas, they need grammar in order to make their ideas meaningful and understood. As the genre was descriptive text, the students were highly engaged in how to describe something, how to use *be* and *have,* and *tenses* which unquestionably leading them to get in touch with grammar. It is in line with the theory that in order to be able to write effectively, writers need to know and understand the text structure and language features (New South Wales Department of Education and Training, 2007).

In short, double entry journals strategy was very effective to be used to improve students' reading comprehension achievement but was not effective to be used to improve students' writing achievement. Double entry journals helped students to recall the materials, make connection with personal experience, improve creativity and enhance the students' vocabulary. The students also get motivated to learn English more. While for writing, it takes more time for double entry journals strategy

to be effective to improve students' writing achievement. Roltgen (2010) reported that the students had a hard time understanding how to use Double Entry Journals effectively at the beginning, but after some times, they began to make noticeable gains. In other words, it takes time for the students to use double entry journals strategy effectively for improving writing achievement.

5. Conclusion and Remark

Based on the findings and interpretations above, some conclusions are drawn. First, double entry journals successfully improved students' reading comprehension. Through double entry journals, the students can see how language and thought work together to form meanings, the students can record their responses to text, have the opportunity to express their thoughts and become actively involved with the material they read. This strategy can improve students' comprehension, vocabulary, and content retention. Second, double entry journals strategy was not effective for teaching writing. It took more time and practice for the students to use double entry journals effectively to improve their writing achievements. The last, there was positive perception of the students about the use of double entry journals in learning reading comprehension and writing.

Based on the conclusions of this study, there are some suggestions offered for English teacher, students, and other researchers who are interested in conducting similar research.

Firstly, the researcher suggested the English teachers to implement double entry journals strategy to teach reading comprehension. Secondly, for the eighth graders, they are suggested to read a lot, not only in the classroom but also out of the classroom.

Lastly, there are some suggestions for other researchers. First, as the present researcher found out that there was no significant difference in writing achievement between the students who were taught by using double entry journals and those who were not, longer treatment is highly recommended. The researcher believes that if the

research was done longer, the results for writing would be significantly different. Second, have more and higher level of population, such as the senior high school students. Because with the higher level of the students, the results for writing might be different with the present research. Third, use other types of texts (narrative, recount, report texts) with this strategy. Fourth, modify the teaching procedure based on the needs. The last one, It is better not to focus only on a particular aspect of reading and writing. Give the students more chances to practice with all reading and writing aspects that will surely help them in reading and writing activities.

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LINGUISTICALLY INTERCULTURAL PROBLEMS IN LEARNING ENGLISH AS A GLOBAL LINGUA FRANCA (EGLF)

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Abstract

In learning English as a Lingua Franca (ELF) of the globe, Indonesian learners of English as a Foreign Language (EFL) need great effort and seriousness to cope with certain linguistic and incultural problems. If beginning EFL learners make errors in making sentences using certain words, it is not surprising but it is when they are made by quite advanced learners. However, errors should be respected and accepted as signs of learning as no learners create errors on purpose. Teachers should realize that errors are committed due to some factors that are beyond learners' awareness linguistically as well as culturally. This paper is intended to describe some linguistic and incultural errors made by advanced EFL learners and discuss some possible causes and offer ways to help them improve their competence and performance in the English language. The data used in this study are in forms of (a) sentences made by 30 Magister program students using certain words given, and (b) answers they provide based on Yes/No questions and Tag-questions asked. The study reveals that to make correct sentences using certain words and correct answers to certain questions in English EFL learners are required to build some linguistic, pragmatic, and intercultural comptence both in Indonesian and English.

Key words: linguistic, pragmatic, and intercultural errors and competence,

1. Introduction

English can be acquired as the first or the second language, or learned as a foreign language depending on by whom and where the acquisition or learning takes place. English is acquired as the fisrt language, for example, by American students in the United States, Australian students in Australia, and Britsih students in England. English can be learned as a second language, for example, by Indonesian students studying in America or by Singaporen, Malaysian, or Indian students in Singapore, Malaysia, or India, respectively. In Indonesia like in other countries in Asia English

is learned as a foreign language. This reality about the role of English can be referred to three circles of English in the world, that is, inner circle, outer circle, and expanding circle, respectively, following Kachru (1985) cited in Kennedy (2010, p. 88). In addition to those terms referring to the position of English on this earth, now English is often branded as a lnguage of lingua franca (ELF)—see Cutting (2008), or it can be called English as a global lingua franca (EGLF) which is commonly intended to mean as an international language.

In this paper, the term ELF is meant to have no distinction from the term EFL as both terms apply in Indonesia in that English is used as a means of global medium of interaction as well as a means of communication among Indonesians besides Indonesian as the national language. Learning English as an ELF or EFL done by Indonesian students seems more difficult than done by Singaporean or Malaysian students. One of the causes of this phenomenon can be referred to the matter of 'exposure' to English in that Indonesian students do not have much opportunity to be exposed in English as compared to Singaporean or Malaysian students (see Ihsan and Diem, 1997). English is not used as a means of public communication in Indonesia as it is in those countries. Ironically, even English Education Study Program students, undergraduate as well graduate students, do not have high motivation and committment to use English on campus and even in classess consistently, let alone the students of junior and senior high schools. If there are non-English major students who have somewhat good or better English proficiency compared to others, they must have experienced or taken English courses privately or through non-formal institutions that make them have good performance and competence in English. It is quite impossible to expect that junior or senior high school graduates in Indonesia to have good or satisfactory mastery of English as they are taught only two course hours (90 minutes) per week (see Kementerian Pendidikan dan Kebudayaan, 2013) with overcrowded classes and limited availability of teaching and learning materials provided by the government or the school.

On the other hand, it is logically valid to expect that graduate students of *Magister* program majoring in English in a univerity in Indonesia have a good if not excellent proficiency in English. However, the reality realized and experienced by the writer shows the unsatisfactory result. Therefore, this paper tries to find some evidence to prove the assumption that learners of ELF or EFL still have problems in making good and correct English sentences using certain words, idioms, and certain forms of questions. The problems the ELF/EFL learners face deal with linguistic, pragmatic, and cultural aspects (see Cohen and Olshtain, 1933).

This study deals with error analysis in that the sentences made by the sample students were analyzed whether or not they are erroneous or correct based on standard grammar of American English. Following Corder (1971), error analysis study belongs to the area of applied linguistics that refers to the study of the application of linguistic findings in teaching and learning a language. In analyzing errors made by EFL learners, aspects of linguistics, and semantics, and social, and cultural aspects need to be considered (Cohen and Olshtain, 1993).

Since the data of this study were also collected using answers of two kinds of questions, i.e., Yes/No question and Tag-question, that require the students' knowledge, understanding, and internalization of both English and Indonesian social and cutural aspects, this study at least partially is related to pragmatic use of language. Pragmatics refers to the study of people's comprehension and production of linguistic action in context (Kaper, 1993).

2. Method

The method used in this study was descriptive analytic method in that the data in form of sentences made by 30 *Magister* program students of a state university in Palembang were collected as they were without any changes whatsoever and then analyzed referring to linguistic, pragmatic, and cultural aspects. The students serving as the participants in this study were asked to make their own sentences using certain

and selected dictions, kinds of words according to parts of speech, idioms, grammatical pattern, Yes/No questions, and Tag-Questions. It was assumed that if the participants could make over 80% good and correct sentences using the following words and questions, it could indicate that the students were quite good in their English proficiency.

The following are selected dictions (# 1, 2), parts of speech (kinds of words) (#3, 4, 5, 6), grammatical pattern (#7), idioms (#8, 9), Yes/No questions (#10), and Tag-Questions (#11) that were used as instruments to collect the data for this study.

1.belong; 2. happen; 3. succeed; 4. success; 5. successful; 6. succesfully; 7. that clause; 8. look foward; 9. accustomed;

10. Yes/No questions;
10.1.　　a. Is this a pen? b. Isn't this a pen?
　　(You are shown a pen.)
10.2　　a. Did you come to class last week?
　　b. Didn't you come to class last week?
　　(You did not come to class last week)
10.3　　a. Do you like pizza? b. Don't you like pizza?
　　(You like pizza.)
10.4.　　a. Are you a good student?
　　b. Aren't you a good student?
　　(You are a good student.)

11.Tag-questions:
11.1　　a. This is a pen, isn't it?
　　b. This isn't a pen, is it?
　　(You are shown a pen.)
11.2　　a. You came to class last week, didn't you?
　　b. You didn't you come to class last week, did you?
　　(You did not come to class last week)
11.3　　a. You like pizza, do you?　　b. You don't you like pizza, do you?
　　(You like pizza.)
11.4　　a. You are a good student, aren't you?
　　b. You are not a good student, are you?
　　(You are a good student.)

3. Result and Discussion

The data collected based on the instruments mentioned above are presented in forms of tables in the following pages. The sentences made by 30 respondents as the sample based on the given dictions, idioms, and questions serving as the data were checked and analyzed whether they were erroneous or correct. The data in forms of the participants' scores on their Sentences and TOEFL like are presented on Table 1. In other words, correct and erroneous sentences were identified and calculated in terms of percentages referring to the number of respondents and to the number of items as presented in Table 1 (See appendix #1). In the last column in Table 1, the respondents' TOEFL scores are also presented to see whether or not their English proficiency is positively related to their ability in making good sentences and giving correct answers to given questions. This study was basically qualitative in the sense that no statistical analysis was applied except percentages.

Table 1 presented in appendix #1 shows that there were 3 respondents (10%) who got A (86-100), 9 respondents (30%) who got B (71-85), 12 students (40%) who got C (56-70), 4 students (13%) who got D (41-55), and 2 students (7%) who got E (0-40). Viewed from these data, it can be said that overall the respondents were not that bad as 80% of them passed the test—if the questions were used as the proficiency test. In other words, the researher's former assumption stating that the advanced EFL students were not that good is refuted. To put it another way, the sample students who were considered 'advanced EFL learners' are not very bad as the average score of the respondents was 69.07 (see Table 1). However, it cannot be denied that the findings also indicate that their English is not very satisfactory as the mean score still belongs to C or average, following the scoring system used in Universitas Sriwijaya (Universitas Sriwijaya, 2008).

Referring to the last column in Table 1 that presents the sample students' TOEFL sores, it seems that this study shows a positive correlation between students' English proficiency and their writing ability using certain words, idioms, and in answering certain questions. This is especially true for the three top groups of the

students who got A (86-100) also got the highest scores in their TOEFL (543-573), and the nine students who got B (71-85) also got good scores in their TOEFL (407-530). Some of the rest students who got lower scores in assigned writing in this study did not show positive correlation with their TOEFL scores. For example, two students who got good TOEFL scores (487-497) failed or got the lowest scores (<40) in writing sentences and answering questions. This phenomenon can be explained by one of the weaknesses of TOEFL in that students tend to guess when they are not sure about the answers, but they cannot write sentences by guessing. However, one interesting note can be made here, that is, in general there is a positive correlation between the respnondents' mean score on the sentence writing assignment (69.07) and their mean score on their TOEFL (468). However, to find out how significant the correlation is, further statistical calculation needs to be done.

Viewed from each question item answered by the respondents—as can be observed in Table 1, it can be said that they were quite good in some items but really bad in others.

Table 2 (see appendix#2) presents the percentage of correct answers on each item given by the respondents (see also Table 1 in the appendix #1).

Observing Table 2 that presents the percentage of correct answers on each item given by the respondents, the following descriptions can be made: (1) The mean score of items 1 and 2 was 80; (2) the mean score of items 3-6 was 72; (3) the score of item 7 was 72; (4) the mean score of items 8 and 9 was 14; (5) the mean score of the correct answers to positive Yes/No question (Is this a pen ?) was 97; (6) the mean score of the correct answers to negative Yes/No question (Isn't this a pen?) was 67.5; (7) the mean score of the correct answers to positive Tag-question (This is a pen, isn't it?) was 96; and (8) the mean score of the correct answers to negative Tag- question (This isn't a pen, is it) was 24.5.

This finding also indicates that students got excellent scores on item 10, that is, answering positive Yes/No question (97) and positive Tag-question (96); they got good scores on items 1-2 (80), 3-6 (72), and 7 (77); they got fair score on answering

negative Yes/No question; and they got the lowest mean score on items 8 and 9 (mean score was 14), and the mean score of 24.5 for the students' answers to negative Tag-question.

The last two lowest mean scores of the students need analysis and explanatioen why they were as they were. Referring to items 8 (look forward) and 9 (accustomed), there were 17% and 10% of the respondents who got correct sentences, respectively. This might be due the fact that the two expressions belong to idiom atic expressions that cannot be solved by guessing. It seems that the students had not acquired the concept of how to use the two idiomatic expressions in correct sentences. The expressions 'look foward' and 'acusstomed' require two principles of how to use them correctly in sentences: (a) they must be accompanied with particle 'to' at the end (look forward to, accustomed to), and (b) they must be followed by –ing form verb (e.g. I am looking forward to hearing from you; I am accustomed to waking up early). The ability of using these two idioms has something to do not only with the students' linguistic competence but also with their pragmatic and semantic knowledge of the English language.

Diction #1: belong; Diction #2: happen

The words 'belong'and 'happen' in terms of part of speech belong to VERB category. These two words were selected as sources of data due to their uniqueness in that they have two specific features: (a) they cannot be made in passive voice sentences, and (b) they are active in form in English but passive in meaning in Indonesian. These two characteristics of these two dictions cause problems for Indonesian students, even advanced ones, in learning English.

The following are examples of erroneous sentences and the correct sentences using those two words made by the respondents. Analysis and discussion are provided after the examples.

Table 3: Examples of Erroneous and Correct Sentences Using the Dictions 'belong' and 'happen' Made by the Sample Students

Data #	Diction	Examples of Erroneous Sentences	Examples of Correct Sentences
1	Belong (verb) (77% Correct)	a. The car is belong to my sister. b. Who is belong to this pen? c. That is bag belong to me. d. You belong with me. e. She belongs my best friend.	a. The books belongs to him. b. The shoes belong to her. c. The biggest house in this town belongs to my boss. d. You belong to me. e. I don't belong here.
2	Happen (verb) (83% correct)	a. It's always happen. b. What is happened to you? c. It was happened yesterday. d. Where were these happened? e. It is happen to me too.	a. The war happened several years ago. b. What happened to your arms? c. The accident happened yesterday. d. What happens to you? e. Things happen for a reason.

It can be noted that the sample students got 77% correct sentences using 'belong' and 83% using 'happen'. The rest got erroneous sentences as examples presented in the table above due to their misconceptions about the features of the two words. They did not know that the two words are 'verb' in terms of parts of speech and they must be used in active sentences instead of passive. Linguistically and semantically, they contain passive meanings in Indonesian but expressed in active sentences in English. For example, the sentence 'The shoes belong to her' means '*Sepatu itu miliknya*'. In addition, they are not familiar with the concept that the word 'belong' should be followed by 'to' instead of 'with'.

Parts of Speech (kinds of words):

#3 succeed, #4 success, #5 successful, and #6 successfully

These four words also belong to diction focussing on parts of speech, that is, verb, noun, adjective, and adverb. The respondents were asked to make their own sentences using those words to find out whether or not they were aware about what kinds of words they are and how proficient they were in using them in good and correct sentences.

Table 4 : Examples of Erroneous and Correct Sentences Using Parts of
Speech
(kinds of words):#3 succeed, #4 success, #5 successful,
and #6 successfully by the Sample Students

Data #	Diction	Example of Erroneous Sentences	Examples of Correct Sentences
3	Succeed (Verb) 60% correct	a. She has succeed to do it, b. He has achieved a great succeed in his career. c. I hope you will be succeed. d. They have been succeed. e. It succeed all the expectation.	a. Studying hard makes you succeed in your study. b. She doesn't succeed in her final test. c. If I succeed, I will continue my study. d. You will succeed someday. e. She succeeds this program.
4	Success (Noun) 60% correct	a. He talks about his success story. b. I want to be success. c. I think my boss is already success. d. She is very success. e. He is a success person.	a. Success is something that you must pursue in your life. b. I hope you get success in your examination. c. Your success depends on the effort that you have made. d. The seminar was a success. e. Do you want to have success in your life?
5.	Successful (Adj.) 80% correct	a. She has successful to make her parents happy. b. The successful of your study is depend on your motivation. c. Widia is successful woman. d. Having good ability in writing is the key of successful in learning English. e. Successful of learning process can be seen from the	a. I want to be a successful woman. b. Your presentation was successful. c. I was successful after all. d. Successful teachers know how to manage the time. e. He is successful in his job.

		students achievement and behavior.	
6.	Successfully (Adv.) 87% correct	a. My examination was successfully. b. Congratulation for your successfully. c. You are successfully finished it. d. The experiment successfully conduct. e. The competition was successfully.	a. I did the test successfully. b. I could pass the bridge successfully. c. The seminar was successfully done. d. The seminar was done successfully e. Successfully, he passed the exams.

Table 4 indicates that the respondents did not do very well in using items #3 (verb) and #4 (noun) as there were only 60% of correct sentences, but they did very well in using item #5 (adjective) (80%), and item#6 (adverb) (87%). Overall, their mean score in using words having different parts of speech was 72 that already belongs to 'good' category although not yet that good.

Grammatical Pattern (#7)

The correct use of grammatical pattern 'That..clause' in sentences may indicate that the writer has had a good command of English and not otherwise. This assumption was intended to be proven in this study. The data collected show that 77% of the respondents could make correct sentences of their own using 'that ..clause' either the clause functioning as the object (I know that she is a nice girl) or 'That..clause' functioning as the subject in a sentence (That they got married is not a matter for me.). More examples of sentences using 'that..clause' functioning as an object are found compared to the examples of sentences functioning as the subject. That means that the second type and meaning of 'that..clause' is more difficult for the advanced EFL learners to master as they are required to have more thorough knowledge of grammar.

Table 5: Examples of Erroneous and Correct Sentences Using Grammatical Pattern 'That ..clause' (#7)

Data #	Grammatical pattern	Examples of Erroneous Sentences	Examples of Correct Sentences
7	That...clause (77% correct)	a. That's really hard to him. b. He said that nobody will come tonight. c. She asked me that Anna is a new student. d. That is my house. e. That girl is the person that make me sad.	a. I know that she is a nice girl. b. She told me that she hates the class. c. I have a new bag that I buy from Mall. d. I believe that my boyfriend loves me so much. e.That they got married is not a matter for me.

Idioms (Items #8 and #9)

Idioms are generally a problem for EFL learners to learn and master as idioms are expressions which usually consist of at least two words that convey certain meanings rather than the meaning based on the literal meaning of each word within the idiom. The two idioms selected as data source were assumed to have been mastered by the advanced Indonesian EFL learners. In fact, the first idiom (look forward), and the second idiom (accustomed to) were correctly used only 17% by the respondents in their sentences.

It seems that idioms need to be paid more attention if not more focussed in EFL classroom. The correct use of idioms in formal letters may indicate that the learners have learned and acquired good proficiency in English. These two idioms are commonly found in formal writing as in closing business letters like 'I am looking forward to hearing from you soon'. The pattern of this idiom is 'look forwrad + to + ING form verb + from + objevtive pronoun'. The expression 'I am accustomed to waking up early' that means similarly to 'I am used to waking up early' are good idiomatic expressions that EFL learners should have mastered especially by advanced learners.

Table 6: Examples of Erroneous and Correct Sentences Using Idioms (#8, 9),

Data #	Idiom	Examples of Erroneous Sentences	Examples of Correct Sentences
8	Look foward (17% correct)	a. She looks foward for the job b. I am looking foward to meet you personally. c. You must look forward to have the best future. d. I'm looking forward for your proposal. e. I look forward to see your progress.	a. She looks forward to meeting you. b. I am looking forward to hearing from you. c. I am looking forward to seeing you. d. I am looking forward to being accepted as a presenter.
9	accustomed to (17 % correct)	a. I accustomed to do that. b. Reading is not accustomed for Indonesian students. c. She has been accustomed to go shopping alone. d. I'm not accustomed to have class in the afternoon. e. My niece accustomed drinking a glass of milk before sleeping.	a. I am accustomed to standing at the back. b. I get accustomed to their culture. c. She is not accustomed to swimming in the river. d. I am not accutomed to playing badminton. e. I am accustomed to waking up early.

Yes/No Question (Item #10)

Dealing with positive Yes/No questions (Is this a pen?, Did you go to class last week?, Do you like pizza?, Are you a good student?), the sample students did not have much problem as they got 98% correct answers. With negative Yes/No questions (Isn't this a pen?, 'Didn't you go to class last week?, Don't you like pizza?, Aren't you a good student?),

68% of the respondents got correct answers. The rest (32%) got confused with negative Yes/No question. As shown in Table 7 below, some students answered, "Yes, it is not", "Yes, I did not", "Yes, I don't", and "Yes , I am not" to those questions, respectively.

Why did 32% get incorrect answers to the negative Yes/No question? This problem can be referred to the problem of pragmatic transfer, that is, from L1

(Indonesian) culture and linguistic principle to L2 (English). Following Franch (1998), pragmatic transfer refers to the influence of the first language (L1) in communication when the speakers use L2. More than two decades ago, Blum-Kulka, House, and Kasper (1989) already asserted that there were two kinds of transfer: (1) Negative transfer or interference occurs when two languages do not share the same language system, resulting the production of errors, and (2) positive transfer or facilitation when two languages share the language system and the target form is correctly transferred.

In Indonesian linguistic and cultural manner, it is purely acceptable to say "Yes, it is not", "Yes, I didn't", "Yes, I don't", and "Yes , I am not" but of course not acceptable in English". In English, the answer of a guestion ,Yes/No question or Tag-question, remains the same based on the reality—once the answer is YES based on the reality, the answers remain YES no matter what kinds of questions they are. In other words, in Indonesian communication system, the speaker can nod and shake head at the soame time in a row, like "Yes (nodding), it isn't (shaking head)" instead of "No (shaking head), it isn't (shaking head). For example, in Indonesian context, one can say "*Ya, saya bukan guru*" (Yes, I am not a teacher) to answer the question "Aren't you a teacher?" based on the fact that "You are NOT a teacher." This is an illustration that cultural problem happens in the proses of learning English as an EL or ELF experienced by even advanced Indonesian learners.

Table 7: Examples of Erroneous and Correct Answers to Yes/No Questions (#10)

Data #	Grammatical item	Yes/No Questions	Answers Starred Answers = Incorrect answers
10	Positive Yes/No Question : (98% correct answers)	10.1. (You are shown a pen.) a. Is this a pen? b. Isn't this a pen? 10.2 (You did not come to class last week) a. Did you come to class last	a. Yes, it is b. Yes, it is. (*Yes, it is not) (*No, it is not) a. No, I didn't.

		week?
		b. Didn't you come to class last
		    week?
		
		10.3 (You like pizza.)
		a. Do you like pizza?
		b. Don't you like pizza?
		
		10.4. (You are a good student.)
		a. Are you a good student?
		b. Aren't you a good studeent?
			b. No, I didn't.
			    (*Yes, I didn't)
			
			a. Yes, I do.
			b. Yes, I do. (*Yes, I don't)
			
			a. Yes, I am.
			b. Yes, I am.
			    (*Yes, I am not)

	Negative Yes/No Question : (68% correct answers)		

Tag-Question (Item #11)

Similarly to the case of Yes/No questions, 96% of the students got correct answers on positive Tag-question that means that there was only one student (4%) who got wrong answer. On the other hand, dealing with negative Tag-question there were only 8 students (25%) who got correct answers that indicates that the students were worst in negative Tag-question as there were 22 students (75%) who got wrong answers. Table 8 indicates that most students got the least intenalization about how to answer the negative Tag-question correctly compared to the other kinds of questions used in this study.

One of the sources of this problem is similar to the case of answering negative Yes/No question as noted above, that is, negative transfer unawarely done by the students in terms of L1 (Indonesian) cutural and linguistic principles to L2 (English). The other plausable causes why the students got difficulty in answering negative Yes/No question and negative Tag-question are (a) the English grammar or writing teachers or lecturers do not do their teaching profession well enough; they do not give intensive practice in making their own sentences using certain words, idioms, and giving answers to certain questions, and (b) the students do not have good internal motivation to really understand what they are learning.

Table 8: Examples of Erroneous and Correct Answers to Tag-Questions (#11)

Data #	Grammatical item	Tag-Questions	Answers Starred Answers = Incorrect answers
D	Positive Tag-Question (96% correct)	11.1 (You are shown a pen.) c. This is a pen, isn't it? d. This isn't a pen, is it?	c.Yes, it is. (*Yes, it is not.) d.Yes, it is. (*No, it is not)
		11.2 (You did not come to class last week) c. You came to class last week, didn't you? d. You didn't come to class last week, did you?	c.No, I didn't. (*Yes, I came) d.No, I didn't. (*Yes, I did)
	Negative Tag-Question (25% correct)	11.3 (You like pizza.) c. You like pizza, don't you? d. You don't like pizza, do you?	c.Yes, I do. (*Yes, I don't). d.Yes, I do. (*No, I don't)
		11.4 (You are a good student.) c. You are a good student, aren't you? d. You are not a good student, are you?	c.Yes, I am. (*Yes, I am not) d.Yes, I am. (*No, I am not).

Incorrect answer to negative Yes/No question like 'Yes, I don't' to the question "Don't you like pizza?' (in fact the speaker does like pizza) is an evidence showing the importance of understanding of the aspects of semantics and culture behind the gramamr of English. The same thing is true to the case of answering negative Tag-question. The majority of the respondents gave erroneous answer to the question 'You don't like pizza, do you?'. They said 'No, I don't' even though in fact they do like pizza. These wrong answers show that very little can be conveyed by lacking of knowledge and understanding of grammar based on context (see Wilkin, 2002,

p.13.). In other words, in written expression correct grammar is very important to convey the exactly intended meaning which sometimes can be ignored in oral communication as confusion can be explained by non-verbal signals like gestures, facial expressions, and body movements.

4. Conclusion and Remark

Some conclusions can be drawn based on the data description, findings, and discussion in the previous pages. First, the sample students so called 'advanced EFLstudents' of this study are generally not that bad as their average score was 69 out of 100 on sentence making and answering questions given, and their average score on TOEFL was 468. Second, the students are quite excellent in making their own sentences using cetain words (belong, happen, succeed, succes, successful, successfully, that clause) and in answering positive Yes/No question and positive Tag-question.

Third, the 'advanced EFL students' still get quite serious problem in making other given idiomatic words (look fowrad, accusstomed) and in answering negative Yes/No question and negative Tag-question. Fourth, the plausable causes of the erroneous sentences and answers to questions the students made can be referred to (a) their insuffcient undertanding about the linguistic, semantic, and cultural aspects of English as a foreign language that cause negative transfer from Indonesian (L1) to English (L2), (b) their unsufficient training on making own sentences using certain words and answering certain questions given by their EFL teachers or lecturers, and (c) their low internal motivation to learn better possessed by the EFL learners.

As the findings of this study show that the sample students' competence and performance in writing sentences and answers based on given words and types of questions, respectively, are not very satisfactory as they still belong to average level (69 out of 100, and 468 in TOEFL), the following suggestions are offered.

First, the learners should be intensively informed about the social and cultural aspects of English and Indonesian society. Lacking knowledge and understanding about those social and cultural aspects in bicountries cause communication breakdown or conflict (Istifci, 2009, p.16). In this matter, special remedial teaching dealing with those aspects and writing skill is thought wirthwhile trying (see Martin .1996, p. 316-322). Corder (1981, p. 45) states 'the practical aspect of EA is its function in guiding the remedial action we must take to correct an unsatisfactory state of affairs for learner or teacher.

Second, to the EFL teachers and/or lecturers, they should and ought to (a) give more intensive linguistic training to their students on how to form their own correct sentences based on high frequency, useful, and meaningful words that are supposed to have been masterd by higher level EFL students, (b) provide clear explanation about the semantic, pragmatic, and cultural aspects involved innately in certain expressions, like the use of 'belong', 'happen', 'look forward', 'accustomed', and 'negative Yes/No and Tag-questions. This knowledge facilitates the students to learn cross-cultural understanding and cultural norms in English context (Qorina, 2012, p. 15), and (c) to realize that errors are signs of learning process (Corder, 1971), and whatever the students say or write should be respected (Selinker, 1972) because no errors are made intensionally.

Third, to those 'advanced EFL learners' who still have problems in making correct sentences and answers to certain questions, it is suggested that they be willing to do remedial learning especially focussing on the trouble spots they have.

Fourth, the students should be continuously motivated and encouraged to read because "reading can make learners comprehend better and develop their language competence" Krashen and Terrell (1989) cited in Mart (2012).

Fifth, EFL learners are advised to keep reading because through reading one can improve his/her writing skill (Gonzales, 2001).

Finally, the EFLstudents should be given as much exposure as possible to English use in the four skills of language (see Huda, 1997, p. 286; Harmer, 2004) as

experiemced by ESL students in countries like Singapore, Malaysia, Philippines, and India.

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Appendix #1

Table 1: The participants' scores on their Sentences and TOEFL like

No of Respondents	1	2	3	4	5	6	7	8	9	10.1 a	10.1 b	10.2 a	10.2 b	10.3 a	10.3 b	10.4 a	10.4 b	11.1 c	11.1 d	11.2 c	11.2 d	11.3 C	11.3 d	11.4 c	11.4 d	Writing Score (100)	TOEFL SCORE
1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	100	570
2	+	+	-	+	-	+	-	-	-	+	+	+	-	+	+	+	+	+	-	+	-	+	-	+	-	60	380
3	+	+	+	+	+	+	-	-	-	+	+	+	-	+	+	+	+	+	-	+	-	+	-	+	-	68	463
4	+	+	+	+	+	+	-	+	-	+	+	+	-	+	+	+	+	+	-	+	-	+	-	+	-	72	437
5	+	+	+	+	+	+	+	-	-	+	+	+	-	+	+	+	+	+	-	+	-	+	-	+	-	72	423
6	+	+	+	+	+	+	+	-	-	+	+	+	-	+	+	+	+	+	-	+	-	+	-	+	-	72	407
7	-	-	-	-	+	+	-	-	-	+	-	+	-	+	+	+	+	+	-	+	+	+	+	+	+	60	430
8	+	+	-	+	+	+	-	-	-	+	+	+	-	+	-	+	+	+	-	+	-	+	+	+	-	64	423
9	+	+	+	+	+	+	-	+	-	+	+	+	+	-	+	-	+	+	-	+	-	+	-	+	-	72	417
10	+	-	-	+	+	+	-	-	-	+	+	-	+	+	-	+	+	+	-	+	-	+	-	+	-	56	473
11	+	+	+	-	-	+	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	84	530
12	+	+	+	-	+	+	+	-	-	+	+	+	+	+	+	+	+	+	-	+	-	+	-	+	-	72	417
13	-	+	+	-	+	+	-	-	-	+	+	+	+	+	+	+	+	+	-	+	-	+	-	+	-	64	420
14	+	-	+	+	+	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	84	483
15	-	+	-	+	-	-	-	-	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	40	487
16	+	+	-	-	+	-	-	-	-	+	-	+	-	+	+	+	-	+	-	+	-	+	-	+	-	48	430
17	+	+	+	+	+	+	+	-	-	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	88	543
18	-	+	+	-	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	-	+	-	76	507
19	-	+	-	-	+	+	+	-	-	+	-	+	+	+	-	+	-	+	+	+	+	+	-	+	-	60	443
20	-	-	+	+	-	+	+	-	-	+	-	+	-	+	+	+	-	+	-	-	+	+	-	+	-	52	410
21	+	+	+	-	+	+	-	-	-	+	+	+	+	+	+	+	+	+	-	+	-	+	-	+	-	68	457
22	+	-	+	+	+	-	-	-	-	+	-	+	-	+	-	+	-	+	+	+	-	+	-	+	-	52	463
23	+	+	-	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	-	+	-	+	-	64	477
24	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	92	573
25	+	+	+	+	+	+	+	-	-	+	+	+	+	+	+	+	+	+	-	+	-	+	-	+	-	76	503
26	+	+	-	+	+	+	+	-	-	+	-	+	+	+	-	+	+	+	-	+	-	+	-	+	-	64	493
27	+	+	-	-	+	+		-	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	52	503
28	+	+	+	-	+	-	-	-	-	+	+	+	-	+	+	+	+	+	-	-	+	+	-	+	-	60	477
29	+	+	-	-	-	+	+	-	-	+	+	+	+	+	+	+	+	+	-	+	-	+	-	+	-	64	500
30	-	-	-	-	+	+	-	-	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	40	497
Score Per item	77	83	60	60	87	87	77	17	10	100	67	97	53	97	73	97	77	100	30	93	30	97	23	100	17	69.07 (mean)	468 (mean)

+ = Correct answer

- = Erroneous answer

Appendix#2

Table 2: The percentage of correct answers on each item given by the respondents

No	Items Selected	Percentage of Correct Sentences/Answers to Questions (%)
1	belong	77
2	Happen	83
3	Succeed	60
4	Success	60
5	Successful	80
6	Succesfully	87
7	that clause	77
8	look foward	17
9	Accustomed	10

10	Yes/No questions:
	10.1 a. Is this a pen?
	    b. Isn't this a pen?
	    (You are shown a pen.)
	10.2 a. Did you come to class last week?
	    b. Didn't you come to class last week?
	    (You did not come to class last week)
	10.3 a. Do you like pizza?
	    b. Don't you like pizza?
	    (You like pizza.)
	10.4 a. Are you a good student?
	    b. Aren't you a good student?
	    (You are a good student.)
		a. 100
		b. 67
		
		a. 97
		b. 53
		
		a. 97
		b. 73
		
		a. 97
		b. 77

11	Tag-questions:
	11.1 a. This is a pen, isn't it?
	    b. This isn't a pen, is it?
	    (You are shown a pen.)
	11.2 a. You came to class last week, didn't you?
	    b. You didn't you come to class last week, did you?
	    (You did not come to class last week)
	11.3 a. You like pizza, do you?
	    b. You don't you like pizza, do you?
	    (You like pizza.)
	11.4 a. You are a good student, aren't you?
	    d. You are not a good student, are you?
	(You are a good student.)
		a. 100
		b. 30
		
		a. 93
		
		b. 30
		
		a. 97
		b. 21
		
		a. 100
		b. 17

IMPROVEMENT OF DIESEL MOTOR TECHNOLOGY LEARNING ACTIVITIES THROUGH COOPERATIVE LEARNING

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Abstract

The objectives of this classroom action research, the model cycle. The object of this research student's courses diesel motor technology as much as 30 people. Data collection using sheets of observation and tests. The results of this study showed a model of cooperative learning can improve student learning outcomes and activity courses for diesel, motor technology indicator asked with a percentage of 38,7%, 70,4% answered the question, the motivation of students with a percentage of 91% and improves the results of the study with an average cycle I 64.5 cycle II became 80.71. Based on the results of the research cooperative approach can be increased the results of the study.

Keywords: activities, motivation, study result

1. Introduction

Learning is an activity that is done either deliberately or inadvertently marked with any changes behavior. It is stated by Slameto (2003) that learning is a process of work done to a person to obtain a change in the behavior of the new overall as a result of his own experience in the interaction environment. The learning process can choose the right learning model and according to the characteristics of the material to be taught. This is because the model of learning is an instructional strategies to achieve specific learning objectives (Eggen, 1995). A learning model that is often used is a direct learning model, from the observations of the direct learning model is the less visible interaction between students with professors, or students with students. This lack of information, students tend to be less motivated in following the process of learning is visible from the learning process of students often go out in,

often not the task. This has resulted in a lack of student learning outcomes, so that there are still many students who got a D or E grades.

To cope with these professors need to change the model of learning by using a learning model cooperative. Cooperative learning model emphasized the activity of the students in the group. In the model of learning in a group of students working together to solve a problem or understand the material to be he had learned. Each group member is responsible for trying and help the group to understand the material. The study of the model of lecturer only acts as a motivator and facilitator.

According to Slavin (1997) cooperative learning is learning that involves learners working together in small groups to help each other learn a material.

According to Nur (2000) there are five cooperative learning methods, one of which is the student teams Achievement Divisions-(STAD) or student group team achievements.

Learners are placed in teams of study consisting of 4-5 people that is mixed according to the level of academic achievement, gender and tribal. The teacher presents the core topics, and distributed to the Group and each group studied the material being studied.

2. Method

The research was classroom action research with model cycle. Model cycle consists of 4 stages: planning, action, observation, and reflection. This study uses two cycles, the first cycle consists of four sessions, while the second cycle consists of three times. This research was conducted to evaluate student learning outcomes in the diesel motor technology courses, totalling 30 people.

In this study the observer observes the motivation and activity during the working groups, for each meeting using sheets of observation, and test the results of

the study. The procedure of processing and data analysis using data-processing pattern.

3. Result and Discussion

Observations the observer about the activity and learning motivation of college students during the study

Table 1 Activity of college students

No	Student activity	Cycle I		Cycle II	
		%	Criteria	%	Criteria
1	Students who actively	8,9	Low	38,7	Low
2	An active student to answer	12,7	Low	70,4	Enough
3	Student motivation	42,6	Enough	91	Very high

Table 2 Distribution of the results of the Study

he value of the	The results of the meeting to Learn-								
	1	2	3	4	TEST cycle 1	5	6	7	TEST cycle II
80-100	18	21	15	20	10	17	23	25	12
65-80	2	14	5	7	6	5	21	22	14
55-65	6	7	4	2	4	2	11	4	5
40-55	5	7	4	3	2	8	7	2	1
≤40	1	1	2	3	4	6	5	3	2

Discussion

From the observations I cycle at the first meeting up to four active student asked the liveliness in the diesel motor technology courses are categorized as low 8.9% and cycle II meeting of the fifth to the seventh became 38.7% means have improved 29,8%. Student presentations are actively answering questions on the cycle I only 12.7% classified as low, in the second cycle be 70.4% belongs to simply increasing average 47.7%.

Students ' motivation in the learning process has already started to improve. A high enough increase in cycle I 42.6%, cycle II becomes 91% with an average of 48.4%

4. Conclusion and Remark

Cooperative learning at this stage of the cycle II can increase student motivation and activity courses for motor diesel technology thereby increasing learning results. The cooperative learning model is expected students can make their learning group to the task either self-contained task, as well as discussion groups.

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IMPROVING SOCIAL SENSITIVITY IN SOCIETY WITH INTERNALIZATION VALUE OF MULTICULTURAL EDUCATION

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Abstract

Humans are social beings so their life will not be separated from community and social process. But the negative effects from globalization resulted in some group of people began lose their social sensitivity especially to other community that have difference of physical, ethnic and cultural. If that problems are not resolved soon it will be bad for social life because it make people move individualistic and antipathy. Therefore needed an effort to increase the return of social sensitivity in society. One effective way to implement this is through multicultural education. Internalization value of multicultur education at society can create social sensitivity to build caring and good community.

Key Words: Social sensitivity, Society, Value of multicultur education.

1. Introduction

The development of information and communications technology has provided various improvements and facilities in various aspects of human life. Through technology, a variety of the world's citizens are now able to connect quickly and can access a variety of information indefinitely. But behind all these positive effects there are various problems that if not addressed will cause people to lose essentially as a social creature and cultured. Turmudhi (Mahmud, 2003:2) describes this era are individualistic, egoistic, the nature of the contractual relationship, just based on profit and loss and exploitation are not adequate. It can be seen in the lives of today's society, where social aspects diminishing, the gap became obvious, even indifferent towards others which all of these indicators describe the start decreasing sensitivity to the social environment.

The decline in social sensitivity in people's lives would make them less likely to be sensitive to people and their surrounding social issues. Groups of middle class people to upper felt natural thing to wear things that are luxurious and sophisticated, but on the other hand the community economic middle and lower felt things were shown groups of people middle to top it is a vanity, finally arose perceptions and prejudices can lead to conflict between groups. Madani (2003:69) suggests that the more world develops, the more prostitution, criminal behavior, teen fights, brawls, abortion, drug abuse and other phenomena that deviate from moral values.

In Indonesia, during the year 2013 there has been a 92 event of conflict, then in 2014 a total of 83 conflicts, then mid-January to April 2015 were 26 events of the conflict (Kemendagri:2016). The high level of conflict in Indonesia indicate if the union as the Homeland with its motto *Unity in Diversity,* Indonesian society still holds the potential to not respect, loss of respect even tended to be selfish, materialistic and indifferent to the surrounding environment.

Such a state, we need a real effort to re-increase the sense of social sensitivity in the life of the Indonesian people. Education as one of the key changes in state can take on a major role in enhancing the sense of social sensitivity. Such efforts must be holistic, involving various aspects including formal education to learning in schools and through non-formal and informal. Driyarkaya (1980:69) said that education is the process of humanism, that teachers and students humanize themselves. So through education can return humans to the essence, namely as a social being *(zoon politicon)*

Multicultural education as one of the learning material in the world of education in Indonesia is possible to be able to contribute effectively in the process of increasing social sensitivity. Transfer and internalization of values that occur in multicultural education is expected to further provide insight to all Indonesian citizens about the nature of the differences that exist in social life so that they are able to better appreciate other people and care about the environment and its problems.

2. Theoretical Background

Social Sensitivity

Social sensitivity can be defined as the ability of human beings to be able to adjust its behavior according the views and expectations of others (Sarwono, 2013:45). People who are not able to understand and adjust to social situations will be deemed not to have social sensitivity. Literally, the term sensitivity is derived from the word sensitive which means it is easy to feel, easy to accept the stimulus, or a condition of a person who is easy to react to a situation. If it is associated with social conditions then it can be termed social sensitivity which can be interpreted as a condition of a person who is easy to react to the problems of social which seen and experienced.

In teorities, social sensitivity and social awareness will happen if their individual experiences in the past. Darley and Latene (Sarwono and Meinarno, 2009:131) suggested several factors that can affect the social sensitivity, including:

a. Bystander. Bystanders are people who were around the scene has a very large role in influencing a person's time to decide between helping or not when faced with an emergency.

b. Attribution. Someone will be motivated to provide help others when he assumes that the misfortunes of the victims were beyond the control of the victim. Therefore, one would be willing to donate to beggars who are disabled and elderly compared with beggars easy.

c. Model. People are likely to be more likely to give charitable donations in the box provided at the store when previously they had seen others also contributed. For example in everyday events, many places such as restaurants or supermarkets that provide charity box and had no money in it, it is certainly meant to draw attention

pengunjun who come to these places akga want turu contribute.

    d. Personality and mood. People who have a forgiving nature will have a tendency to easily help. People who have high self-monitoring is also likely to be a helper, because by being a helper, he will be awarded the higher social. A person's emotions also play a role. Positive emotions generally help improve behavior, but if it is not clear (ambiguous) people who are not happy assumes no emergency, so unhelpful. On the negative emotions a person who is sad to have the possibility of helping the smaller ones.

Research Koestner and Franz (2000) found that personality factors also affect a person's level of social sensitivity. According to Alma (2010:209) advances in technology can impact the depletion of social sensitivity in students. Davis (2003:130) divides social sensitivity based on several aspects, namely:

    a. Perspective taking, is the tendency of individuals to take over spontaneously other person's perspective, perspective-taking ability stressed the importance of non-egocentric behavior, that behavior is not oriented on self-interest, but the interests of others. Perspective taking is high can be linked to a person's social functioning well. This capability as well as the anticipation of a person's behavior and emotional reactions of others, so that it can be built of good interpersonal relationships and respect.

    b. Fantasy, is a person's ability to transform themselves imaginatively into the feelings and actions of

imaginary characters contained in books, glass screen, the cinema or in games. This aspect, according to a study Scotland et al (in Davis, 2003) effect on emotional reactions to others.

c. Emphatic concern, a person's orientation towards the problems faced by others include feelings of sympathy and care. Emphatic concern is a reflection of the feelings of warmth and sympathy that is closely related to sensitivity and concern for others.

Multicultural Education

Banks (2010:8) argues that multicultural education is a set of beliefs and the explanation that recognizes and assesses the importance of cultural and ethnic diversity in the form of lifestyle, social experience, personal identity, educational opportunities of individuals, groups and nations. Sleeter and Grant (2007) suggested multicultural learning is a policy in educational practice that recognizes, accepts and confirms the differences and similarities of humans is associated with religion, culture, gender, ethnic, social class.

While Liliweri (2005:15) states multicultural education is an educational strategy that utilizes the diversity of the cultural background of the learner as one of the forces shaping the multicultural attitude. Then Maslikhah (2007:47) argues terminology Multicultural education is a process of development of all human potential that respects plurality and heterogeneity as a consequence of the diversity of cultural, ethnic, tribal and flow (religion). Of the few opinions about multicultural education that has been described, it can be seen if multicultural education is a process which focuses on awareness of their differences and still respect each other and respect each other.

The purpose of multicultural education by Moeis (2006:9) include: (1) strengthen awareness of multicultural, without losing its identity, (2) improve skills in

interaction across cultures, (3) eliminate stereotypes, stigma, a sense of superiority of self or group, and the negative perception others in inter-group relationships, (4) strengthen the awareness of national and state in the context of global dynamics, (5) upholding the rule of law, (6) to improve the skill of self-transformation and social skills through stages as follows: (a) identify themselves, the environment, and related systems with patterns of thinking about the relationship between culture, (b) identify the forms of power and control that affect patterns of thinking about intercultural relations, (c) assess the effects of power and control that come to mind, attitude, and action on relations ethnic, assess which the effect is useful in inter-ethnic interaction and which should be abandoned, and (d) take transformative action (self and social) is based on an accurate assessment of the knowledge, attitudes, and behaviors that fit within the social interaction between cultures. Furthermore Farris & Cooper (1994:46) suggested if multicultural education was organized in an effort to develop the ability to learn the subject of looking at life from different perspectives of different cultures with their own culture, and a positive attitude towards different cultures, races, and ethnicities

Rational importance of multicultural education as proposed by Primawati (2013), because the strategy of education is considered to have sanctity, mainly in: (1) provide a breakthrough learning that can improve empathy and reducing prejudice the student or students so as to create a human (citizens) intercultural who is able to resolve conflicts without violence (nonviolent); (2) approaches and strategies for learning potential in promoting the process of social interaction and contains a strong affection; (3) model of multicultural learning to help teachers manage the learning process becomes more efficient and effective, especially give learners the ability to build collaborative and committed to a high value in the life of a plural-paced society; (4) contribute to the Indonesian people in the settlement and nuanced SARA managing conflicts that arise in the community by increasing empathy and reducing prejudice.

3. Method

This study is a library or study concepts in the process of basing his research and findings on the analysis of data sources in the form of text either in book form or another. According Sugiyono (2012:291) study of literature related to theoretical study and other related reference values, cultures and norms that develop in social situations studied, in addition to the study of literature is very important in doing research, this is because research will not escape from literature- Scientific literature.

In interpreting data, researchers used a method of analysis description. The first process of data collection carefully, systematically and consistently. Data were collected and analyzed, in the selection and subsequent combined be concluded using deductive analysis of common problems and then drawn a conclusion that has to be special.

4. Result and Discussion

Indonesia is one of the largest multicultural countries in the world, it can be seen from the socio-cultural and geographical so diverse and extensive. Indonesia consists of various tribes that each tribe has a culture of their respective regions. Diversity is recognized or not can cause a variety of problems as faced by Indonesia at this time are: political hostility, separatism, social inequality, inter-ethnic clashes and war, these things are real negative form of their multiculturalism. Violence between civilians groups and between ethnic group shows how vulnerable the sense of unity in the Indonesian nation, how the strong sense of prejudice between groups and how low sense of understanding between groups in society.

The emergence of the negative effects of the increasing multiculturalism as the swift currents of globalization, the negative effects of globalization is the weakening role of the state in regulating its citizens. Communities in the present era are particularly vulnerable to being provoked mainly through social media, people have started to lose a sense of caring, empathy and sympathy for the social environment and tend to be materialistic in living her life. According to AW

Pratiknya (Mahfud,2011:109), some of the trends of development of society on a global era are as follows:

1. Functional society, the society of each of its citizens in a social activity only happened because of their specific purpose or function. This means that relationships between people will be colored by motives of interest (functional) which usually connotes 'physical-material'. The things that are beyond it by itself enough attention being paid reasonable.

2. Technological society, the society that all the affairs and activities should be done according to the technique each which tend to be raw. The pattern of life that technological consequences of value, the dominant considerations of efficiency, productivity and the like, which generally describe the characteristics materialistic.

3. The scientific community, namely respect for human society in more colored by how much it is worth the rational objective, provable (can be proved empirically and scientific principles in the other). In this kind of society in science and technology the longer it will show an increasingly important role.

4. Open society, is a society that all their life governed by a system in place. The dynamics of life is set by the system, not governed by the people. And the system is not just local, national or regional but global nature.

5. Transedentalisation religion, is a society who put religion merely as an individual problem. God was no

longer given the authority to regulate the dynamics of nature and life. Religion as aside from the social dynamics of the community.

6. Paced society values, namely the development of the cultural values of society resulting from the modernization itself. Some of these trends include secularism, materialism, individualism, hedonism and so forth.

Pluralism tribes Indonesia is often proud of, but many people do not realize that plurality also holds the potential conflicts that can threaten the life of the nation. Therefore it is very important to instill the values of multicultural since its inception in Indonesian society through multicultural education, so that each community can appreciate the diversity that is alive and thriving in the country of Indonesia. Studies on multicultural initially more emphasis on efforts to fight and give the rights of minorities are viewed as equivalent to the majority in the educational process, because it is the study of multicultural more likely on the activities that occur in the world of education are associated with the issue of race, ethnic, cultural, religious, gender, and social class that felt there was discrimination then of that is known for multicultural education.

Multicultural education can be defined as education for or about the diversity of cultures in response to demographic and cultural changes in a specific community. Multicultural education is a response to the development of the diversity of the population, as demanded equal rights for each group. Calarry Sada (2004:85) by quoting Sleeter and Grant explained that multicultural education has four meanings (models), namely: (1) teaching about cultural diversity an approach to the assimilation of cultural, (2) teaching about the different approaches in the governance of social relations, (3) instruction to promote pluralism regardless of social strata in

society, and (4) teaching about the reflection of diversity to increase pluralism and equality.

Aspect of education both multicultural education and other education to be able to create a society that is educated and uneducated, through the process of learning in education will be a transfer, planting and civilizing values either as proposed Tilaar (2004:83) that in a society, which really is good for society, it is usually cultivated in member communities through learning. A good education is not going to create a society that only glorifies social prestige as a result of the wealth and prosperity that happened or inherited, a good education is also able to eliminate fanaticism redundant because there is awareness if all persons are equal, despite race, ethnicity or economic level is different and value investment process awareness among fellow can take place smoothly.

According Hanum (2005) through multicultural education learners are able to accept differences, criticism, and have a sense of empathy, tolerance for others regardless of class, status, gender, and academic skills. So through multicultural education is expected to Indonesian citizens consisting of various customs and ethnic groups can have high social sensitivity in bermasyarakatnya life and keep them together in a unity as a nation.

However implement multicultural education is not easy, many obstacles that must be resolved in order for the purpose of multicultural education can be achieved which would create tolerance in the diversity that exists. Obstacles include: ethnic diversity, excessive fanaticism, social class differences are striking and the appearance of the spirit of regionalism which beat the spirit of nationalism. Moreover, we can see that not all learners even community care and awareness to issues of social and political, and therefore should educators can actively provide incentives to students and the community can have high social sensitivity especially in the era globalization and social change is so rapid as it is today.

In order for these conditions can be done so in the learning process needs to be started to be introduced in the form of concepts, norms, principles, values and social issues close to students' lives. Social sensitivity in reality does not present itself of the individual or of the environment, social sensitivity emerged due to the experience of the past that becomes a habit. Therefore, efforts should be made by educators is to clarify the experiences of students and develop it in the classroom through a reconstruction by involving students in social activities and learning processes. Consistent with that view, Banks (1993:12) suggests four approaches that integrate multicultural educational materials into the curriculum and learning in school that when examined relevant to be implemented in Indonesia, where it will support the process of formation of social sensitivity on the learner.

1. Contribution approach (the contributions approach). This level is the most common and most widely used in the phase pertamadari ethnic revival movement. Character is to include the hero / heroine of tribes / ethnic and cultural objects into the appropriate subjects. This is what has been already done in Indonesia.

2. Approach additives (additive approach). At this stage, the addition of material, concepts, themes, perspectives of the curriculum without changing the structure, purpose and characteristics base. This additive approach often d ilengkapi with books, modules or areas of discussion to the curriculum without substantive change. Additive approach is actually an early phase in implementing multicultural education, because it has not touched the primary curriculum.

3. Approach transformation, transformation approach substantially different from the contribution approach and additives.Transformation approach to change the basic assumptions of the curriculum and foster the basic

competencies of students in view concepts, issues, themes and problems from multiple perspectives and viewpoints ethnicity. Perspective centered on the main flow that may be described in the subject matter. Students b by looking from another perspective. Banks (1993) refer to this as multiple acculturation process, so that mutual mengharg ai, togetherness and love for others can be felt through the learning experience. Acculturation conception of double (multiple acculturation conception) of a society and culture that the country leads to the perspective view of ethnic events, literature, music, art, more knowledge as an integral part of that form of culture in general. The dominant cultural groups simply seen as part of an overall larger culture.

4. Approach to social action includes all the elements of the transformation approach, but it does add components that require students to make action related to concepts, issues, or issues that are studied in the unit. The purpose uama of learning and this approach is to educate students doing social criticism and teach decision-making skills to strengthen students and membentu k they get political education, school help students become reflective social critics and participants were trained in social change. Students acquire the knowledge, values and skills they need to berpartisispasi in social change so that the ethnic groups, races and factions neglected and victimized can participate fully in society.

Ethnic diversity in Indonesia may be more cause the seeds of conflict if coupled with the migration of immigrants who have attributes socio-culturally very different from the local population that has long been settled, especially when the

immigrants began to become owners in the economic aspects of the area. Azyumardi Azra in Nationalism and Cultural Resilience in Indonesia (2011) suggested that, adoption of autonomy and decentralization since 2004 which tends to emphasize "the spirit of regionalism" is not uncommon to have implications on the occurrence of inter-ethnic conflict and violence in a particular locality.

Local communities tend to have narrow fanaticism and consider a local group is the most correct and most have a right to grow and develop in that area and other groups are prohibited from growing and developing in the area. When that happens then arises stereotypes and prejudices in social life, then society will tend to indifferent and insensitive to other ethnic groups who are outside of its ethnic groups. If this is neglected and not treated properly, then gradually will lose the essence of social life for individuals and groups in the community who are already losing their social sensitivity. Therefore, it is important to start now and start from the most basic level to instill the values of multiculturalism through multicultural education, so as to increase the return sense of social sensitivity in people's lives.

5. Conclusion and Remark

The diversity of Indonesia is an advantage that can be utilized to realize a developed country and be able to compete in the International association. However, the weak awareness of multiculturalism found in Indonesia can also cause a variety of problems, the behavior of the people who lack respect the opinions of others, individualistic, lack of social solidarity, to the start fading social sensitivity, and the erosion of tolerance in the society and the nation is the accumulation of these weaknesses.

Therefore it is very important to instill the values of multicultural since its inception in Indonesian society through multicultural education, so that each community can realize and appreciate multiculturism in their life and thrive in the country of Indonesia. So as to restore the essence of human as a social being who has a high social sensitivity in society's life.

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THE CORRELATIONS AMONG STUDENTS' PERCEPTIONS OF CLASSROOM ENVIRONMENT, MOTIVATION IN LEARNING ENGLISH AND THEIR ENGLISH ACHIEVEMENT OF THE ELEVENTH GRADE STUDENTS OF STATE SENIOR HIGH SCHOOLS IN INDRALAYA

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Abstract

This study was aimed at finding out whether or not there were significant correlations between: (1) the students' perceptions of classroom environment and students' English achievement, (2) each scale of the students' perceptions of classroom environment and students' English achievement, (3) students' motivation and students' English achievement, (4) each scale of the students' motivation and students' English achievement, (5) predictor variables and criterion variable. This study also investigated whether or not there were significant contributions of the predictor variables toward students' English achievement. This study involved 103 students selected randomly from 3 state senior high schools in 3 different sub-districts in Indralaya. The 'What Is Happening In this Class (WIHIC) questionnaire', motivation questionnaire, and an English test were used to collect the data which were analyzed statistically by using correlation and multiple regression analyses. The findings showed that there were significant correlations between: (1) the students' perceptions of classroom environment and their English achievement ($r=$ .297), (2) five scales of the students' perceptions of classroom environment and their English achievement, (3) the students' motivation and their English achievement ($r=$ .312), (4) all scales of the students' motivation and their English achievement, (5) combination of predictor variables and criterion variable ($r=$ .346). There were also significant contributions of: (1) the students' perceptions of classroom environment and *Teacher Support* toward their English achievement, (2) the students' motivation and *Instrumental Motivation* toward their English achievement, (3) predictor variables toward criterion variable. In conclusion, the students' perceptions of classroom environment and students' motivation were significantly correlated to their English achievement.

Keywords: Classroom Environment, Motivation, English Achievement

1. Introduction

English is an international language that is spoken in many countries throughout the world, including Indonesia. As Crystal (2003, as cited in Lauder, 2008, p. 10) claims, there are around 1,500 million speakers of English worldwide, including around 329 million L1 speakers, 430 million L2 speakers, and about 750 million speakers of English as a foreign language.

In Indonesia, English is still a foreign language. Indonesian students have talked each other by using English in their conversation, but they still have some mistakes in it, such as grammar error in their speech. As the Indonesian second language oral examination report (2013), some students in Indonesia still have a limited control of simple vocabulary, make frequent errors, speak with inaccurate rising intonation, and sometimes cannot be able to elaborate on ideas and opinions. Therefore in Indonesia, English has been extensively taught and implemented from junior high school to college levels. Moreover, there are Indonesian elementary schools that include English as the local content subject. It is worth saying that the teaching of English from the early level (i.e., elementary school) is the effort to anticipate the trend of globalization and stiff competitiveness from other foreign countries. For example, in 2016, ASEAN holds AEC (Asean Economic Community) that opens the labor exchange as one of its vision. Therefore, having a good command in English is very essential for Indonesian students.

As the compulsory subject for the junior high and senior high school students, English is included in the final examination as oficially stated in the Ministry of Education Decree No. 5/2015. Nevertheless, a recent study focusing on the students' English national examination score from 2010-2014 at SMKN 1 Teluk Keramat, Pontianak (Pratamawadi, Supardi, & Salam, 2015) showed that the students' English achievement did not show the promising result. Specifically, the English results of national examination from 2010 to 2014 showed an inconsistency result and it tended to show a negative progress.

The students' low English achievement can be caused by many factors. One factor which can influence students' English achievement is motivation. As Brown (2001, p. 84) claims, "One of the more complicated problems of second language learning and teaching has been to define and apply the construct of motivation in the classroom".

Another factor which influences students' English achievement usually comes from the students' circle such as their parents, economic status, or classroom environment. Based on Vygotsky's theory of social development (1978, as cited in Wei & Elias, 2011, p. 240), students' learning development can be determined by the classroom environment. Furthermore, the study conducted by Rahmi and Diem (2014) to the 8th graders of state junior high schools in Palembang found that students' perceptions of classroom environment were correlated positively to students' English achievement.

Being taken into the consideration the students' low English achievements, the roles of motivation and the other factor such as students' perceptions of classroom environment are very important. A recent study done by Astuti (2013) to the students from two schools in a small town in West Sumatera claimed that teachers' rapport with their students and the teachers' planning decisions played very important roles in motivating the students in learning the language. Therefore, classroom environment plays an important role in students' English learning development since it is the place where process of learning occurs.

Students' lack of motivation that is caused by the classroom environment as explained previously can affect the students' achievement in learning English. As Li and Pan (2009, p. 127) claimed in their study conducted in China, students who had the higher motivation in learning English achieved greater success while those lacking motivation made no attempt in learning and they often led failure in exam.

In addition, a study done by Wei and Elias (2011) to the 140 Form Four students of the secondary school in Malacca found that majority of the students perceived their classroom as having affiliation and they were extrinsically motivated.

Another study done by Haqza (2014) who did her research by involving 32 students of the second year students at MA Darel Hikmah Pekanbaru as the sample proved that there is a significant correlation between students' perception of classroom environment and motivation in learning English, and it gave the effect to their achievement.

Based on the explanation above, the writer was interested in conducting a research entitled "The Correlations among Students' Perceptions of Classroom Environment, Motivation in Learning English and Their English Achievement of the Eleventh Grade Students of State Senior High Schools in Indralaya." Thus, the problems of this study were formulated as the following questions; 1) Was there any significant correlation between students' perceptions of classroom environment and English achievement of the eleventh grade students of state senior high schools in Indralaya?, 2) Was there any significant correlation between each scale of students' perceptions of classroom environment and English achievement of the eleventh grade students of state senior high schools in Indralaya?, 3) Was there any significant correlation between students' motivation in learning English and English achievement of the eleventh grade students of state senior high schools in Indralaya?, 4) Was there any significant correlation between each scale of students' motivation in learning English and English achievement of the eleventh grade students of state senior high schools in Indralaya?, 5) Was there any significant correlation between the combination of predictor variables (students' perceptions of classroom environment and motivation) and criterion variable (English achievement) of the eleventh grade students of state senior high schools in Indralaya?, 6) Was there any significant contribution of the students' perceptions of classroom environment and each scale of the students' perceptions of classroom environment toward the English achievement of the eleventh grade students of state senior high schools in Indralaya?, 7) Was there any significant contribution of the students' motivation in learning English and each scale of the students' motivation in learning English toward the English achievement of the eleventh grade students of state senior high schools in

Indralaya?, and 8) Was there any significant contribution of the combination of predictor variables (students' perceptions of classroom environment and motivation) toward the criterion variable (English achievement) of the eleventh grade students of state senior high schools in Indralaya?

2. Theoretical Background

There are many factors that may contribute towards students' motivation to achieve high grades in school. The perceptions of classroom environment are the one of the background of English achievement because classroom environment is the place where the students study and learn. Classroom environment can be considered as a miniature society that consists of individual students with varying interests, diverse background and wide-ranging personalities (Khine, 2001).

The condition of classroom can influence students' outcome. As Vygotsky's theory of social development (1978, as cited in Wei & Elias, 2011, p. 240), students' learning development can be determined by the classroom environment. Moreover, Klem and Connell (2004) also claim that the roles of the teacher and students' engagement in classroom are the important things for getting success in school. Classroom environment is significantly correlated with the students' English achievement (Rahmi & Diem, 2014). Meanwhile, Brookhart (2006) claims that the students' perceptions of grades and other aspects of classroom assessment influence student motivation to learn. Students will perform better and have more positive attitudes in learning when they perceive classroom environment positively.

On the other hand, motivation has an important influence in students' outcomes because it plays as the helps when the learners face something difficult and complex in learning motivation has an important influence in students' outcomes because it plays as the helps when the learners face something difficult and complex in learning. Motivation comes from Latin word "movere", which means "to move" (Partridge, 2000, p. 8).

Motivation can force or push someone to do something. Dimyati and Mudjiono (2013, p. 80) explain that motivation is the mental power that encourages students to act such as the attitude of students when they are learning. In Self-determination Theory (Ryan & Deci, 1985, as cited in Ryan & Deci, 2000, p. 55), they distinguish different types of motivation based on different reasons or goals that cause an action. Those types of motivation are intrinsic motivation and extrinsic motivation. Ryan and Deci (2000, p. 55) explain that intrinsic motivation refers to doing something because it is inherently interesting or enjoyable. It means that intrinsic motivation is innate or within, hence it stimulates or drives within the individual. Intrinsic motivation is similar to integrative motivation, because when a learner is aroused or motivated by this kind of information, the learner feels positive to learn English as he or he desires to learn English by herself or himself not because being forced.

Extrinsic motivation is a boost toward someone's behavior which is outside of the act doing (Dimyati & Mudjiono, 2013, p. 91). Extrinsic motivation is similar with instrumental motivation, which is when a learner is activated to do something because he or she has a desire to receive something that she or he prefers. Extrinsic motivation can come from the school or from the students' living environment.

3. Method

This study applied correlation method. According to Arikunto (2000, p. 326), the objectives of correlation research are to find out whether or not there is a correlation between the variables, to calculate the strength of the correlation, and to determine the significance of correlation. The population of this study involved 497 eleventh grade students of state senior high schools in Indralaya in academic year 2015/2016 coming from 3 state senior high schools of three sub-districts (Indralaya, Indralaya Utara, and Indralaya Selatan).

The technique of selecting the sample was simple random sampling. In using simple random sampling, every member of the population had an equal and

independent chance of being selected (Fraenkel, Wallen, & Hyun, 2012, p. 94). The writer used the lottery in taking the sample. Arikunto (2006, p. 120) states that, if the subjects in the population are more than 100, the sample can be taken around 10-20% or 20-30% or more. In this study, the writer took 20% of the sample. Therefore, there were 103 students who became the sample of this study.

In collecting the data, the writer used the English test and two questionnaires. English test was taken from the English examination test from the previous year made by the teacher that consists of 50 multiple choice questions. The questionnaires used were ready-made questionnaires. They were 'What Is Happening In this Class (WIHIC) questionnaire' developed by Fraser, Fisher, and McRobbie (1996, as cited in Khine, 2001) to measure the students' perceptions of classroom environment and motivation questionnaire designed by Degang in 2010. WIHIC questionnaire consists of 56 items divided into seven scales (*Student Cohesiveness*, *Teacher Support*, *Involvement*, *Investigation*, *Task Orientation*, *Cooperation*, and *Equity*) and motivation questionnaire consists of 20 items divided into two scales (*Instrumental* and *Integrative Motivation*). Both of questionnaires used Likert-scale. The questionnaires had been translated into Indonesian first and then they were checked by the Indonesian and English teacher in order to get more acceptable and understandable translated items of questionnaires to be responded by the students.

The writer checked the validity and reliability of the test and questionnaires before distributed them to the sample students. The test and questionnaires were tried out to 25 non-sample students who are in the same grade in SMA N 1 Tanjung Raja. The validity of the test was measured by SPSS 22 version using Corrected–Item Total Correlation. After the result of the test and questionnaires were checked, there were ten questions of the test which were invalid. They were number 15, 19, 24, 25, 28, 35, 41, 43, 44 and number 45. Those six invalid questions were directly discarded. Meanwhile, all statements of the questionnaires were valid. Then, the writer checked the reliability of the test and questionnaires by using Cronbach's Alpha in SPSS 22 version for windows. The test and instruments were reliable since the reliability of the

general English test was 0.814, the reliability of WIHIC questionnaire was 0.954, and the reliability of motivation questionnaire was 0.866. Wallen and Fraenkel (1991, as cited in Nurdiana, 2013) state that a rule of thumb is that reliability should be at least 0.70 or preferably higher.

After the valid and reliable questions of the test and statements of the questionnaires were obtained, the writer gave those instruments to the sample students. Then, to analyse the data, the writer used SPSS 22 version for windows. Pearson Product Moment Correlation Coefficient was used to check the correlation among those variables, and Multiple Regression Analysis to check the contribution of the predictor variables (Students' perceptions of classroom environment and students' motivation) toward the criterion variables (students' English achievement).

4. Result and Discussion

Descriptive Statistics

The descriptive statistics of the variables, i.e. students' perceptions of classroom environment, students' motivation in learning English, and students' English achievement are presented in Table 1. It can be seen that the means score and standard deviation of classroom environment were 200.33 and 25.628 respectively. For each scale of classroom environment, *Equity* had the highest mean score (32.12).

Meanwhile, the mean score of the students' motivation in learning English was 68.63. The highest mean score of the students' motivation scales was *Integrative Motivation* (34.51). Then, the mean score of students' English achievement was 72.05. Table 1 also shows that most of the students' English achievement was still in an average level (46.60%).

Table 1. Descriptive Statistics Summary of Students' Perceptions of Classroom Environment, Students' Motivation, and Their English Achievement (N=103)

Variables	Mean	Frequency	Percentage (%)	Standard Deviation
Students' Perceptions of Classroom Environment	200.33			25.628
Student Cohesiveness	31.10			3.869
Teacher Support	26.10	103	100.00	5.455
Involvement	25.36			5.691
Investigation	24.53			5.756
Task Orientation	31.83			4.025
Cooperation	29.29			5.133
Equity	32.12			5.049
Students' Motivation	68.63			11.819
Instrumental	34.12	103	100.00	4.918
Integrative	34.51			8.037
Students' English Achievement	72.05			10.637
Excellent	90.33	6	5.83	2.251
Good	79.30	44	42.72	4.537
Average	65.71	48	46.60	3.770
Poor	52.75	4	3.88	2.062
Very Poor	25.00	1	0.97	-

Statistical Analyses

The results of the statistical analyses were presented based on the proposed research questions.

The Correlation between Students' Perceptions of Classroom Environment and Their English Achievement

The result of the correlation between the students' perceptions of classroom environment and their English achievement can be seen in Table 2. Based on this table, it was found that there was a positive significant correlation between students' perceptions of classroom environment and their English achievement (r= .297; p-value= .002).

Table 2. Summary Statistics of Correlation Analysis between Students' Perceptions of Classroom Environment and Their English Achievement (N=103)

Predictor Variable	Correlation Coefficient (*r*)	Significant Level (*p< .05*)
Students' Perceptions of Classroom Environment	.297	.002[**]

[**].Correlation is significant at the 0.01 level (2-tailed)

The Correlation between Each Scale of Students' Perceptions of Classroom Environment and Their English Achievement

Each scale of the students' perceptions of classroom environment was also correlated to the students' English achievement. From the result of Pearson Product Moment Analysis, it was found that two scales of classroom environment (*Student Cohesiveness* and *Task Orientation*) did not have any significant correlation to the students' English achievement since the correlation coefficients of *Student Cohesiveness* (*r*-obtained= .131) and *Task Orientation* (*r*-obtained= .150) were lower than the *r*-table (*r*-table= .197). The other five scales of the students' perceptions of classroom environment (*Teacher Support*, *Involvement*, *Investigation*, *Cooperation*, and *Equity*) were significantly correlated to the students' English achievement since their correlation coefficients were higher than the *r*-table (*r*-table= .197).

Table 3. Summary Statistics of Correlation Analysis between Students' Perceptions of Classroom Environment Scales and Their English Achievement (N=103)

Scales of Students' Perceptions Classroom Environment	Correlation Coefficient (*r*)	Significant Level (*p< .05*)
Student Cohesiveness	.131	,188
Teacher Support	.286	.003[**]
Involvement	.219	.027[*]
Investigation	.240	.015[*]
Task Orientation	.150	130
Cooperation	.232	.019[*]
Equity	.221	.025[*]

[*].Correlation is significant at the 0.05 level (2-tailed)
[**].Correlation is significant at the 0.01 level (2-tailed)

The Correlation between Students' Motivation and Their English Achievement

As shown in Table 4, there was a positive significant correlation between students' motivation in learning English and their English achievement ($r= .312$; p-value= .001).

Table 4. Summary Statistics of Correlation Analysis between Students' Motivation and Their English Achievement (N=103)

Predictor Variable	Correlation Coefficient (r)	Significant Level ($p< .05$)
Students' Motivation	.312	.001[**]

[**]. Correlation is significant at the 0.01 level (2-tailed)

The Correlation between Each Scale of Students' Motivation and Their English Achievement

Each scale of the students' motivation was also correlated to the students' English achievement. From the result of Pearson Product Moment Analysis, it was found that two scales of motivation (*Instrumental* and *Integrative Motivation*) were significantly correlated to the students' English achievement since the correlation coefficients of *Instrumental Motivation* (r-obtained= .309) and *Integrative Motivation* (r-obtained= .270) were higher than the r-table (r-table= .197).

Table 5. Summary Statistics of Correlation Analysis between Students' Motivation Scales and Their English Achievement (N=103)

Scales of Students' Motivation	Correlation Coefficient (r)	Significant Level ($p< .05$)
Instrumental Motivation	.309	.002[**]
Integrative Motivation	.270	.006[**]

[**]. Correlation is significant at the 0.01 level (2-tailed)

The Correlation between Predictor Variables (Students' Perceptions of Classroom Environment and Motivation) and Criterion Variable (Students' English Achievement)

The result of the correlation between predictor variables (students' perceptions of classroom environment and motvation) and criterion variable (students' English achievement) can be seen in Table 6. Based on this table, it was

found that there was a positive significant correlation between students' perceptions of classroom environment and their English achievement (r= .346; p-value= .000).

Table 6. The Correlation between Predictor Variables (Students' Perceptions of Classroom Environment and Motivation) and Students' English Achievement (N=103)

Predictor Variables	Correlation Coefficient (*r*)	Significant Level (*p*< .05)
Students' Perceptions of Classroom Environment and Motivation	.346	.000[**]

[**]. Correlation is significant at the 0.01 level (2-tailed)

The Contribution of Students' Perceptions of Classroom Environment and Students' Motivation to Their English Achievement

Since there were positive significant correlations between students' perceptions of classroom environment and their English achievement and between students' motivation in learning English and their English achievement, the analysis was then continued by using Multiple Regression Analysis to see whether or not students' perceptions of classroom environment and students' motivation really had a significant influence on students' English achievement.

The contribution of the students' perceptions of classroom environment toward the students' English achievement is presented in Table 7. It shows that the R^2 of the students' perceptions of classroom environment was 0.088 (sig. F= .002). It means that there was a small contribution of the students' perceptions of classroom environment (8.8%) toward students' English achievement and it was significant.

Table 7. The Contribution of the Students' Perceptions of Classroom Environment toward Students' English Achievement

Predictor Variable	Criterion Variable	R	R^2	R Square Change	Sig. F Change	Sig. F
Students' Perceptions of Classroom Environment	Students' English Achievement	0.297	0.088	0.088	0.002	0.002

Table 8 shows the contribution of the scales of students' perceptions of classroom environment toward students' English achievement. It shows that only *Teacher Support* that was predicted as the most important scale of students' perceptions of classroom environment which explained 8.2% proportion of variance in students' English achievement. However, the six other scales were weak and excluded from the analysis by the stepwise procedure.

Table 8. The Stepwise Contribution of the Scale of Students' Perceptions of Classroom Environment toward Students' English Achievement

Students' Perceptions of Classroom Environment	Criterion Variable	R	R^2	R Square Change	Sig. F Change	Sig. F
Teacher Support	Students' English Achievement	0.286	0.082	0.082	0.003	0.003

The contribution of the students' motivation toward the students' English achievement is presented in Table 9. It shows that the R^2 of the students' motivation was 0.097 (sig. F= .001). It means that there was a small contribution of the students' perceptions of classroom environment (9.7%) toward students' English achievement and it was significant.

Table 9. The Contribution of the Students' Motivation toward Students' English Achievement

Predictor Variable	Criterion Variable	R	R^2	R Square Change	Sig. F Change	Sig. F
Students' Motivation	Students' English Achievement	0.312	0.097	0.097	0.001	0.001

Table 10 shows the contribution of the scales of motivation toward students' English achievement. It shows that only *Instrumental Motivation* that was predicted as the most important scale of students' motivation which explained 9.5% proportion of variance in students' English achievement. However, the other scale was weak and excluded from the analysis by the stepwise procedure.

Table 10. The Stepwise Contribution of the Scale of Students' Motivation toward Students' English Achievement

Students' Motivation	Criterion Variable	R	R^2	R Square Change	Sig. F Change	Sig. F
Instrumental Motivation	Students' English Achievement	0.309	0.095	0.095	0.002	0.002

The contribution of the predictor variables (students' perceptions of classroom environment and motivation) toward students' English achievement is presented in Table 11. It shows that the R^2 of the students' motivation was 0.120 (sig. F= .000). It means that there was a small contribution of the students' perceptions of classroom environment (12.0%) toward students' English achievement and it was significant.

Table 11. The Contribution of the Predictor Variables (Students' Perceptions of Classroom Environment and Motivation) toward Students' English Achievement

Predictor Variables	Criterion Variable	R	R^2	R Square Change	Sig. F Change	Sig. F
Students' Perceptions of Classroom Environment and Motivation	Students' English Achievement	0.346	0.120	0.120	0.000	0.000

Based on previous findings above, the R^2 for the students' perceptions of classroom environment was 0.088 and students' motivation in learning English was 0.097. It can be concluded that students' motivation in learning English (9.7%) contributed more than students' perceptions of classroom environment (8.8%) though the contribution was small.

Discussion

Based on the statistical analyses, the writer attempted to describe some interpretations. First, the students' perceptions of classroom environment was positively correlated with the students' English achievement and it was significant. It is in line with Fraser (1998) statement that the quality of the classroom environment is the significant determinant of students learning.

Second, the correlation data analysis between each scale of students' perceptions of classroom environment and students' English achievement was conducted separately. There were two scales of students' perceptions of classroom environment (*Student Cohesiveness* and *Task Orientation*) positively correlated with the students' English achievement, but they were not significant. It means that the relationship of each student in the class and their willingness in completing planned activities and staying on the subject matter did not have significant correlation to their English achievement. Brok, Fisher, Rickards, and Bull (2005) found in their study that *Student Cohesiveness* and *Task Orientation* were statistically no significant amounts of variance at the class level. These two scales had the lower correlation coefficient than other scales. Nonetheless, the five scales of students' perceptions of classroom environment (*Teacher Support*, *Involvement*, *Investigation*, *Cooperation*, and *Equity*) were positively correlated with the students' English achievement, and they were significant. The positive correlation means that the higher the possession of each scale of students' perceptions of classroom environment, the higher the students' English achievement.

Third, another finding of the study was the correlation between the students' motivation in learning English and students' English achievement. There was a significant positive correlation between students' motivation in learning English and their English achievement. It is in line with Li and Pan (2009, p. 127) that claimed students who had the higher motivation in learning English achieved greater success while those lacking motivation made no attempt in learning and they often led failure in exam. Fourth, the data analysis also showed that there was positively correlated both instrumental and integrative motivation to students' English achievement and it was significant. Instrumental motivation showed higher correlation than integrative motivation toward students' English achievement. This study coincides with the result of the study conducted by Kitjaroonchai and Kitjaroonchai (2012) which claimed that the students' instrumental motivation was found slightly higher than their integrative motivation.

Fifth, the predictor variables in this study (students' perceptions of classroom environment and students' motivation) were positively correlated with the students' English achievement and it was significant. It also showed that the better the students possessed good classroom environment and high motivation, the better result of students' English achievement was gained.

Sixth, the regression analysis showed that there was significant contribution of the students' perceptions of classroom environment to their English achievement. It means that the students' perceptions of classroom environment have contribution to the students' English achievement though it was in a small proportion. Furthermore, among the seven scales, only *Teacher Support* contributed significantly to the students' English achievement. It means that the role of teacher in class had stronger influence toward the students' English achievement than the others. However, the contribution was also in a small proportion.

Seventh, there was significant contribution of the students' motivation to their English achievement. However, the contribution of the students' motivation in learning English toward their English achievement was also weak. The result of regression analysis showed that only *Instrumental Motivation* that contributed significantly to the students' English achievement. It means that instrumental motivation (extrinsic motivation) was predicted as the most important scale of students' motivation in contributing the students' English achievement. Al-Tamimi and Shuib (2009, as cited in Kitjaroonchai and Kitjaroonchai, 2012) also found that instrumental motivation being the primary source of the Yemeni students' motivation.

Eighth, the regression analysis of the predictor variables (students' perceptions of classroom environment and students' motivation) toward students' English achievement was analyzed. Here, the result showed that the predictor variables contributed low on the students' English achievement. However, the combination predictor variables toward the criterion variable had higher contribution than the contributions of students' perceptions of classroom environment and

students' motivation had toward students' English achievement if they were analyzed separately. Finally, by comparing the two contributions, students' motivation in learning English showed higher influence toward students' English achievement than students' perceptions of classroom environment did.

5. Conclusion and Remark

Based on the findings and interpretations above, there were some conclusions drawn from this study.

First, there was a significant positive correlation between the students' perceptions of classroom environment and students' English achievement. Second, among the seven students' perceptions of classroom environment scales, only *Students Cohesiveness* and *Task Orientation* scales were not significantly correlated with the students' English achievement. Nonetheless, all the scales of the students' perceptions of classroom environment (*Students Cohesiveness*, *Teacher Support*, *Involvement*, *Investigation*, *Task Orientation*, *Cooperation*, and *Equity*) were positively correlated.

Third, a significant positive correlation between the students' motivation in learning English and their English achievement was also occurred. Fourth, each student's motivation in learning English scale (*Instrumental* and *Integrative Motivation*) was positively correlated.

Fifth, there was a positive significant correlation between the combination of predictor variables (students' perceptions of classroom environment and students' motivation) toward their English achievement.

Sixth, regarding the contribution of the teachers' teaching styles and each scale toward students' English achievement, it was found that students' perceptions of classroom environment gave significant contribution to the students' English achievement though with a small proportion. Moreover, it was also found that only *Teacher Support* contributed significantly to the students' Enflish achievement.

Seventh, in general students' motivation in learning English also showed a low contribution. It was also found that only Instrumental Motivation contributed significantly to the students' English achievement. Eighth, the predictor variables (students' perceptions of classroom environment and students' motivation) also gave significant contribution to the students' English achievement though with a small proportion. Finally, the students' motivation in learning English showed higher influence toward the students' English achievement than the students' perceptions of classroom environment did.

Based on the conclusion above, suggestions in this study are provided for the students, teachers and other researchers who are interested in further research. First, for the students, this study can help students to know about the importance of their interaction and participation among themselves and teachers to their motivation in learning English toward their English achievement. Second, for the English teachers, they need to pay attention with the classroom environment. Since the *Teacher Support* had higher contribution than the other scales of perceptions of classroom environment, the teacher should enhance their attention and support to the students to get better process and result on teaching and learning English activities. Third, for future researchers who have interest on this subject, students' perceptions of classroom environment and students' motivation in learning English are broad area, so there are probabilities to correlate them with other variables since there are still many unexplained factors that can give contribution for the students' English achievement.

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THE INFLUENCE OF LISTENING ANXIETY TO LISTENING COMPREHENSION OF ENGLISH EDUCATION STUDY PROGRAM STUDENTS OF SRIWIJAYA UNIVERSITY

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Abstract

This study was intended to investigate the influence of listeninganxiety on Students' Listening Comprehension of English Education Study Program of Sriwijaya University and (2) the contribution of students' listening strategies and listening anxiety to their listening comprehension. To do so, a correlational research design was used for the study. The participants were the second, fourth and sixth semester students. A strategy questionnaire and a listening comprehension test were employed to collect the data. To analyze the data obtained, descriptive statistics and correlation analysis were used. The findings revealed that the listening anxiety of the participants and their listening comprehension skill was found to be significant. listening anxiety gave significant influence to their listening comprehension.

Keywords: listening comprehension, listening strategies, listening anxiety

1. Introduction

Listening is a skill that is most often used in daily language. This is the key of language learning itself. According to Feyten (1991), people spend most of the time about 45% in listening when communicating with each other, 30% in speaking, 16% in reading, and only 9% in writing. Underwood (1989) says that people will not be able to take part in oral communication if they do not listen effectively. Put easy-to-understand in facilitating learning a second language. Krashen and Terrell (1984) state the same priority between listening in learning a second language and priority of students who only listen to get first language. By developing listening skills, students are ready to develop other skills. When listening, the students are preparing to imitate the sound when they speak and to match the sound with the appropriate symbol when

they decode words. Linse (2005) summarizes how listening skills to build other skills in the simple statement "You need to hear the word before you can say it. You need to say the word befor you read it. You need to read the word before you can write it" (p.27) Therefore, listening it extremely important. For verbal communication. However, listening is something that often taken for granted in the communication (Turner, 1995).

Most foreign language students often consider that listening is as the most difficult skill language to learn. For people who are learning English as a foreign language, it has confusing happen and misunderstanding if they cannot understand what the other person wants to say. According Vandergrift (1999), to understand the spoken language, people the need to synchronize among voice, vocabulary, grammar structure, and knowledge background. Rost (2001) states that "the key of the main difference between someone who is successful and less successful in learning language mostly concerned with their ability to use listening skills as a means of language" (p. 94).

In 2007, Vandergrift states that one of the reasons why listening is a difficult skill to learn is probably because students are not taught how to listen effectively. Actually there are several factors that influence listening comprehension. Yan (2006) classifies these factors into linguistic and non-linguistic factors. Pronunciation, vocabulary, exercise patterns are linguistic factors, while the psychological and cultural factors are non-linguistic factors. Learners also have different individual characteristics such as age, aptitude, attitude, motivation, styles and strategies that will have a significant impact on the sustainability-finish learning a language.

In fact, research in the field shows that the listening comprehension shortly consists of several procedures. Listeners should be able to distinguish sound, stress, intonation and tone of language. Once they can be realized throughout entire information that the speaker wants to say, listeners need to keep information in their memory until they can be understood. Clark &Clark (1977) summarize listening

process consists of three parts: perception, parsing, and use. The process of perception means that the listener receives the sound by speaker and form a picture in their short-term memory, and then the listener quickly convey information of echoic memory to short-term memory to process the meaning of the sound. Then, in the process of decomposition message rebuilt into a meaningful word that can be stored in short-term memory. Listeners take advantage of their long-term memory for connecting incoming messages to their own knowledge. Comprehension occurs when new information can be linked with existing knowledge.

Additionally, Bromley (1992) classifies listening into three types: informational, critical, and appreciative. Informational listening is to interpret the information in order to identify and remember facts, ideas, and relationships. Critical listening refers to the interpretation of in-formation; requires more than identifying and remembering facts, ideas, and relationships. It requires the ability to analyze what is heard and make interpretations about it. Appreciative listening means the ability to enjoy what people hear.

In relation to the feelings of anxiety, some researchers have tried to prove it, most of them have other causes that protect the feelings of anxiety in listening investigated in 1998 done by Vogely produce several causes concern listened as the nature of voice, stage hardship, is less clear, lack of visual support, and the lack of repetition of the underlying concerns in listening. Additionally, Christenberry (2003) found the problematic nature listen and affirm as part of that very difficult. In another study conducted by Chang and Read (2008), they declare the factors related to the terms of exams, such as the way to take notes in listening. Furthermore, Gonen (2009) proved text listened, did not understand the material gathering and external factors like noise as a factor of anxiety in listening.Thus, this studyfocused on the anxiety of listening and its influence towards the students' li307stening comprehension.

2. Theoretical Background

Listening comprehension is very important to learn a second language both in general and in particular to learn foreign languages because it can be enable learners to internalize the language through exposure to the target language (Brown, 2001). The process of understanding the complex and active listening is. Listening once considered a passive skill. Vandergrift (1999) defines a listening comprehension as "a passive activity" (p. 168). But recently, this view has been replaced by the view that more accurate that listening is an active process that requires the listeners to construct meaning by interacting with matter while they are listening to. This concept is comprehensively defined by O'Malley, Chamot, and Kupper (1889) that "listening comprehension is an active process and aware of where the listener to construct meaning using contextual cues of information and of knowledge that exists, by relying on several strategies to meet the needs required tasks "(p. 19). Moreover, in the discourse and certain conditions, the listeners should be able to process and decipher the chill of the spoken language. In other words, he should know "illocutionary force of speech" (Matsuoka, 2009, p. 32).

Purposes of establishing proficiency listen to foreign language learners as oral understanding is an important element in a communication. However, these skills are usually driven by fears. According to Alder-son (2005, p. 138), "concern is fear understand the message and mean it right for thinking more hearing as proficiency complex." Then, the feeling of making a deep impression on understanding impression capabilities such as loss of confidence and contempt for ordinary skill stonewall hear about indecision heard referring to the fear of hearing in a foreign language (Elkhafaifi, 2005, p. 211). She investigated 233 post-secondary students of Arabic. The results indicated that there were significant negative correlations among foreign language learning anxiety, listening anxiety, and selected demographic variables and she suggested to reduce student anxiety by advising the teachers and Arabic programs to create a less stressful classroom environment in order to help

students improve both their listening comprehension proficiency as well as their overall course performance.

In addition, most of the anxious feelings appear when hearing a new message or quote is not logical, thinking for achievement that reflects their ability or intelligence, and got a new situation (Raja and Behnke, 2004, p. 76). Not surprisingly, the listener hears the English language too complicated and cannot understand what they were hearing.

Accordingly, all the causes encountered by prior research include two major concerns in listening (Kim, 2000, p. 99). They are tension and indecision English listening and less confidence in listening. For such problems, each listening protected by other factors as described in the following table.

Table 2
Socio-affective Strategies

Listening Anxiety Causes	
1. *Tension and worry over English listening*	- *Situation related listening apprehension* represent general listening anxiety. - Process related listening anxiety refers to more specific feelings and circumstances in which the anxiety prevails.
2. *Lack of confidence in listening*	- Low self-confidence in English listening. - Experiences of failure in conversation or listening activities. - Both of the low self-confidence and the experience of failure in listening activities.

Source: Kim (2000, p. 92-93)

Similarly, the possible having high-anxiety in the listening process may occur and lead the students to participate passively. Several researchers proved that for example Kim (2000) who studied the foreign language listening anxiety. One of her main findings is two-factor analyses of the foreign language listening

anxiety: tension or worry over English listening and lack of confidence in listening. She also found a moderate association between listening anxiety and listening proficiency and demonstrated the somewhat obvious case that listening anxiety interferes with foreign language listening. Naturally, the anxiety possibly appears when learners encounter a difficult and unfamiliar task (Scarcella and Oxford, 1990).

3. Method

This study uses a quantitative approach. To get the data questionnaire about listening anxiety was employed to the research subject. The questionnaire was designed through the operational of research variables, namely religiosity variable and motivation derived from the indicator. For verification of questionnaires and tests were done testing instrument validity and reliability of research instrument before it uses to retrieve data from material samples to be analyzed.

This research was conducted in English Language Study Program of JPBS FKIP of University of Sriwijaya in Palembang. The study population was all students of English Language Study Program in semester 2, 4, and 6. The population in used as a reference for sampling research. Sampling technique in this research is purposive sample, was taken in the sense that there are male and female.

In analyzing the data, there are three types of data to be analyzed. They are listening comprehension student test dataand FLLASS questionnaire to measure the level of anxiety in listening. Data obtained from tests and questionnaires were calculated by statistical package for social sciences program (SPSS) version 20.

4. Result and Discussion

Descriptive analysis

Table 3 presents the descriptive statistics of the results of listening comprehension tests.

Table 3
Listening Comprehension Test Statistic Description

Number of Students	Total Problem	Min	Max	Mean	SD
134	50	24	94	61.23	19.48

Table 3 shows that the lowest score was 24 and the highest score is 94, while the average score was 61.23 and the standard deviation was 19.48. This score is also distributed to five scale description. With the scale of 'very good' (A), 'good' (B), 'enough' (C), 'low' (D), and 'failed' (E). While graduation in English Study Program Sriwijaya University is 71.The distribution of students listening comprehension test scores are presented in Table 4 below.

Table 4
Distribution of Listening Comprehension Test Scores (n = 134)

Scale Point	Value Scale	Value Description	Frequency	Percentage
86-100	A	Very Good	15	11%
71-85	B	Good	21	16%
56-70	C	Moderate	57	43%
41-55	D	Low	15	11%
0-40	E	Failed	26	19%
Total			**134**	**100%**

As shown in Table 4 above, there are only 36 students (27%) who score ≥71. Less than 50% of students who did the test passing grade. While 57 (43%) of students are categorized in category enough, 15 (11%) of students in lower categories, and 26

(19%) of students in the category failed. Author concludes that the sample was not successful in running their listening comprehension test because most of their value does not pass passing grade

Correlation analysis

The researchers did test to identify the correlation between the aspects of anxiety in listening and listening comprehension. It also used the data calculated Pearson Product Moment Correlation, with the following results:

Table 5
Correlation between Listening and Understanding Concerns in Listening

		Listening Comprehension
Listening Anxiety	Pearson Correlation	.514[**]
	Sig. (2-tailed)	.000
	N	134

**. Correlation is significant at the 0.01 level (2-tailed).

The coefficient between concerns in listening and understanding listeners showed a positive correlation (r = + 0514). At 0:01 a significant level, r-table (n = 134) 0222 and the p value (0.000) is lower than 0.05. Correlation anxiety in listening and listening comprehension in this study shows the relationship level correlation was (0431). Thus, the hypothesis Ho is rejected and Ha accepted, meaning no significant influence between listening anxiety and listening comprehension.

Table 6
Listening Anxiety in Listening Comprehension

Model	R	R Square	Std. Error of the Estimate	F	Sig. F Change
1	.246	- .180	18.95387	8.537	.000

Interpretation

Based on the findings above, there are several interpretations can be drawn to elaborate the answer from the research problem. Through questionnaire dealing with listening anxiety and comprehension tests listening involving 134 students of the second semester, fourth and sixth Study Program English, University of Sriwijaya, found that there was a negative influence was between listening anxiety and listening comprehension. In other words, the anxiety in listening also had relevance to the process of listening comprehension. This is in line with Elkafaifi (2005, p. 211), which revealed that the loss of confidence and look down capability may cause doubts in the ability to listen to endless fear of listening to a foreign language.Further analysis using simple regression shows that anxiety in listening accounted for 18% for listening comprehension. It means that anxiety in listening influences very weak to listening comprehension of English Education Study Program of Sriwijaya University.

5. Conclusion and Remark

Based on these findings, it can be concluded that in general the students use varying strategies, either consciously or unconsciously they use it when they listen. The influence was also found between listening anxiety and listening comprehension. Despite the relatively small influence, listening anxiety still played an important role in listening comprehension.

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THE DEVELOPMENT OF TEACHING MATERIALS INTERACTIVE MULTIMEDIA-BASED ON CHEMICAL BONDING FOR STUDENTS OF GRADE X AT SEKOLAH MENENGAH ATAS NEGERI 1 INDRALAYA UTARA

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Abstract

The purpose of the research are to produce teaching materials valid and practical multimedia-based and had effectivity towards students' learning output on chemical bonding grade X. The methodology used in this research was development research by using Alessi and Trollip models whichcarried out in three phases, namely planning, design, and development. The validity was tested by alpha test, the practice of the teaching materials was tested by using betha test, whereas the effectivity of the learning output was tested by field test on the real class. The result of field test showed that the students' learning output increase 44,37 with the average of the pretest score 32,19, meanwhile the result of the posttest was 76,56 with N-gain score 0,65 (mid category). The conclusion of the research was that the teaching materials interactive multimedia-based that was developed was valid, practical and had effectivity towards students' learning output. The suggestion for other researcher, it is that they are expected to develop quiz and games for metal bonding, random question for evaluation process, and closing evaluation program in order that the evaluation would not be able to be opened by the students before the time;(2) for the teacher, it is expected that the teaching material will be able to be applied as one of the teaching material in order the learning process would be easier; (3) for the school, it is expected that the teaching material interactive multimedia – based will be used as a learning resources in the teaching chemistry at X grade and as a model for other teacher.

Keywords: development research, teaching materials, interactive multimedia, chemical bonding

1. Introduction

Chemistry learning on the material of chemical bonding is usually done by teacher only using verbal language and text book. Based on the interview to the students of grade X and the teacher, the students got difficulty in understanding the material in text book especially the abstract material such as the chemical bonding, so when

they were given the formative test, only 44% of them passed the test. The learning process that only used text book can't involved all students to participate actively in the learning process, so the learning process was not interactive. Teaching materials interactive multimedia-based enable students to learn individually based on their own ability to understand the material, so they are expected to be able to solve the problem faced in the learning without the teacher.

Teaching materials interactive multimedia-based was suitable to be used in SMAN 1 Indralaya Utara. The technology in the school to support computer-based learning is already sufficient. The quality of the human resources both teacher and students had been sufficient in operating the computer. This school based on ICT that is proved by doing online examination in every mid-term semester test and semester test, so all the students of SMAN 1 Indralaya Utara had had laptop and modem facilities of their own that could be used in learning.

The used of teaching materials interactive multimedia-based could minimalized the teacher's participation in learning process (Kennedy and Naught, 1997). Kennedy also stated that the used of teaching materials interactive multimedia-based in the learning process could improve students' interest. The teacher are expected to be able to develope teaching materials interactive multimedia-based, so the learning process is interactive and enjoyble. Kennedy suggested to further developer to design the teaching materials interactive multimedia-based by expanding multimedia design which could increase students' activities in the learning process (students center).

A research about teaching materials interactive multimedia-based had been also done by some expert, they are Jones (2013) stated that the learning multimedia-based on molecule geometry material could help the student to understand molecule's mobility, it was proved by the high student's learning output. In the research Jones suggested to develope multmedia grafis based on instructional design principle which is focused on the easiness of using, the interest, and the abillity to give feedback for the students.

Zhang (2005) showed that most of students liked the used interactive multimedia in learning process. It is proved that most of the students who were not

active in learning process became active after interactive multimeddia was applied in the learning process. Garnett et all (2010) showed that the teaching materials interactive multimedia-based was the right solution to improve the understanding learning material. Teaching materials interactive multimedia-based also had been used in research to explore many kind of strategy to develope the concept and study achievement.

Based on the researches above, it could be concluded that teaching materials interactive multimedia-based was part of learning media in the school which was very useful for the students to improve learning outcome besides that the use of teaching materials interactive multimedia-based could improve students' interest in learning. However in the researches above there were some disadvanteges in instructional design principle. This disadvanteges could be revised in this research. This research will be done by adding the insruction of the use of interactive multimedia that was function to help the students to use interactive multimedia. Beside that, the interactive multimedia which will be made was stand alone. It was because that multimedia could be used alone in learning process. Through interactive multimedia that would be made it is expected that the students could learn the material do the execice and do the evaluation alone by giving the reinforcement to students' answer. Based on that explaination above the research about The Development of Interactive Multimedia-Based on Chemical Bonding at grade X of Sekolah Menengah Atas Negeri 1 Indralaya Utara sould be done.

The purpose of the research are to develope and produce the teaching materials interactive multimedia-based on chemical bonding material which are valid, practical, and effective to the students' learning output of grade X students of SMAN 1 Indralaya Utara. Teaching material which was developed were expected give some benefit, that are: (1) for other researcher, it is that they are expected to developed quiz and games for metal bonding, random question for evaluation process, and closing evaluation program in order that the evaluation would not be able to be opened by the students before the time; (2) for the teachers, it is expected that the teaching material will be able to be applied as one of the teaching material in

order the learning process would be easier;(3) For the school, it is expected that the teaching materials interactive multimedia-based will be used as a learning resources in the teaching chemistry at X grade as a model for other teacher.

2. Theoritical Background

Yaumi (2013:244) stated that teaching material is a set of material which is made sistematically to be used in learning process, that get from printed material, visual aid, audio, video, multimedia, animation, and computer network. According to Sanjaya (2008:141) teaching material is everything that we find in the curriculum that sould be mastered by the student based on competentce based in order to reach competentce standart in every subject.

Based on the definition, it could be concluded that the teaching material is a learning component that is used by teacher as learning material for students in the process of learning in the classroom. This research will develope teaching material interactive multimedia-based, so it is expacted that help learning process in the classroom.

Rusman (2013:140) stated that interactive multimedia is a media which is made by combinizing text, grafik, audio, video, and animation with link and tool that enable user to do navigation, interaction, creation, and comunication. According to Susilana and Riyana (2009:126) interactive multimedia is a media that contain material methode and the way to evaluate that is design sistematically to reach competent or subcompetent in a subject.

Based on explaination above it can be concluded that interactive multimedia is a teaching media which contains picture, grafik, video, audio, and animation which is used to help teacher to explain teaching material. The function of interactive multimedia above is a basic to do this research about the developing teaching material based in interactive multimedia in senior high school.

3. Method

This research was development research that produce teaching material interactive multimedia- based on chemical bonding. This research had been carried out in students of grade X in SMAN 1 Indralaya Utara Kabupaten Ogan Ilir from Oktober until Nopember 2015.

This research used Allesi and Trollip model. The steps were (1) planning, the researcher did eight analysis, They were students' character analysis, technology analysis, socio economy analysis, students' task analysis, interactive teaching material analysis, SK KD analysis, learning objective analysis, and media analysis; (2) designing, the researcher made flowchart, GBPM, storyboard, and determined the softwere that would be used to make teaching material interactive multimedia-based and determined the activity in learning; (3) developing, researcher made audio, the instruction how to use teaching material interactive multimedia-based, prepared supporting material, produced prototype, did alpha test, did the first revised, did betha test, did last revised and did field test to know the effectiveness of students learning outcome.

4. Result and Discussion

Alpha test is to produce the valid teaching material interactive multimedia-based. This test was carried out by two media expert, two material expert, and one language expert. The result of the test were the suggestion and the quantitative evaluation from the expert to revise the prototype.

Based on the cathegory table that the teaching material was valid and could be used in the research. The expert also gave suggestion that was used to revise prototype that had been produced.. The first validator suggested to revise the colour in opening page, to change most of the text into animation, to change electron picture into animation, the explaination of metal properties used animation to make it concret, before starting the material the students were given some question about the material. Meanwhile the second validator suggested to give the opening on the

opening page, to give different colour to importent word, the picture of electron in nucleus atom was made in animation, to make video in printscreen, to make the animation for explaining metal bonding, revise picture and text position in the screen, to fix tke key on the game and the answer of evaluation could not be detected.

Material validation was done by two material expert. The purpose of it are to test the validity of the material and so that it could be understood by the students easily. The suggestions got from the first validator were to revise the audio naration, the word "mengelompokan" sould be change into "mengelompokkan", the electron had to make apart away, the electron transfer of Na^+ to Cl^- in video ionic bonding was ilustrated in animation, the name of the element in quiz sould be similarize. The second validator suggested to change the picture of pile of brick into another ilustration picture, to make the teaching material straightly, such as by giving opening question, changing the words in explaining the definition about ionic bonding, covalent bonding, and coordinate covalent so that the students would understand it easily, to give some example about the process of ionic, covalent, and coordinate covalent by using animation, , to fix tke key on the game and the answer of evaluation could not be detected.

Language validation used to produce teaching material interactive multimedia-based gramaticaly correct. it was cathegorized valid and could be used in the research. The suggestion were the spelling of the word "struktur lewis" sould be change into " Struktur Lewis", the spelling of the word "Ionisasi" sould be "ionisasi", the spelling of the sentence "Perhatikan contoh Ikatan Kovalen Koordinasi berikut" sould be "Perhatikan contoh ikatan kovalen koordinasi berikut", the spelling of "Ikatan Logam" should be "Ikatan logam", the spelling of "sepertihalnya" should be "seperti halnya", the spelling of "Kation" should be "kation", the spelling of "anion" should be "anion", the spelling of preposition should be sparated by the main word and the answer of evaluation could not be detected.

Betha test was carried out to a student by doing interview. The result of the interview were the students suggestion and quantitative evaluation about the practicality of the of teaching material had developed.

The purpose of field test is to see the effectiveness of teaching material interactive multimedia-based.

The Result of Pretest

The pretest was done in the firs meeting to 32 students of X grade in SMAN 1 Indralaya Utara to know their output before using teaching material interactive multimedia-based, and the average score of them was 32,19. The data could be seen in table 1 below.

Table 1. The Result of Pretest

Interval Score	Student	Presentage	Category
90 – 100	0	0 %	Very good
80 – 89	0	0 %	Good
60 – 79	3	9,38 %	Enough
50 – 59	7	21,88 %	Bad
0 – 49	22	68,74 %	Very Bad
	Rerata	32,19	Very Bad

The Result of Posttest

The posttes was done in the last meeting. It was given to know the output of students after using teaching material interactive multimedia-based on chemical bonding material. The data of posttest could be seen in table 2 below.

Table 2. The Result *Posttest*

Interval Score	Students	Persentage	Category
90 – 100	6	18,75 %	Very good
80 – 89	13	40,63 %	Good
70 – 79	8	25%	Enough
50 – 69	5	15,62%	Bad
0 – 49	0	0 %	Very Bad
Rerata		76,56	Enough

Based on the result of posttest it can be concluded that that was the increase of students learning output after using teaching material interactive multimedia-based. The result of pretest was 32,19 and the result of posttest was 76,56.

Discussion

The teaching material interactive multimedia-based that was developed by the researcher was cathegorized valid because in the process of developing has fullfil the characteristic of interactive multimedia, thay are (1) self instructional; (2) self contained;(3) stand alone ;(4) adapted ;(5) user friendly ;(6) contain representation; (7) visualization with multimedia; (8) using interest variation and the high quality resolution; (9) learning response and reinforcement (Riyana dan Susilana, 2009:128)

The first prototype had been produced by alpha test would be tested it's practicality in betha test. The result of betha test were the students suggestion and quantitative evaluation about the teaching material interactive multimedia-based.

Based on the result of the interview that has been carried out by the researcher, student stated that teaching material interactive multimedia-based was very good, if it was applied in learning, because it could increase students' interest learning. It was suitable with the research carried out by Kennedy and Naught (1997) which stated that the learning using teaching material interactive multimedia-based could increase strudent interest in learning.

The practical cathegory that got from betha test because teaching material interactive multimedia-based had fullfil the students' characteristic based on the

result of student characteristic analysis that had been carried out by the researcher before, that was the students wanted the interactive teaching materials contain video, animation, and game, so that the student were more interesting in learning.

The effectivenes of teaching material interactive multimedia-based could be seen from the result of pretest and postest. The first meeting, students were given pretest to compair the score, they got before and after the learning using teaching material interactive multimedia-based. The average score of pretest was 32,19 and it was very low from standard minimal chriteria, than the student learn using teaching material interactive multimedia based.

The average of posttest was 76,56 and the highest score was 100. Based on the data from the result of pretest and postest there was an increase 44,37 and N-gain score was 0,65 . It means that the effectivenes of teaching material interactive multimedia based was good.Based on the table classification of N-gain score that $0{,}7 \square \text{N-gain} \geq 0{,}3$ was cathegorized moderate. The result of this research showed that teaching material interactive multimedia-based could increase students' learning output. It was suitable the research carried out by Jones (2013) which stated that the use of teaching materials interactive multimedia based in learning could increase the students learning output.

5. Conclusion and Remark

Based on the result of the research it can be concluded that the teaching materials interactive multimedia-based that had been develope in this research was valid. It meant that the teaching material can be used in the learning process, the teaching materials interactive multimedia-based that had been develope in this research was practical, and the teaching materials interactive multimedia-based that has been develope in this research had the effectivity toward students learning output.

The suggestion of this research were for other researchers, it is that they are expected to developed quiz and games for metal bonding, random question for evaluation process, and closing evaluation program in order that the evaluation

would not be able to be opened by the students before the time, For the teachers, it is expected that the teaching material will be able to be applied as one of the teaching material in order the learning process would be easier, and For the school, it is expected that the teaching materials interactive multimedia-based will be used as a learning resources in the teaching chemistry at X grade as a model for other teacher.

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FABRICS IN PALEMBANG COMMUNITY LIFE[°]

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Abstract

The purpose of this paper is to describe the role of the fabric community in Palembang from time to time. Fabric is a vital necessity that can not be separated from daily life of Palembang community. At the beginning, this vital need only be met by using wood as a raw material. On the development, the processing of wood fiber materials was growing. In addition the use of cotton fabrics from India and China silk is also increasingly becoming an integral part in the life of the archipelago. Palembang occupied a special position in the cloth trade, especially as most potential fabric lovers in Southeast Asia, together with Jambi. Both of the regions known as the Southeast Sumatra. The function of fabric for Palembang society is very diverse, ranging from meeting the needs of body armor consisting of fabric, and scarves, to other functions. These functions among others, as a symbol of one's status, prizes, a medium of exchange, pay fines, media peace, a symbol of the bond, the means of diplomacy, prestige and heritage, thus, the position of Palembang as a connoisseur and developer of cloth until now continues. So normal that until now Palembang is famous as the sole producer of the most beautiful fabric known as the Queen of fabric which is Songket Fabric.

Keywords; fabric, Palembang, function.

1. Introduction

Regarding to its natural use, human beings need body armor to cover the body as well as part of the aesthetic. Thus, the body amor has existed since the growing of humans since thousands of years ago. The need is increasingly urgent with the rapid improvement of human civilization. In early day the "protector" of the body is quite simply consist of rough bark which is pounded with certain tools be wide and thin, and can be used as a body cover. This simply armor grows increasingly complex by adding color, shape, size, pattern, and smoothness level. This is the beginning of human history using body armor in its development known as the fabric.

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The development of fabric in the archipelago can not be separated from the influence of the outside area, which stretches from Sumatra to Papua. There are two dominant nations in the field of fabrics. History mentioned that the relationship with China had been grown since the reign of the Han dynasty (206 BC-220 AD). The nation's trade in silk, ceramics, tea and others stuff had reached the stage of a certain quality. The relationship was known as "Ceramic Line", which lasted until the VII century, precisely during the reign of the Tang Dynasty (618-907). The relationship continued and developed further during the tenth century to the fourteenth century[1], in the Song Dynasty and the Yuan Dynasty. The Relationship with China was well maintained, it was done by traders who specifically carry merchandise to be exchanged in ports in Southeast Asia / Nusantara, also the relationship "seigniorial" between the various Chinese dynasties with the local authorities as a form of "tribute or offering" (Tribute missions), As a result of various commodities, mainly silk and ceramics, more intense to be traded and also was known as "Maritime Silk Road". The term appeared in the sixteenth century / XVII (Ta Sen, 2010). Thus, silk to be the main composition of fabric or even silk fabric became potential merchandise between China and port authorities or kingdoms in the archipelago.

In the early of XV century, the relationship between China and Southeast Asia, especially Indonesia had a different phase with their colossal expedition to the south under the leadership of Admiral ChengHo (1405-1433). The expedition involved dozens of large ships, and tens of thousands of sailors, with a variety of high-value items. Based on the name of the voyage track with valuable objects such as silk and ceramics. These objects had given to the rulers of the archipelago. As a form of relationship that existed, then surely the party receiving the prize would be in return reward with various value objects as well. (Dahana, 2007). Thus, we can conclude that the relationship between China and the archipelago in general continue to move forward, by exchanging a variety of high-value commodities in each party (Nusantara and China).

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[1] According to van leur, XIII century in Indonesia had been passing various commodities world, including silk, silver, ceramic, pewter, ivory, shell, silver, aloes wood, sugar, iron, sandalwood, rose water, and spices (2015)

And also India was also a "player" in the rise of the cloth trade. If China is famous for its silk fabric, then India had a role as a maker and trader of cotton cloth. Indian fabric export to the archipelago is said to occur prior to the fifteenth century, but even more in that time and continued to move forward until the XVII[2] century (Reid, 2011).

In the trading, Indonesia and other Southeast Asia countries were not only as a passive party, but also actively participated. Proven by authority of Melaka, Aceh and Banten also sent envoys to India to order and buy the fabric according to taste. The forms of clothes at that time generally were the wrapped sarong. In addition, also used scarves placed over the chest, and the edges placed on the shoulders. Clothing was more complete with the incoming and the growing influence of Islam or Christianity, in the form of clothing or *kebaya*, as a complement of fabrics and scarf that already existed for women, and for the men provided clothes and cloth headband.

Were the people of the archipelago only as a consumer of those fabric? What people afforded not only as objects but instead became a subject in the cloth trade. It turned out that the local population also made and cloth trade. In XVI and XVII century, cotton fabrics used by the majority of the population of Southeast Asia (in Sumatra, first produced by Pasai, followed by Padang, Indrapura, even Java has been producing fabrics since the fifteenth century), the fabrics had been successfully exported to China and India. However, the fact that the fabric was generally consumed by the common people, while the upper class still used exclusive fabrics imported from China or India. Fabrics imported from both countries had vibrant colors with interesting patterns. Indian fabrics commonly used by poeple of autorithy centered power and rural elite (Reid, 2011). People chose cotton and silk become a very attractive alternative choice at that time. Thus, the presence of both types of fabrics enriched the taste of choice, and the "status" of urban residents who had a

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[2] In 1619 merchants from Masulipatam India could sale raw cotton cloth of a thousand scores (Leur, 2015: 94). According to Anthony Reid fashion style was retained, and developed to form a national fashion styles of today, (2011).

high "taste" of choice. The rapid improvement of the fabric in the XVII century also marked by increasing the good quality of the tools used, which was followed by the increasing expertise of the weavers, as well as their creativity. The trade was more intense with the presence of the Dutch trade organization in the archipelago that was Vereenigde Oost Indische Compagnie (VOC) in 1602. This organization enlivens the cloth trade by bringing fabrics from Europe to be traded here. (Portuguese had already been a pioneer in the cloth trade since the beginning of the sixteenth century with the conquest of Melaka in 1511). For the people of Southeast Asia[3], the fabrics were milling about at that time attracted their attention, because it was more varied than the local product, both varied in color and pattern. (Reid, 2011). Definately, this contributed to the taste of the local peopele, the emergence and development of a desire to emulate and to be famous as an aggresive fabric "connoisseur", furthermore, the producers diversified their products more affordable (Reid, 2011).

2. Palembang and Fabrics

As part of the world and regional trade, the Palembang became an integral part in the "arena" in the race for the fabric. Weather they were become high "taste" consumers or producers. The oldest evidence of the existence of fabrics used as clothing, was the clothing worn by the largest Buddhist statue found in Bukit Siguntang (now posted on Museum Sultan Mahmud Badaruddin II). Such a Smooth and transparent fashion, a very beautiful work ever existed in that time. As the oldest and the largest statue (nearly three meters high) remains of Buddhism from the era of Sriwijaya, show that clothing worn statues were very beautiful with very high manufacturing techniques. Further research is needed to find out more related to this Buddha statue, including the clothing he wore, for the ancient age of the statue.

The other important oldest evidences are the clothing / fabrics worn by three statues feaured Sriwijaya arts found in the temple complex Bumiayu at PALI District

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[3] Among the population of Southeast Asia at the time, then Palembang and Jambi known as the Southeast Sumatra in fact have the highest interest when compared to Java, the Maluku, Malaka and its surroundings (Andaya, 1989), which in the language of Anthony Reid is known by the term " The Malays "(Reid, 2011).

in South Sumatra (IX-XIII century). The three of them are the Mahadeva Shiva statue, statue Figure 1 and statue Figure 2.

Siva Mahadewa Statue   Statue Figure 1   Statue Figure 2

The three statues are worn clothes. Mahadeva Shiva statue was worn a long wrapped cloth around his waist and hung down to the ankle. Statue figure 1 is a statue of a woman with a remarkable art. This statue was worn a cloth until its ankle, and a vest with a very beautiful motif. The third statue wearing *uncal* placed in the center of the fabric. (Purwanti, 1996). Of the three fashion shows that in around centuries IX to XIII, was worn clothes from beautiful fabrics. This evidence was incredible, but how was it made? So far there is no evidence found to track the sustainability of fabrics that have been imposed since twelve centuries ago.

How about Palembang as part of Sriwijaya was well known for its a crowded port city, as the intersection of traders from the world. At the beginning, the same as other areas in the archipelago, Palembang also recognized and developed the fabric of bark fibers. The bark was used for fabric derived from several types of wood[4]. In addition, the people also developed a woven fabric with a simple tool. Furthermore, according to the times, the Palembang was also active in the fabric "competition" in the archipelago. The function of fabric penetrated into many areas of life. Every

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[4] This type of fabric is still being used, especially in the area *Uluan* until the nineteenth century, the technique used is the bark of wood and pounded until blended, to be good enough to be a fabric

important moment in life, such as birth celebration, circumcision ceremony, marriage ceremonial, designation of the sultan and his officials or empire, gifts, either to be given to delegates from other kingdoms (Nusantara or the world), the prize for the local elite (*Pasirah / depati* and *proatin* of *Uluan*) which *milir sebo*[5], fines pay, and also as a means of reconciling the warring factions. Fabrics were also given by the men to the women as a precious gift, which was a symbol of the bond that the two would soon be married. At the time of adversities such as death or the affected populations, the fabric becomes an integral part.

Similarly, in wartime, the fabrics had been "charged" with a prayer by an Islam leader or wise man, serves as a conduit force on an object wrapped in cloth or attached on it[6]. For example, when the war broke out between Palembang and VOC in 1659, in order to function properly and well Palembang cannons, then the cannon wraped with red[7]cloth. In Palembang people's belief at the time, that the fabric of "sacred" that would protect them in battle. (Andaya, 1989; Farida, 2012; Reid, 2011).

Long before the events above, Queen Sinuhun who was the wife of King Sido Ing Kenayan (1629-1636) made the fabric as "special bond" between the Queen as the giver and the *Kubu*[8]as a receiver. Since then, the *Kubu* community became part of the Palembang Kingdom, marked by the *Piagem* (charter) made of copper from

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[5] *Milir Sebo* was traveling from Palembang *Uluan* toward the capital as a center of government both during the kingdom and the Sultanate of Palembang. On arrival at the palace, their tribute and honor the Sultan will reply with gifts as a symbol of the close ties between the center and *Uluan* (ANRI, Bundles Palembang No. 47.6; No. 62.6; Stibbe, 1932)

[6] This tradition continues in Indonesia, can be seen from the young people who are members of various units (paramilitary) physical revolution era utilizing cloth or paper written and prayed by a leader of Islam. With this they defend the homeland more fiery. Until now, this tradition still exists in certain societies in Indonesia, generally people residing in rural areas (Interview with Ms. Maimunah, July 20, 2016).

[7] The red color of its own position, because the fabric of the wood is colored black. Thus, the red color has been the growing use shows their skills in weaving and dyeing

[8] *Kubu* is also called *Suku Anak Dalam* is a tribe that settled in various districts in South Sumatra (Bayung Lencir, Babat Toman District, Jatimulya District, Muara Lakitan, Rawas Ulu District, Rawas Ilir District, and the District of Bangka Hulu in Musi Rawas). Most of them are still nomaden, and gathering forest products, hunting and fishing. Most of them had worked as a farmer fields or chop wood. (Hidayah, 1996: 140).

the Queen Sinuhun for chief of *Kubu* tribe called Dipati[9]. This gift to be a sacred object to them and passed down from generation to generation. The effect of the provision was that they knew the fabric, and made the fabric as precious objects. The owner of the fabric meant that people who had a high social status. (Andaya, 1989). Based on that, it is clear that Palembang had became one of the important city when it became an integral part of the rampant trade of fabrics in the XVII century.

For the people of Palembang who glorify the fabrics as a symbol of status, fabric is apprciated well weather it is high-quality fabric or even abrasive fabric from Java, still regarded as a valuable treasure though. That is why, the import fabrics from different nationalities are more intense (European, Indian, Arabic, and Chinese). Palembangnesses are famous for their tough bargaining, and experts in assessing the quality of the fabric. Precious fabrics can be marked out of fashion, paintings contained in a piece of fabric.

The exciting of buying fabric is very high, and the lust slightly lower if the economy more sluggish, but quickly rise back if economy condition has improved. For example, at the beginning of the reign of Sultan Abdurakman (XVII century) pepper prices rose sharply up to four Real per bear, so the Sultan ordered *depati* in *Uluan* for comprehensive plant pepper (ANRI, Bundles Palembang No. 15.7; Andaya, 1989). The high price of pepper, bring in prosperity, then the spirit of buying cloth and fabric increasing.

In XVIII century Palembang economy was enhanced by the development of lead as a superior[10] product, so that the Sultanate of Palembang were in prosperity, and became one of the most important kingdoms at that time. Prosperity was positively correlated with the purchase of fabric clothes. The very prestigious fabrics at the time was fine fabrics, woven and silk, knitted with gold lace, gold cloth with fine threads, and Chintz soft, sheer fabric with gold and silk yarn, fabrics for silk

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[9] *Depati / Pasirah* is the head of *Marga* or clan in South Sumatra, while the clan is a combination of several villages. Initial formation for genealogical factors (ANRI, Bundles Palembang No. 62.2).

[10] According Stapel (1940) and the discovery of tin mining occurred at the beginning of the XVIII century on the island of Bangka. Sultan Mahmud Badaruddin I developed the production of tin to bring in many workers in mining which originated in China. Tremendous advantages as a result of tin mining gained.

Netherlands, for yellow fabric Kalikut and green smooth, fabrics for gold lace and chintz printed gold (Andaya, 1989). Various precious fabrics were being special products for the nobility at the time.

Over time, the daughters of the nobility of the Palembang Sultanate began to study and develop the skills of weaving. The products they resulted in the form of a sarong, headcloth (Arab fez with gold thread), *pelet* (prada). In addition, they also made clothes from European cotton with floral decoration. Palembang weavers were famous for their ablelity to produce a high quality product with a high taste. Their well known Embroidery products were *trawangan* embroidery, and hooked embroidery. Their products spread in Sumatra (Veth, 1869).

Dominance fabric in Palembang Sultanate can also be seen from the events of the resignation of Sultan Mahmud Badaruddin II to *Uluan* in 1812 after England reign under the command of Colonel Gielespie[11]. In order to win the hearts of his people, the Sultan gave a fabric (*pesalin*) in the form of clothing with all its attributes as a status symbol of a person or group. Sultan's coat of arms was given to the commanders who recently were sworn in by the Sultan, in order to form a government in *Uluan*. Meanwhile, his brother was named Prince Dipati who succeeded him as sultan of the Sultanate of Palembang was inaugurated in May 1812 with the title of Sultan Ahmad Najamuddin II. In the sacred event Sultan Ahmad Najamuddin wearing eminenced clothes, seated in a place covered with red bedspreads, and nearby there was a yellow silk umbrella (ANRI, Palembang Bundle No. 67; Woelders, 1975: 93; Java Gouvernement Gazette, July 4, 1812) , it was obviously that the fabric was very important in the Sultanate of Palembang.

Palembang as the city and the metropolis develop trade, made the cloth into something exclusive to developed and commercialized. In the ups and downs of the history of Palembang and South Sumatera, the fabric became as an integral part of experiencing the same thing. In difficult times under the control of colonialism and

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[11] Colonel Gillespie attacked Palembang Sultanate since Sultan Mahmud Badaruddin II refused to hand over the island of Bangka which was rich in tin, and put Palembang as a royal sovereign loose from the Netherlands and rejected the British presence that positions itself as being substitutes Netherlands with the signing of the Tuntang 18 September 1811 (ANRI, Bundles Palembang N0. 67; Java Gouvernement Gazette, May 2, 1812 No. 10)

war, it is difficult to develop the fabric as a reliable product. However, along with the more advanced and lackluster trading, and then took fabrics spread out, especially since the 1990s. The Palembangnese fabrics developed, until present days, Palembang becomes famous as the producer of the high quality fabrics especially Songket cloth, known as the "Queen of cloth".

3. Conclusion

Evidence shows that the existence of the fabrics in the capital city of Palembang and South Sumatra region was ancient aged. The oldest findings are cloth worn on the Buddha statue from Bukit Siguntang Sriwijaya in Palembang remnants of the past. The fabrics used by three statues from the temple area of Bumiayu also during the Sriwijaya kingdom (IX-XIII century). Both the evidencec indicate that the fabric has a very long well known by the people.

At the beginning of its existency the fbarics, it was only a linen cloth and shawl to cover the body, growing with additional loops in the chest. Furthermore it became the form of an outfit like Kebaya. The functions are very diverse in the form of cloth fabric, such as a symbol of one's status. The better of the quality, variety of shapes, patterns and colors, and the numbers of fabrics owned, the higher of "high status" of a person who owns and wears it. So it was natural if the beautiful and nice fabrics are only owned by nobility. Fabrics also became a symbol of the bond between the rulers and the people, between the youth and their lovers. Fabrics also serves as a medium of exchange, a gift that is highly coveted by the recipient, fines pay, media peace for the warring parties, as well as fabrics are precious objects that can be inherited. Thus, regarding to its natural history particularly in Palembang and South Sumatra the fabrics are generally very highly praised, and the spirit of developing the fabrics kept preserved until now.

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RECOGNIZING ETHNOMATHEMATICS IN *WAU* KITE AND *CORAK-RAGI* OF *TENUNMELAYU* FROM KEPULAUAN RIAU PROVINCE AND USING ITS POTENTIALS TOWARDS LEARNING OF SCHOOL MATHEMATICS

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Abstract

Ethnomathematics proposes the idea of mathematics that develops informally in cultural aspects of human's life.Mathematics is utilized through some daily activities such as grouping, counting, measuring, designing, playing, locating, etc. For specific group of people, mathematical activities can uniquely exist and develop. Hence, ethnomathematics can obviously be subject to diversity since it relies on culture of specific groups. The idea of ethnomathematics is promising to learning practice of school mathematics for at least two reasons. First, it can provide the context of learning which is undeniably familiar for learners living in specific area. Second, it enables the reinvention of relevant mathematical concepts which are already arranged formally in school curriculum. Kepulauan Riau province, one of provinces in Indonesia, has rich *melayu* culture that spreads across the entire islands. *Wau* kite and *tenun melayu*are the examples of many cultural items originating from Kepulauan Riau province. The making of *Wau* kite utilizes mathematical activity and precision to ensure the kite is fully functioning to be played and flown. *Tenun melayu* displays beautifully arranged geometrical patterns called *corak-ragi* that are created by particular technique that involves mathematics. This ethnography based qualitative study discovers the ethnomathematics behind the creating of *Wau* kiteand*corak-ragi*of*tenun melayu*. The data is obtained through interview andliterature study. Both data are triangulated to get a fuller information. The analysis is qualitatively described to deliver attention to two main analysis: etnomathematics domain analysis and ethnomathematics taxonomy analysis on *Wau* kiteand*corak-ragi* of*tenun melayu*. The study indicates that creating of *Wau* kite heavily utilizes the length measurement which is a basic topic in school mathematics. Modelling of linear function-equation are other topics that can be reinvented. The creating of*corak*of*tenun melayu* and its variety applies the technique which is familiar to relevant mathematics topic in school such as transformation geometry (reflection, translation, rotation, and dilation). Other relevant concepts are symmetry, and transformation composition.

Keywords: Ethnomathematics, corak-ragi of tenun melayu, wau kite, mathematics learning context

1. Introduction

Culture is constructed by group of society, developed, and inherited to their younger members. It includes set of rules, ideas, concepts, and values related to the way of life including beliefs, policies, economy, language, creation, social organization, and customs. Culture is various all over the world. It entails that the way people conduct the aforementioned aspects of culture is different each other. Hence, this also implies that the daily practices or activities of a society will be different to one and another. Apparently, in every aspect of culture, daily activities can explicitly and implicitly contains mathematical activities. It becomes the sources of the informal mathematics which grows and develops in society. Those activities includes counting, localizing, grouping, explaining, measuring, playing, and designing. Mathematical practice undertaken by group of people such as society is generally known as ethnomathematics. The activity categorization is apparently called ethnomathematics domain.

However, many people in society are not aware of such mathematics-related intellectuality they perceive from daily activity.In fact, in separate occasion, they define mathematics as ready-made tool gained while having formal education in school and it is taught unconnectedly to their life. Hence, mathematics is considered as difficult and meaningless subject to learn.

Knowing the potential of this ethnomathematics, new paradigm flourishes the idea that school mathematics should be taught by using everyday life context that is familiar to the students in order to obtain meaningful study. Hence, the exploration of mathematical practices in culture of group of people is continuously executed to find hidden potential daily context for school mathematics. It enables correspondence of real life mathematics with mathematical concepts that are taught at school. Also, it gives information how to teach mathematics by reinvention.

This study tries to uncover the mathematical activities conducted by group of people in Kepulauan Riau province. This province has rich *melayu* culture and has bunch of cultural products to explore. Two famous attributes of this *melayu* culture concerned are: *Wau* kite and *corak-ragi* of *tenun melayu*. In this study, the analysis on ethnomathematics domain and taxonomy are conducted. These will give the

information on what school mathematics concepts that can be corresponded to the one growing up in society. Hence, this information will bring the idea of how to deliver those explored concepts in mathematics teaching and learning at school.

2. Theoretical Background

a. Perspectives on Culture

The basic concept of this study is culture. Generally, people will relate culture with everyday life termsin society,like customs and traditions. However, culture is more complicated than only those two. There are many ways to define culture. It can be approached by many perspectives. For example, culture is defined as a system consisting of ideas and concepts as results of human's activity that has pattern (Koetjaraningrat, 2000). Meanwhile, Matsumoto (in Spencer-Oatey, 2012) defines culture as the set of attitudes, values, beliefs, and behaviors shared by group of people, but different for each individual, communicated from one generation to the next.In the same line of that definition but more elaborated one, Spencer-Oatey (2008) entails culture as a set of basic assumptions and values, orientations to life, beliefs, policies, procedures and behavioral conventions that are shared by group of people, and that influence (but do not determine) each member's behavior and his/her interpretations of the meaning of other people's behavior (Spencer-Oatey, 2008).

From these solid aforementioned definitions, we can perceive that culture is constructed and developed within society. This is in line with the theory that classifies a culture into several defining attributes or characteristics. One of them is culture as an individual and social construct (Spencer-Oatey, 2012). This value and rule is spread within cultural society that makes them possible (not necessarily should) to affect people's way of life and how they interpret the way of others'.For instance, in some societies, parents teach their children how to conduct their life according to culture of the society they are living in. The values are inherited to the younger members of the society that make the culture last longer and survive. It implies that a culture can be inherited. It is another defining attribute of a culture.

Culture is also subject to diversity. For example, western culture, is a way much different with eastern culture. The culture of the eastern, for example, is transcendental kind of one. Zainal (in Malik, 2004) stated that Eastern culture is created as manifestation of relationship of human and God.

To identify a particular culture, one should understand the components that build up the culture itself. There are seven components of culture. They are social organization, customs and traditions, religion, language, arts and literature, form of government, and economic system. These components can be different with those in other cultures. This study more focuses on the component of arts and traditions.

b.   Mathematics and Society

It is believed that every people, group of people, societies all over the world face the difficulty and confront with challenge in their live. This is when people try to maintain and to solve the problem with their thought and strategy. Mathematics is believed as something people from any culture grow and develop while such difficult situation or challenging condition coming into their aspects of life. This is undeniable that people growing mathematics means people growing knowledge. Since knowledge as Tyler (in Spencer-Oatey, 2012) defined, is part of culture of society, it can be concluded that mathematics becomes part of culture, part of society.

However, even though mathematics is considered the best practice people conduct while facing challenge in everyday case, it is not guaranteed that people really realize that what they have done is mathematics. For example, a creator of *Wau* kite in Kepulauan Riau province is not aware that what he does is mathematics while designing the measure of frame of kite in order to fly high and to be better played. At least one following theory explains this situation. Mathematics pervades our everyday lives, sometimes obviously and sometimeson a more hidden or implicit level(François & Van Kerkhove, 2010). It suggests us that implicity of mathematics in life practice can affect people's acquisition of mathematics existence in their life.

Moreover, whenever people in society hear the word mathematics, they directly correspond it to the one the students learn in school, something formal only gained by doing study in certain level of education. Somehow, school mathematics is also taught without everyday context so that it remains meaningless. In another

context, mathematics is still considered as the tool to solve practical problems only in science practice, so that people ignore that mathematics is part of their everyday activity (Soedjadi, 2010).All of these findings accumulate to make one general social judgments towards Mathematics that it is difficult subject.

Hence, it is truly required that people realize that mathematics is part of their life. One idea needs to be planted in society about Mathematics. Certain effort needs to be undertaken to educate people that mathematics is a construction of human's culture (Sembiring in Parbowo, 2010), something theirs.

c.   Ethnomathematics

The concept of mathematics that grows and develops in human's culture is widely known as ethnomathematics. D'Ambrosio (Rosa & Orey, 2011) defined ethnomathematics based on pieces of word that build up the term itself as follow

> The prefix *ethno* is today accepted as a very broad term that refers to the socialculturalcontext and therefore includes language, jargon, and codes of behavior, myths, and symbols. The derivation of *mathema* is difficult, but tends to mean to explain, to know to understand, and to do activities such as ciphering,measuring, classifying, inferring, and modeling. The suffix *tics* is derived from*techné*, and has the same root as technique (p. 81).

From the meaning of these words, the definition of ethnomathematics is derived by D'Ambrosio who was apparently the person that proposed the idea of ethnomathematics itself. He defined ethnomathematics as the mathematics practiced by cultural groups, such as urban and rural com-munities, groups of workers, professional classes, children in a given age group, indigenous societies, and so many other groups that are identified by the objectives and traditions common to these groups (D'Ambrosio, 2006).

The important aspect underlying ethnomathematics is the idea of mathematical practice that is conducted by group of people. In order to make mathematical practice well defined, categorization of practice should be derived. Bishop (Wedege, 2010)identified six types of mathematical practice or activity as follow

- *Counting*, the activity that includes the use of a systematics way to compare and order discrete phenomena.

- *Localizing*, the activity that includes exploring one's spatial environment, conceptualizing, and symbolizing that environment, with models, diagrams, drawings, words or other means.

- *Measuring*, the activity that includesquantifying qualities for the purposes of comparison and ordering, using objects or tokens as measuring devices with associated units or 'measure-words'.

- *Designing,* the activity that includes creating a shape or design for an object or for any part of one's spatial environment.

- *Playing*,the activity that includes devising and engaging in games and pastimes playing by rules with more or less formalized rules that all players must abide by.

- *Explaining,* the activity that includes finding ways to account for the existence of phenomena, be they religious, animistic or scientific.

Based on this explanation, several thoughts can be drawn. First, it can be concluded that theconcept of ethnomathematics signals that mathematics is not a ready-made product that is unconnected and at distant from human's life. It is indeed part of human's activity and people in society must realize it. Second, it implies that culture in several locations or areas does reflect the intellectuality of their people. This intellectuality should be well discovered. Third, ethnomathematics is promising for education, especially mathematics teaching and learning.Therefore, the exploration of mathematics that grows including its component in society through their culture becomes crucial.

d.   Ethnomathematics and School Mathematics

The concept of ethnomathematics is promising to mathematics education. First, this thought is supported by National Council of Teacher of Mathematics (NCTM, 1991) which highlighted the importance of building connections between mathematics and students'personal lives and cultures. Second, it is argued that mathematics education is nested in a socio-cultural context (François & Van

Kerkhove, 2010). Ethnomathematics provides the information of mathematical practices which are undertaken by the people of the society with particular culture. Since students are the member of society and they learn mathematics at school, it is wise to think that ethnomathematics can be regarded as worthwhile contributor to the development of mathematics education, especially in teaching and learning mathematics.

Furthermore, there is a solid argument on why ethnomathematics can help the development of mathematics through the education curriculum. Ethnomathematics presents mathematical concepts of the school curriculum in a way in which these concepts are related to the students' cultural and daily experiences, thereby enhancing their abilities to elaborate meaningful connections and deepening their understanding of mathematics(Rosa & Orey, 2011).

It is believed that ethnomathematics will be able to replace the old paradigm that entails the display of learning mathematics at school which is brought formally, less connected to students' real life experiences, and less meaningful.It is supported by Gravemeijer (2010) who suggests that learning will proceed better if students are taught from informal level in which they are familiar with in their everyday life experience.

e.   *Wau* Kite and *Corak* of *Tenun Melayu* as Products of Culture in Kepulauan Riau Province

Kepulauan Riau province is one the youngest province in Indonesia. The area of the province consists of mainly 96% waters and several bigger and smaller islands. It has about 8,202 km^2 territory in total. It consists of seven districts: *Kabupaten*Bintan, Tanjungpinang city, Batam city, *Kabupaten* Lingga, *Kabupaten* Karimun, *Kabupaten* Anambas, and *Kabupaten* Natuna. It is surrounded by Malaysia, Singapore, and Riau province. It has around 1.7 million people and about 40% of them are *Melayu* people. Language being used in everyday life is *melayu* language, or *melayu*-dialected Indonesia language. Those local people spread in entire seven districts on the islands.

Kepulauan Riau province has rich *melayu* culture. The people are mostly known as the art creators as well as poets and artists. Beside the famous *melayu*

poetry and *Gurindam* 12 of Raja Ali Haji, there so many products of *melayu* culture such as *corak* or patternof *melayu* that can be found in *tenun*, building ornaments, and other media. Some famous *corak-ragi*of *melayu* are *itik pulang petang, pucuk rebung,* and *pucuk puteri*. Each *corak* has meaning that entails value grown and inherited within *melayu* society. Each *corak* can be used to create special extended patterns that apparently uses technique which shows up mathematical skill of local people. Another famous cultural stuff is *Wau* kite. This traditional game is frequently played in Kepulauan Riau province. There is also local competition of kite that is held annually. Talking about kite, Kabupaten Lingga stands out among others. It is the most famous house to see beautiful kite called *Wau* played and flown. Apparently, the locals use mathematics to gain precision in building up the frame of kite while creating it.

3. Method

The purpose of the study is to get information, and to identifyethnomathematics of people in Kepulauan Riau province in the making of *Wau* kiteand *corak* of *tenun melayu*. The appropriate approach to gain the purpose of this study is ethnography. Spradley (in Tandililing, 2012) entails that ethnography is used to describe, to explain, and to analyze the component of culture of particular society. This approach is one of those many that is used in broad qualitative study and consists of common several stages including determining informant(s), conducting interview, documenting, posing descriptive and structural questions, analyzing interview, constructing domain analysis, conducting taxonomy analysis, and reporting.

The objects of the study are *corak-ragi* of *tenun melayu* and *Wau* kite which originate from Kepulauan Riau province. In this study, researcher is the main instrument of the study that takes control several aspects of the study including determining the informants or subject of the study, undertaking the data collection, triangulating the data, and interpreting the result based on the purpose of the study. Since the study is addressed to get information of ethnomathematics on the objects of

the research, then the purposive approach bases the subject determination or informant.

Kabupaten Lingga, one of the seven districts of Kepulauan Riau province, located in one of the Islands that spreads around 211,772 km^2, is one of the house of the famous handmade *Wau* kite. One of local people in Kabupaten Lingga is chosen as the main informant, locally called *Andak Sadat*. He is the person who masters the making of local *Wau* kite as well as playing it in local competition. In 2014, he won the annual kite competition in Kabupaten Lingga. He is pure *melayu* person that speaks heavy *melayu* dialect. Hence, one translator, which is also coming from Lingga, is hired to help the researcher understand the language being used while the informant is interviewed. The information obtained is not only about the making of *Wau* kite, but also about*corak-ragi* of*melayu*, those which are also found in *tenun melayu*, since those patterns are apparently found to be drawn on the body of the kite. Another instrument used while interviewing the informant was field notes. In addition, during the session, the informant made notes and drew picture on the paper while explaining *Wau* kite making. This note is used as another written data to analyze.

While interview is the main data collection method, literature study is undertaken to obtaininformation that mainly focuses on *corak-ragi* of *tenun melayu*and *Wau* kitein Kepulauan Riau province. This written data is triangulated with those obtained through interview to get deeper and fuller information for the purpose of the study. The data obtained in this study is analyzed and qualitatively described to display the ethnomathematics on the making of *Wau* kite and *corak-ragi*of *tenun melayu*.

The main result of the analysis is led and is centered on two important aspects: ethnomathematics domain analysis and ethnomachematics taxonomy analysis (Ubayanti, 2016). Ethnomathematics domain analysis aims to get broad description from research objects followed by categorization of data and domain determination including activity of: counting, measuring, designing, localising, playing, and explaining. Meanwhile, ethnomathematics taxonomy analysis is undertaken by elaborating the domains previously determined and chosen into

specific details based on mathematical concepts within the making of *Wau* kite and *corak-ragi* of *tenun melayu*. Those mathematical concepts will be corresponded to those included in school mathematics curriculum that are recently applied in Indonesia, namely 2013 curriculum.

4. Result and Discussion

a. Ethnomathematics on the Making of *Wau* Kite and Its Connection to School Mathematics Concepts

The basic component used to make *Wau* kite is bamboo for kite's frame, paper, and thread. The framing is the most important part of all process. There are five bamboo sticks used in framing (see figure 1, left part). The pair of parallel bamboo sticks that have same length are called *kepak* or sticks to create wings (upper and lower both later curved). Stick in the middle perpendicular to *kepak* is called *tiang* or pole. The forth stick is called *ekor* or tail.
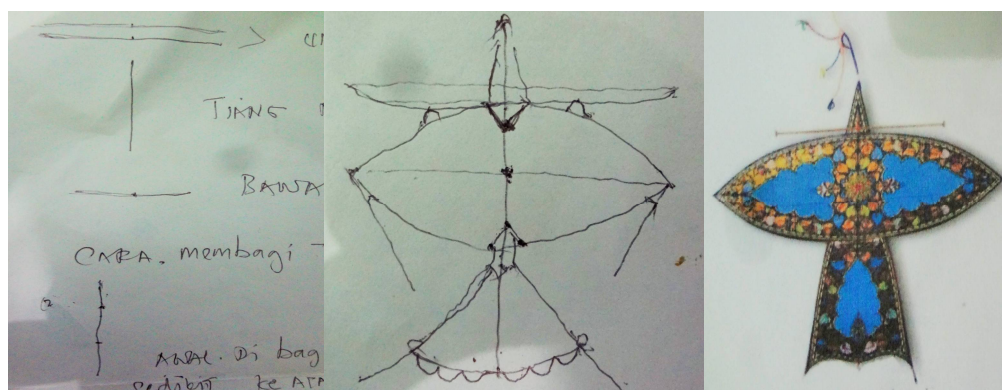
Figure 1. *Andak Sadat's* initial written strategy to measure frames (left) and Wau sketch (middle), one of the picture of ready-played kite (right)

Based on *Andak Sadat's* estimation, pole stick is divided into three equal parts resulting two points (suppose upper and lower point respectively to the picture) in between. Suppose 1 m pole, after divided three equal parts, the upper wing is

bonded with thread to pole perpendicularly at exactly two fingers above the upper point. On the other hand, the lower wing is bonded with thread to pole perpendicularly at exactly one finger below the lower point. The tips of both wings are joined so that both wings make elliptical figure (see figure 1). The upper segment of pole is shortened by cutting it exactly 1 inch. This upper segment is called head.This practice entails three main mathematics topics/concepts: number (see table 2, T1), length measurement and its measure, both standardized and non-standardized like finger, inch (see table 2, T2-T7).

Tail stick is exactly half of the length of wing stick.It is bonded around the tip of the lower segment of pole and perpendicular to it. Meanwhile around the head near the upper wing another stick is bonded perpendicular to pole as the holder of *pakau*. *Pakau* is made equal with pole on length to make it produce high pitched and better sound while flown. It entails the relationship of the length between wings (W) and tail (T), *pakau* (Pa) and pole (Po). This kind of relationship can be modelled into formal mathematics expression $T = \frac{1}{2}W$ and $Pa = Po$. This equation in school is known as linear function (see table 2, T9, T10).This precision on length measurement ensures the *Wau* kite can be flown better. Besides, the precision also causes balance to the kite. Another reason for this balance is the symmetrical form within the frame of the kite's body (see table 4, T1).

Beside *Andak Sadat's* way of framing, it is also found that other Lingga people use more complicated framing to obtain precision in length measurement (see figure 2). From that delicate way of framing, it can be obviously seen that every two sticks (or pair) has "length" relationship. It is similar to that used by *Andak Sadat*. This connection supports mathematical modelling which is linear function (see table 2, T9, T10).
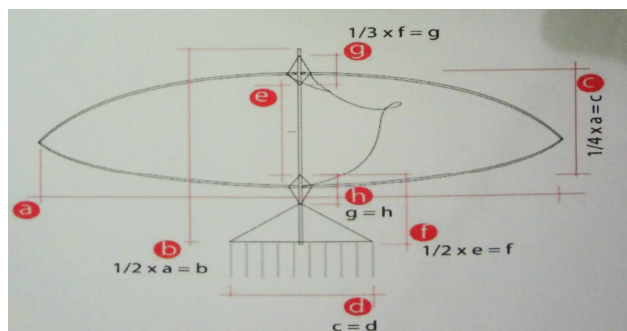
Figure 2. Another strategy for the measure of Kite's frame (source: Batam Pos 2016)

From this linear function idea, it can be derived the idea of two variable linear equation. For example $\frac{1}{2}a = b$ can be expressed into $\frac{1}{2}a - b = 0$. Consider this possible strategy within framing (if other case) "difference between wing and tail is 30 cm", then it can simply implies $W - T = 30$. Later, in the advanced case, this two variable linear equation can bring the idea of value of variables within linear equation (see table 2, T10).

Ethnomathematics domain analysis and ethnomathematics taxonomy analysis for the making of *Wau* kite are presented in the following tables

Table 1. Ethnomathematics domain analysis in the making of *Wau* kite

Domain	Related to	Mathematics idea/activity in the making of *Wau* kite
Counting	-how many (components) -how longer (ordering)	- Determining the number of bamboo stick used to make kite's frame. - Determining the number of segment of a stick - Determining the length relationship between each stick, for example, wing's length is twice of tail's
Localizing	Not explored	Not explored
Measuring	- **how long (quantifying and ordering)**	- **Determining the length of sticks and its segments both in standardized and non-standardized measure**
Designing	- **how to (technique)**	- **Desiging the kite's frame/basic shape** - **Precision obtained from symmetrical form of kite**
Playing	Not explored	Not explored
Explaining	Not explored	Not explored

Table 2. Ethnomathematics taxonomy analysis in the making of *Wau* kite

Code	Mathematical Activity	Associated Topics and Concepts	Kompetensi Inti (Core Competency)	Kompetensi Dasar (Basic Competence)	Education Level
1	-Determining the number of bamboo stick used to make kite's frame. - Determining the number of segment of a stick - Determining the length relationship between each stick, for example, wing's length is twice of tail's	Number - Natural Number	*Memahami pengetahuan faktual dengan cara mengamati [mendengar, melihat, membaca] dan menanya berdasarkan rasa ingin tahu tentang dirinya, makhluk ciptaan Tuhan dan kegiatannya, dan benda-benda yang dijumpainya di rumah dan di sekolah*	*Mengenal bilangan asli sampai 99 dengan menggunakan benda-benda yang ada di sekitar rumah, sekolah, atau tempat bermain*	**Elementary (first grade)**
2	Determining the length of sticks and its segments both in standardized and non-standardized measure	Geometry and Measurement - Comparing the length	*Memahami pengetahuan faktual dengan cara mengamati [mendengar, melihat, membaca] dan menanya berdasarkan rasa ingin tahu tentang dirinya, makhluk ciptaan Tuhan dan kegiatannya, dan benda-benda yang dijumpainya di rumah dan di sekolah*	*Membandingkan dengan memperkirakan panjang suatu benda menggunakan istilah sehari-hari (lebih panjang, lebih pendek)*	**Elementary (first grade)**
3	Determining the length of sticks and its segments both in standardized and non-standardized measure	Geometry and Measurement - Understanding the length through comparison		*Mengenal panjang, luas, massa, kapasitas, waktu, dan suhu*	
4	Determining the length of sticks and its segments both in standardized and non-standardized measure	Geometry and Measurement - Knowing the length by standardized and non-standardized measure	*Memahami pengetahuan faktual dengan cara mengamati [mendengar, melihat, membaca] dan menanya berdasarkan rasa ingin tahu tentang dirinya, makhluk ciptaan Tuhan dan kegiatannya, dan benda-benda yang dijumpainya di rumah dan di sekolah*	*Mengetahui ukuran panjang dan berat benda, jarak suatu tempat di kehidupan sehari-hari di rumah, sekolah dan tempat bermain mengunakan satuan tidak baku dan satuan baku*	**Elementary (second grade)**
5	Determining the length of sticks and its segments both	Geometry and Measurement - Conversing the length	*Memahami pengetahuan faktual dengan cara mengamati [mendengar, melihat, membaca] dan*	*Mengenal hubungan antar satuan waktu, antar satuan panjang, dan antar*	**Elementary (third grade)**

	in standardized and non-standardized measure	measure within standardized and non-standardized measure	*menanya berdasarkan rasa ingin tahu tentang dirinya, makhluk ciptaan Tuhan dan kegiatannya, dan benda-benda yang dijumpainya di rumah dan di sekolah*	*satuan berat yang biasa digunakan dalam kehidupan sehari-hari*	
6	Determining the length of sticks and its segments both in standardized and non-standardized measure	Geometry and Measurement - Estimating the length with standardized measure	*Menyajikan pengetahuan faktual dalam bahasa yang jelas, sistematis dan logis, dalam karya yang estetis, dalam gerakan yang mencerminkan anak sehat, dan dalam tindakan yang mencerminkan perilaku anak beriman dan berakhlak mulia*	*Menaksir panjang, luas, dan berat suatu benda dan memilih satuan baku yang sesuai*	
7	Determining the length of sticks and its segments both in standardized and non-standardized measure	Geometry and Measurement - Measuring the length with standardized and non-standardized measure		*Memperkirakan dan mengukur panjang, keliling, luas, kapasitas, massa, waktu, dan suhu menggunakan satuan baku dan tidak baku*	
8	Determining the length relationship between each stick, for example, wing's length is twice of tail's	Algebra - Two variable linear equation - Variable and its value	*Memahami dan menerapkan pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya terkait fenomena dan kejadian tampak mata*	*Menentukan nilai variabel persamaan linear dua variabel dalam konteks nyata*	**Junior High School (eight grade)**
9	Determining the length relationship between each stick, for example, wing's length is twice of tail's	Algebra - Relation - Function and Its formula		*Menyajikan fungsi dalam berbagai bentuk relasi, pasangan berurut, rumus fungsi, tabel, grafik, dan diagram*	
10	Determining the length relationship between each stick, for example, wing's length is twice of tail's	Algebra - Definition of model - Solution of equation	*Mengolah, menyaji, dan menalar dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai dengan yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori*	*Membuat dan menyelesaikan model matematika dari masalah nyata yang berkaitan dengan persamaan linear dua variabel*	

b. Ethnomathematics within *Corak-Ragi* of *Tenun Melayu*and Its Connection to School Mathematics Concepts

There are two local terms for patterns attached to several object like *tenun* (*melayu*traditional cloth), building ornaments, etc: *corak* and *ragi*. *Corak* refers to basic pattern or unit/single pattern. If *corak* is expanded on the surface of *tenun*, with particular technique, repeating for example, there will be new pattern or design. This design is locally called *ragi*. Many *corak* and *ragi* can be established to meet the various functionality of wear.

Figure 3. Corak of *itik pulang petang* with reflection technique (left), extended pattern from *corak* of *pucuk rebung* with translation and reflection technique (middle), and extended pattern from *corak* of *pucuk puteri* with rotation, translation, and reflection technique (right)

Several famous *corak* of *tenun melayu* are: *itik pulang petang, pucuk rebung*, and *pucuk puteri* (see figure 3). All *corak* and *ragi* have special value and meaning on several aspect of *melayu* society life such as religion, customs, tradition, social, etc. *Itik pulang petang* is one example of *corak* included in animal group. It implies the value of love, affection, and kindness. *Pucuk rebung* is an example of plant *corak*. The picture in the middle is *ragi*, called *pucuk rebung kaluk paku,* consisting of several identical *corak* of *pucuk rebung*. It entails the value of being kind, being helpful to others who are in difficult situation. *Pucuk puteri* is another plant *corak*. On the right side of the picture is the *ragi* called *kuntum bersusun*. The value implied is the significant of belief in life, life in harmony and peace.
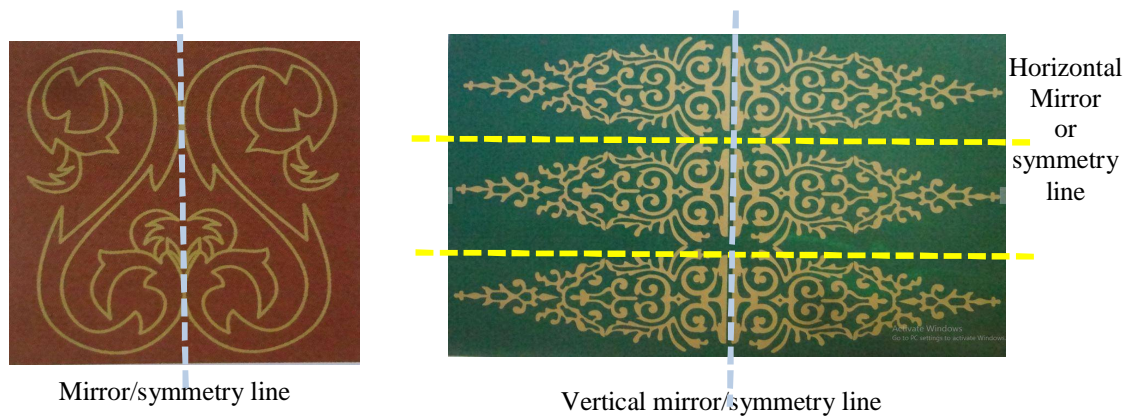
Figure 4. Reflection technique found in *corak* and *ragi*

Apparently, reflection technique is applied not only when creating *corak* but also when constructing *ragi*. *Itik pulang petang* is *corak* constructed by reflection. *Pucuk rebung kaluk paku* is design created by reflecting *pucuk rebung corak* as many as creator wants. The reflection can be done vertically or horizontally. The creator also use technique to derive precision of design. Something similar to mirror or symmetry line. Therefore, it can be concluded that creating *corak* and *ragi* applies technique that includes mathematics, especially related to topics: number (see table 2, T1), reflection, and line symmetry in school (see table 4, T1).
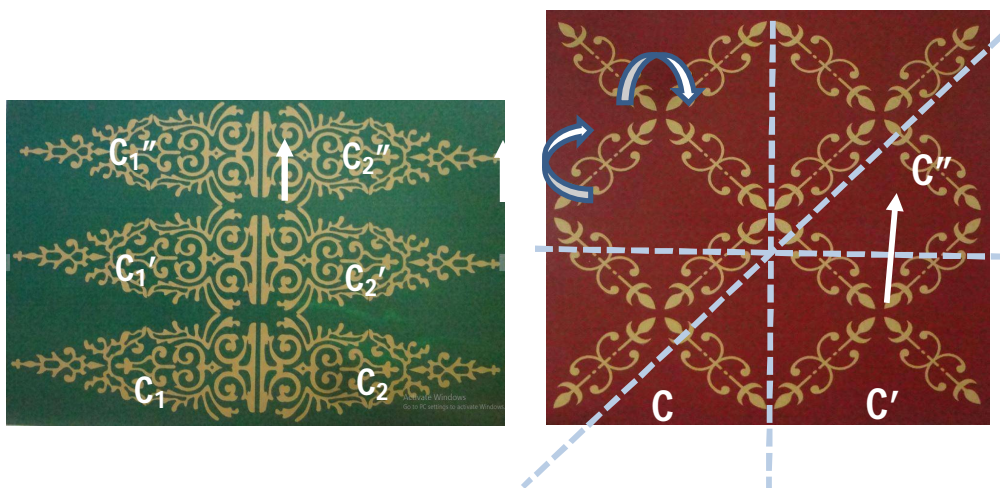
Figure 5. Translation of *pucuk rebungcorak* to derive *ragi* (left), many ways of doing transformations to derive *ragi* (right)

Ragi of *pucuk rebung kaluk paku*(figure 5, left) is apparently constructed by sliding basic *corak* of *pucuk rebung* in particular direction as many as creator wants.

This sliding technique is known mathematically as translation. Meanwhile, *kuntum bersusun* (figure 5, right) can be constructed with more than one geometrical technique: rotating *pucuk puteri corak* at exactly 90 degrees either clockwise or counterclockwise. Then, reflection and translation can be undertaken to expand the design. The process can also be approached by other order of transformations. Therefore, it can be concluded that creating *pucuk rebung kaluk paku* and *kuntum bersusun*includes mathematics, especially related to topics: transformation and transformation composition (see table 4, T2-T5).

Ethnomathematics domain analysis and ethnomathematics taxonomy analysis for the making of *corak-ragi of tenun melayu*are presented in the following tables

Table 3. Ethnomathematics domain analysis in the making of *corak-ragi* of *tenun melayu*

Domain	Related to	Mathematics idea/activity in the making of Wau kite
Counting	- how many (repetition of *corak*)	- Determining the number of *corak* within pattern - Determining the number of part contained in *corak*
Localizing	Not explored	Not explored
Measuring	- **how much expanded**	- **Determining the area on tenun to be attached with *corak* and *ragi***
Designing	- **how to (technique)**	- **Designing *corak* with specific geometrical technique (transformation, symmetry)** - **Infinite exploration on *ragi* based on creativity by applying geometrical technique (transformation, symmetry)**
Playing	Not explored	Not explored
Explaining	Not explored	Not explored

Table 2. Ethnomathematics taxonomy analysis in the making of *corak-tenun* of

tenun melayu

Code	Mathematical Activity	Associated Topics and Concepts	*Kompetensi Inti* (Core Competency)	*Kompetensi Dasar* (Basic Competence)	Education Level
1	Designing *corak* with specific geometrical technique (transformation, symmetry)	Geometry - The notion of ymmetry - Rotation - Reflection	*Memahami pengetahuan faktual dengan cara mengamati [mendengar, melihat, membaca] dan menanya berdasarkan rasa ingin tahu tentang dirinya, makhluk ciptaan Tuhan dan kegiatannya, dan benda-benda yang dijumpainya di rumah dan di sekolah*	*Menemukan sifat simetri bangun datar (melalui kegiatan menggunting dan melipat atau cara lainnya), simetri putar dan pencerminan menggunakan benda-benda konkrit*	Elementary (third grade)
2	Infinite exploration on *ragi* based on creativity by applying geometrical technique (transformation, symmetry)	Geometry - Finding the image of reflection and rotation	*Menyajikan pengetahuan faktual dalam bahasa yang jelas, sistematis dan logis, dalam karya yang estetis, dalam gerakan yang mencerminkan anak sehat, dan dalam tindakan yang mencerminkan perilaku anak beriman dan berakhlak mulia*	*Menunjukkan hasil rotasi dan pencerminan suatu bangun datar dengan menggunakan gambar*	
3	Infinite exploration on *ragi* based on creativity by applying geometrical technique (transformation, symmetry)	Geometry - Transformation of geomterical objects	*Memahami pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya terkait fenomena dan kejadian tampak mata*	*Memahami konsep transformasi (dilatasi, translasi, pencerminan, rotasi) menggunakan objek-objek geometri*	Junior High School (seventh grade)
4	Infinite exploration on *ragi* based on creativity by applying geometrical technique (transformation, symmetry)	Geometry - Solving transformation problem by using transformation principles	*Mencoba, mengolah, dan menyaji dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai dengan yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori*	*Menerapkan prinsip-prinsip transformasi (dilatasi, translasi, pencerminan, rotasi) dalam memecahkan permasalahan nyata*	
5	Infinite exploration on *ragi* based on	Geometry - Analysing	*Mengolah, menalar, dan menyaji dalam ranah konkret dan ranah abstrak*	*Menyajikan objek kontekstual, menganalisis informasi*	Senior High School

creativity by applying geometrical technique (transformation, symmetry)	and solving transformation daily problem -Transformation composition	*terkait dengan pengembangan dari yang dipelajarinya di sekolah secara mandiri, bertindak secara efektif dan kreatif, serta mampu menggunakan metoda sesuai kaidah keilmuan.*	*terkait sifat-sifat objek dan menerapkan aturan transformasi geometri (refleksi, translasi, dilatasi, dan rotasi) dalam memecahkan masalah.*	(eleventh grade)

c. Utilizing Ethnomathematics of *Wau* Kite and *Cora*k of *Tenun Melayu* in Mathematics Teaching and Learning

Based on this exploration, it can be suggested that *Wau* kite and *corak-ragi* of *tenun melayu* can be brought into mathematical classroom teaching and learning since both of them contain mathematical concepts. Hence, both of them can be regarded as the contexts of learning. The use of *Wau* kite can deliver students to daily concept of length measurement including measuring by local or standardized measure; building up understanding of length relationship between two or more components;and constructing mathematical model of linear function and two variable linear equation. Meanwhile, the investigation of pattern of *tenun melayu* can bring the idea of geometrical concepts: symmetry, transformation, and transformation composition. The use of both contexts is believed to support students' understanding of those focused concepts. These contexts can also be delivered as the problem to be solved, namely contextual problem. Treffers (in Cici, 2014) explained that the contextual problem is used to give meaning to the mathematical learning and become the milestone for students to build the mathematical concepts. Additionally, getting to know mathematics does involve much concrete experience and grounding in its central (Bentley and Malven in Mashingaidze, 2012).

Moreover, those contexts can bring the idea of guided reinvention through sequence of learning process or learning trajectory. Gravemeijer and Doorman (1999) explained that the idea of guided reinvention is to allow learners to come to regard the knowledge that they acquire as their own private knowledge, knowledge for which they themselves are responsible. In *Wau* kite case, students can reinvent the idea of function through mathematical modelling process. Consider the following problem they might find during the process, "the length of tail is half of the length of

wing". The statement can be translated into equation at first, $tail = \frac{1}{2}wing$. By translating those terms into variables, then student might obtain $t = \frac{1}{2}w$. Hence, this last expression can be understood as function, as relation.

In *tenun melayu* case, students might reinvent the idea of transformation through the understanding of geometrical movement of object on plane. They might develop the idea of reference point, reference line (symmetry line), angle, and direction. This exploration on *corak-ragi* of *tenun melayu* can bring the idea of coordinate of points in Cartesian system on plane and its image under certain transformation applied. The discussion can slightly shift from visual to algebraic way. Later, students might develop formal transformation as the function which maps every points on a plane, notated as $f: R^2 \rightarrow R^2$. Moreover, they might reinvent the idea of isometry which implies transformation that results the same shape and size of object being transformed. Formally, an isometry is defined to be function $f: R^2 \rightarrow R^2$ that preserves distance; that is $|f(P_1)f(P_2)| = |P_1 P_2|$ for any point $P_1, P_2 \in R^2$ (Stillwell, 2005).

5. Conclusion and Remarks

Through the result of the study, it is considerable that ethnomathematics can be found in *Wau* kite and *corak-ragi* of *tenun melayu* in Kepulauan Riau province. Mathematical activities or strategies are executed while people creating those two *melayu* cultural stuffs. The main clear domains explored are: counting, measuring, and designing. Of those three domains, some mathematical concepts that can be associated with those taught in school are: number, length measurement, modelling problem into linear function and two variable linear equation system (*Wau* kite), and symmetry, transformation, and transformation composition (*corak-ragi* of *tenun melayu*). This finding implies the intellectuality of local *melayu* people in Kepulauan Riau province.

Consequently, this finding can be contribution to the development of mathematics education especially for school mathematics teaching and learning. *Wau*

kite and *corak-ragi* of *tenun melayu* can be rich sources for learning mathematics concepts. Hence, they can be regarded as meaningful contexts. In addition, reinventing those mathematical concepts can be possible to derive. From this moment, there is a chance for enhancing the practice of mathematics teaching and learning especially on the topics of length measurement and geometry.

Lastly, it is considerably wise to think about further ideas that can be included in the ethnomathematics of *Wau* kite and *corak-ragi* of *tenun melayu*. It is strongly recommended that other domains (localizing, playing, and explaining) should be explored further to meet the possibility of finding other mathematical practices of those two cultural stuffs. The exploration of other ethnomathematics in Kepulauan Riau is also important to undertake.

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HOW TO TEACH WRITING IN LITERATURE CLASS THROUGH GENRE-BASED APPROACH

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Abstract

This present study was conducted in order to portray how to teach writing in literature class throgh Genre-Based Approach. Specifically, this study identifies (1) how lecturer guides students write their response to literature through Genre-Based Approach, and (2) how the students write their response to literature using Genre-Based Approach. Qualitative case study design was chosen as the method of the study. The participants were 1 lecturer and 40 students who studied Prose in English Education Study Program at one state university in Palembang. The data were collected through observation, documentation, and questionnaire. The data were analyzed qualitatively by doing thematic analysis. The result shows that (1) all the procedures of Genre-Based Approach which incorporated Building Knowledge of The Field (BKOF), Modelling, Joint Construction and Independent writing were helpful in facilitating students writing, specifically BKOF and Joint Construction; (2) Most of the participants, to some extents, have applied the schematic structures (introduction, expands-on and summary) and the linguistic features modeled in this study.

Keywords: Genre-Based Approach, Teaching writing, Literature Class

1. Introduction

Teaching literature as one of the content teaching also contributes to literacy education. Teaching literature means to train students' skills in reading, writing, and speaking. Teaching literature can invite students to understand the literature and also use language to express his understanding (Coenen, 1992 in Witte, Janssen & Rijlaarsdam, 2006). In the context of learning a foreign language, especially English, teaching literature can enhance the knowledge of students about the literary works being read and improve language skills, especially reading and writing skills.

Writing in literature classes differ from writing in other subject learning. Writing activities in literature classes is intended to encourage students to respond to and reflect on literary works. In other words, in literature classes students write

literary response text. The purpose of writing literary response text varies ranging from free writing, review, summary, critical review, and academic essay (Purves, Rogers, & Soters, 1990; Beach & Marshall, 1991; Feez & Joyce, 1998; Gibbons, 2009). Writing activities in the current literature classes tend to encourage students to write freely or to write personal response without giving much concern on language use. So the students' writing are likely to be too long, and contains many grammatical errors, ineffective and unclear. There are times when lecturers ask students to write a response to literature in the form of an academic essay. The results, however, also sometimes do not meet the purpose of writing an essay, not cohesive and coherent.

This was evidenced by the results of the writer's observation, which were carried out over the last few years, on literary response text written by college students. It was found that their writings tend to have grammatical errors, punctuation errors, lack of proper word choice, and ineffective or long-winded sentences. According to Kim (2006), students usually found difficulties in writing, specifically when it is to do with "choosing appropriate vocabulary, organizing the structure depending on the topic or the purpose of writing, following correct grammar rules, and integrating ideas". Based on the observation, it was shown that in teaching writing in these literature classes, the lecturers applied a traditional approach in which essay writing and free writing became the focus.

Through this traditional way, the students write an essay by following the procedure of writing essays that have been defined by the lecturers. For instance, the essay should consist of five paragraphs, each paragraph should be the main sentence, in each paragraph, there should be a conclusion sentence and so forth. Then the students are a guided by some grammar rules such as avoid using first person pronoun and second person forms; avoid using slang words; or use the correct tense. All of these rules are set by the teacher as the requirement of a writing assignment. If eligible, students will be rated good and vice versa, if the text does not qualify, the students' scores will be ugly. An assignment like this would be a burden to students and would not improve the ability to write. As what Rezvani, Aqdam, and Saeidi

(2013) states, "Test driven learning also makes them ignore the crucial process in such condition. Students write only to practice grammar at a sentence level for getting high scores on tests". This is the weakness of traditional essay writing. Students do not undergo the process of writing such as drafting, revising, and rewriting. This makes the students do not know for sure if their writing is good or not because the lecturer did not comment on the written response. Another consequence is lecturers will find difficulties in evaluating and assessing the text. In this case, the lecturers did not explain well the purpose of writing an essay, if the essay aims to criticize, evaluate or argue.

In connection with the GBA (Genre-Based Approach), teachers and lecturers in Indonesia have started to use the GBA since a decade ago as a strategy to improve the students' ability in writing. But they rarely apply it in content class like literature classes. They believe that language and content are two different things and they should be taught separately. This is not in line with the principle of Genre-Based Approach implementation. In GBA, lecturers of the content subject are not only responsible for the subject but also concern with the language use. Therefore, exploring the students' ability to write literary response text through Genre-Based Approach (GBA) is necessary in order to get an insight of the influence of GBA in improving students' ability to write a literary response in literature class.The main issues that were examined in this study are (1) How lecturers guide students to write a literary response text with the GBA?, (2) Does the use of GBA effectively help students write a literary response text?, (3) How is the students' ability to write literary response text?, and (4) What are the students 'perceptions regarding the application of GBA in the classroom?

2. Theoretical Background
Genre-Based Approach

Ideally, in order to implement the teaching cycle in a literature class, lecturers should follow the four stages of teaching (Derewianka, 2000; Butt, Fahey, Feez, Spinks, &

Yallop, 2000, p.264-265; Hammond, 2001, p.54-55; Gibbons, 2009, p.115). These stages consist of:

1. Building Knowledge of the Field (BKOF)

This stage requires students to build information or content which is likely to emerge from learning issues. To study the theme analysis, as in this study, students should interpret the themes built by the story's author. This can be done with a collaborative activity between teachers and students in order to "build a shared experience in the context of the text that they learn to use" (Butt et al, 2000, 264; Gibbons, 2002). This activity can be a hands-on experience, the task of research, discovery learning and problem-solving activities, activities outside the classroom and a trip (ibid).

In addition, according to Gibbons (2009, p.116), all teaching and learning activities (such as practical activities, discussions, use of IT, and all the activities of speaking and writing) done in the classroom are classified in this stage. These activities aim to guide students' understanding to construct information on the topic of writing itself (see Derewianka 2000; Butt et al, 2000; Hammond, 2001) so that students will be familiar with words, expressions or terminology related to the main topic (Gibbons, 2009). By doing this the students will have "self-confidence" (Harmer, 2004) with what they want to write.

2. Modeling

In this stage, the activity is focused on the schematic structures and the use of language that includes forms and functions. It is time for students to identify clearly the purpose of a literary response text, schematic structure, and linguistic features. To do this, teachers can perform the the following procedure (see Derewianka, 2000; Hammond, 2001; Gibbons, 2009, p.118): 1) introducing a model of the genre to class, 2) discussing with students the purpose of the genre , 3) providing a number of different examples of the genre and explain how they resemble, 4) asking the students to identify how the structures of the text (structural schematic), 5) asking students to focus on the essential features of the language, 6) discussing the functions of each stage, 7) asking students to reconstruct the text, 8) asking students to

compare the structure and stages of the sample text with other texts that have been checked or the texts that have not reached its goal, and 9) displaying information about the genre (such as the purpose, structure, and language features) on the board.

3. Joint Construction

This phase invites students to be aware of the language as well as literature as the subject. Lecturer and students work together in this type of writing. They should discuss literary response and the use of appropriate language for writing. This time, the students have the opportunity to articulate their own ideas and expressions while the lecturer's job is to correct, improve, add or elaborate on what is meant by the students. Specifically, joint construction activities include activities such as 1) finding a topic to be written; this time the lecturer and the students determine a topic, 2) in the process, asking students to write, organize ideas, correct words, fixing grammar, and spelling; discussing language and how language is used while students compose the text, 3) helping students improve the structures by correcting or deleting; 4) giving them a copy of the literary response text created in this stage as a model for further response (Derewianka, 2000, p.8; Butt et al, 2000; Gibbons, 2009, p.119)

4. Independent Writing

The final stage is to give the students the opportunity to work independently in building their own text (see Derewianka, 2000; Butt et al, 2000; Hammond, 2001; Gibbons, 2009). In this stage, the students choose their own topics and write their first draft. This draft will be improved by getting feedback from their peers and their teachers. In giving feedback, teachers can discuss the draft of the student.

There are some recommendations to lecturers, especially lecturers of literature, to implement the teaching cycle in the classroom. Adapted from Gibbons (2009, p.124), the recommendations are:

1. In teaching subjects like literature, the lecturer should choose a genre which is relevant to the ability or the way of thinking of learning context. In this case, the learning context encourages the selection of genre.

2. The teaching cycle should be carried out thoroughly until the students can do the writing independently. The teaching cycle will be effective if it is done repeatedly. In this way, students will learn progressively every stage and they will move into a next stage if the previous stage has been mastered.

3. The cycle can be implemented flexibly. Once students are familiar with a genre and they can use it well, then presenting briefly stage 2 and stage 3 or skipping stage 2 or 3 can be done. However, it is important to remind the students about the schematic structures, linguistic features, and the topics that will be discussed in their writing.

4. The lecturer is allowed to encouraging students to use their first language in each stage. The use of this first language will facilitate the students to find the appropriate vocabulary and compare ways of writing between two different cultures.

5. Due to integrating language and content learning takes time, it needs a solution. At this point, it is better for lecturer of subjects to think in terms of "exposing subjects" instead of "finishing the content". This means that teaching and learning activities must be made on how to use the language and the way of thinking in subjects explicit for students. As a result, teachers will find it efficient in assessing students' writing.

6. Lecturers of subjects should be responsible for language teaching. Every lecturer is a language lecturer.

From the above explanation, it can be concluded that the cycle of teaching writing should be done within the class of subjects. By doing this, the students can be good writers. They will know how to organize their writing and know what language features that conformed to the purpose of their learning.

Literary Response Text

According to Feez and Joyce in Gibbons (2009, p. 177), literary response text, as in table 1 below, has a typical goal, schematic structures, and linguistic features. The purpose of writing this text is to summarize, analyze, interpret and respond to literary works, art, and drama (see Gibbons, 2009,p. 177). To meet this goal, the students must follow the three stages of writing, namely the introduction, expands-on and reaffirmation. In the preliminary stage, the students must describe the background of the theme of literary works, setting, character, topic or author of a story. In this phase, students are expected to provide an overview of argument (theme) that will be studied. After that, in the expands-on phase, students should explain their arguments to the selected interpretation. In this case, the citations should be written to support the argument (Feez and Joyce, 1998, p. 45). In the last phase, reaffirmation, the students provide a review regarding the interpretation that has been made in an earlier phase. Here is the concept of literary response text.

Table 1. Literary Response Text

Purpose, Schematic Structures and Linguistic Features

No	*Written Response*	*Purpose*	*Schematic Structures and Linguistic Features*
1.	Literary Response In Emma, Jane Austin is concerned with appearance versus reality: discuss in relation to Emma's journey of Moral awakening	To summarize, to analyze, interpret, or responds to a literary text, art work, or performance	Schematic Structures: • Introduction, with context and background information about general themes of the work (e.g., summary of narrative), preview of arguments to be presented • Expands on (1), argues for a particular interpretation using as evidence discussion of stylistic features of the text, artwork, or production; uses of close reference to text • Summarizes writer's judgment reaffirms interpretation of work Linguistic Features: Connectives: first, finally, therefore, nevertheless,

			Reference to specific people and things
			Negative and positive evaluative vocabulary, indicating writer's personal belief or stance
			Simple present tense
			Quotations to support ideas

Source: Feez and Joyce (2004) in Gibbons (2009, p. 177)

With regard to aspects of language, literary response text must have connectives like first, finally, therefore, nevertheless; a reference to a person or a certain thing like she, or the name of a person; negative and positive evaluative vocabulary indicating students' opinion; the simple present tense as well as citations to support the interpretation

3. Method
Research Design

The research design for this study is a qualitative case study design. The context of this study is the English education study program of one state university in Palembang. The participants of this study were 40 students of English education study program class of 2009, semester 7, who enrolled in Prose class.

Data Collection Procedures

Classroom observation

Classroom observation was conducted at the beginning of the study. It was conducted in eight meetings, starting from mid-September to mid-November 2012. In this observation, the lecturer's and the students' activities were recorded by using the camera. In addition, these activities were also noted down directly on the laptop in class in the form of classroom observation.

The role of researcher-lecturer in this observation was a participant-observer (Creswell, 1988, p.125). This means that researcher was involved in the class

observation. That is the researcher also became the lecturer who taught literary response text writing through Genre-based Approach. As a participant-observer, the researcher always strives to be objective in order to avoid research bias.

Documentation

Documentation was done by collecting students' writing in the independent writing phase. The text was then analyzed its schematic structure and language features that have been discussed in the previous section. In this study, three students' works written by high-achiever (HA), mid-achiever (MA), and low-achiever (LA) were documented in order to illustrate the way the students write literary response text.

Questionnaire

The questionnaire was administered to students to find out their perceptions about the use of GBA to improve the students' skills in writing literary response text. The items of the questionnaire were compiled in accordance with the research objectives. At this point, open-ended questionnaire, which consists of 30 items, was selected so that what students perceive on the application of GBA in class can be picturized.

Data analysis

Data analysis was carried out by correlating the findings of the observation, documentation, and questionnaires. In this case, in class observation, the list of activities done by the researcher-lecturer was obtained. This list was then categorized based on the phases of existing GBA, BKOF, modeling, construction joint and independent writing. The data from documentation were collected in order to find out the usage of the schematic structures and language in students' writing. They were analyzed with reference to the literary response text proposed by Feez and Joyce (1998) and Gibbons (2009). In this case, the patterns found were conceptualized by comparing and contrasting it with the standard of literary response text and the tendency of individuals.

Finally, data from the questionnaires were tabulated based on the types of questions asked. Every question that indicates a specific theme was tabulated in the table so

how students respond to every item of the questionnaire was obtained. Lastly, any discovery of the data were correlated in accordance with the research questions formulated at the outset.

4. Result and Discussion

Data From Observation

Based on the eight meetings of class observation, it can be said that the writer has applied Genre-Based Approach in guiding students to write literary response text. The four phases of GBA which include BKOF, Joint Construction, Modeling and Independent Writing have been done by the writers' in Prose class. To get a detailed explanation, the following sections discusses how lecturer guided students to write.

Building Knowledge of the Field

At this stage, all the activities undertaken to lead the students to interpret the text they read is called Building Knowledge of the Field (BKOF). According to Gibbons (2009, p.116), all activities that support learning content can be categorized as BKOF. Based on the observation, the writer did five meetings for BKOF stage. In this phase, the lecturer explained prose class syllabus, introduced two novels entitled Wuthering Heights by Emily Bronte and Tess of D'urbervilles by Thomas Hardy, described the characteristics of prose, asked students to select reading texts, asked students to read a selected novel, explained the concept of writing in literature class, GBA concepts, and concept of theme analysis.

Table 2. Activities in BKOF Phase

Meeting	Activity	Remark
1	a. Introducing Syllabus of Prose b. Explaining characteristics of Prose	
2	a. Introducing novel entitled Wuthering Heigths and Tess of D'urberville b. Telling a brief synopsis of the stories c. Distributing the pdf file of Wuthering Heights and Tess of D'Urberville	

	d. Asking the students to do fast reading and choose the story that they really like e. Asking the students to start reading the novel	
3	a. Explaining the concept of writing in Literature Class b. Explaining the relationship of literature learning and language learning c. Explaining Genre-Based Approach d. Summarizing story	PowerPoint and Handout PowerPoint and Handout
4	a. Discussing the story b. Identifying important events in the story **c.** Discussing new words	Lecturer poses questions related to stories, students give responses
5	a. Explaining variety of responses to literature b. Explaining theme analysis c. Practicing theme analysis d. Making theme analysis board e. Identifying nouns for themes, for example, happiness, adventure, darkness, sorrow etc **f.** Developing critical thinking by always giving evidence for supporting the theme analysis	PowerPoint and handout, reflection, Teachers' questions, group discussion Students are asked to specify the concept of the theme using noun like struggle, love, obsession students were asked to explain in their own words why they chose the theme, then shows excerpts for support reasons. They write it on a piece of paper

What has been done by the lecturer in BKOF were in accordance with the procedures recommended by experts like Derewianka (2000), Hammond (2001), Gibbons (2009). The lecturer has chosen genre which was relevant to the purpose of doing theme analysis (Derewianka, 2000, p.6). She has prepared students with the theme of the story that will be drawn up and the vocabulary needed in the analysis of the theme (Gibbons, 2009, p.115). She also established herself as a facilitator by asking some questions to guide students in understanding the analysis of the theme. By asking themes, she opened wide the elaboration, invited students to deepen their thinking for making a response (Hammond, 2001, p.40).

Modeling

In this modeling stage, the lecturer shared two examples of essays or literary response text regarding the analysis theme. Both of these essays were then analyzed by the students to get the similarities in terms of writing organization and structure or grammar. The students were also asked to determine which text was better. To do this, students worked in groups. They were asked to mark the texts with a colored pen, for example, words for the conjunction striped, red-inked words for connectives, and so forth. After that, they discussed with other groups with guidance from the lecturer. The results of their discussion were then compared again with the literary response text suggested Feez and Joyce (1998) and Gibbons (2009).

Table 3. Activities in Modeling

Meeting	Activites	Remarks
6	a. Students (in group) read two texts discussing theme analysis b. Students found the similarities of texts by identifying the structures and the linguistic features of the texts c. Students discussed the texts. Each group presented their findings.	
7	a. Prose quiz: students were asked to summarize the story b. Students and lecturer compared their findings and the standard *literary response*. c. The writer explained the purpose, *schematic structures* and language features of the text.	This phase should be done in BKOF

As a final point, in this modeling phase, the lecturer introduced and displayed a model of a good literary response text. During that time, she explained the goal, schematic structures, and language features as suggested experts like Butt et al (2000), Derewianka (2000, p.7), Hammond (2004, p.57), Gibbons (2009, p.118).

Joint Construction

Joint construction was done by dividing the students into groups consisting of 4 to 5 people. Then the student got a blank sheet of paper on which they wrote. At this stage, students in one group, together, tried to write literary response text in accordance with their capability after getting modeling phase. What they do was talking about what would be written and the language used for writing. The task of the researcher here is to monitor each group's work and to give feedback to their shared writing. This is in line with Derewianka (2000, p.8) who states that in the phase of joint construction, the text could have been constructed throughout the class, groups, or by lecturer and students during the conference. Derewianka also said that the purpose of is to guide, provide questions and give advice (p. 9). In this phase, the researcher also encouraged the students to use their first language, Indonesian, when having difficulties expressing their ideas in English. This motivation will greatly assist students in writing (Butt et al, 2000: p.267).

Tabel 4. Activities in *Joint Construction*

Meet ing	Activities	Remarks
1.	a. Students worked in groups to write literary response text b. The lecturer gave questions and feedback to the students' writing	
2.	a. The lecturer assessed students' writing which was created in Joint Construction b. The students re-wrote literary response text after they got corrections from their peers and lecturer	

By doing phase 8 and 9 as written in table 4 above, actually, lecturers continually tried to check the progress of each group or each student. According to Derewianka (p.9) and Butt et al (2000, p. 267), this is very good because the students will develop in proportion to their ability without compulsion. In addition 9.b activity was a process of "editing and proof-reading" (Butt et al, 2000, p.267), which helps

the students write a literary response text with accepted grammar, spelling, and punctuation. According to Qian (2010), by correcting their peers' writing, the students learn how to see their own writing critically.

Independent Writing

Independent writing is the last cycle conducted after the lecturer believed that the students have been able to write individually. Independent writing was done in one meeting and the results of independent writing became the documentation of this study. At this stage, the lecturer shared a form of independent writing, asked students to write in the classroom, asked students to see notes and handouts them back when writing text individually, motivated students to use assignment sheet on analysis of themes and its related quotation which had been worked out in different sheet, responded to several questions from the students.

Table 5. Activities in *Independent Writing*

Meeting	Activities	Remarks
1	**a.** Asking students to consult to their notes and handout when they wrote **b.** Encouraging students to use the worksheet to support their writing **c.** Responding to questions from students	

Step 10a, 10b, 10c were some steps recommended by Gibbons (2009, p.119) in the phase of independent writing. Gibbons suggested lecturers or teachers to constantly make a draft, revise, show the results of the writing to peers and obtain feedback, to motivate the students that their text would be publicly displayed.

From the foregoing explanation, it can be concluded that the researcher had done properly every step of the GBA. He had a good understanding of what should be done in each phase. However, some activities done seems rigid, and too serious. Some students still had difficulties in getting ideas for their writing although BKOF phase has been implemented to the fullest where a set of questions were posed to

students as a means of understanding the analysis of the theme. This can happen because the lecturer applied less hands-on experience in the classroom as recommended by Gibbons (2009, p.117). Hands-on experiences that can be potentially done are a semantic map, wallpapering, picture dictation, barrier crossword, interviewing experts, world wall, progressive brainstorming, and jigsaw reading.

Moreover, it can also be concluded that the lecturer plays an important role in each phase of GBA. The task of the lecturer is to explain, guide and provide feedback. The ability of the lecturer to provide questions and respond to questions as well as a stimulus to the activities of the student's writing was necessary specifically in the phase BKOF. Questions from the teacher will improve or sharpen the students' understanding of the theme analysis (Hammond, 2004, p.41).

Data from documentation

Schematic Structures by High Achiever (HA)

Schematic structures written by High Achiever (HA) were considered good although there were several unclear parts. HA had written a brief review of the narrative story of Tess of D'Urberville. But how HA wrote a preview of argument seems not explicit, otherwise HA tends to give suggestion to read the story as "therefore this novel is a very good novel to read". Expands-on phase was written by HA in three paragraphs. However, there are only two themes analyzed in the text. HA did not clearly mention the third theme to be discussed. In the second paragraph, arguments are not explicitly stated and no explanation was significant. Yet, HA presented excerpts to support the argument she made as suggested by Gibbons (2009, p.177).

Tabel 6. *Schematic Structure* **written by** *High Achiever*

Student	Schematic Structures		
High Achiever	*Introduction*	Context, background, synopsis	"Tess od D'urbervilles is a novel written by Thomas Hardy. It tells about how a woman keeps her love even when she is in a bad condition. The story begins…"
		Preview argument	"Therefore this novel is a very good novel to read"
	Expands On Paragraph Two	Argument	"The story of Tess' life explains about how Tess keeps her faith with her husband". An honest feeling of still loving someone or thing in every condition (weakness or strength, happiness, and also sorrow) is called faith."
		Explanation	-
		Quotation	"As it is showed in page 410, line 7-12"
	Paragraph Three	Argument	"Another theme of Tess of D'Urbervilles beside Faith is sorrow."
		Explanation	"Sorrow occurs almost in every event that Tess faces"
		Quotation	"…to suck human knowledge (page 140, line 12 -17).
	Paragraph Four	Argument	-
		Explanation	"…there is still another sorrow that is faced by Tess"
		Quotation	"As it is presented in page 334, line 20-29)
	Summary of Writer's judgment	Reaffirmation	"…this novel talks about woman's faith dan her sorrowful condition that she should face in life".

In the third paragraph, HA tried to argue that one of the themes of the novel Tess of D'Urberville is Sorrow. In this paragraph, HA provided an explanation in the form of evidence and quotations which were important to strengthen students' understanding of the text read (Feez and Joyce, 1998, p.49). While in the fourth paragraph, the HA did not provide arguments, it only gave more explanation of the themes analyzed in the third paragraph. Literary response text written by HA was ended with good response review to the arguments she advanced on the theme of the novel Tess of D'urbervilles.

Schematic Structures by Mid Achiever (MA)

Literary response text written by MA was not very successful. The text still has many shortcomings such as a summary of the narrative is too short; groove to explain is ambiguous; no citations exist, or with citation but without showing the page and line as recommended by Feez and Joyce (1998) and Gibbons (2009). However, the text written by MA has presented a preview of the arguments in the first paragraph which was not found in the text by the HA.

Tabel 7. *Schematic Structure* **written by** *Mid Achiever*

Student	*Schematic Structures*		
Mid Achiever (MA)	*Introduction*	Context, background, synopsis	"This novel by Thomas Hardy tells us about a girl that innocent and also struggle in her life. Beside that she is very care and also love with her family"
		Preview of argument	"There are two themes in this novel. They are: love and care"
	Expands On Paragraph two	Argument	"Firstly about love. Tess feel a natural feeling that is love with a young man. When she meet with a young man at dancing party"
		Explanation	-
		Quotation	"He wished that he asked…" **without page and line**
	Paragraph Three	Argument	"And secondly about care. It means Tess give more attention with her

			family"
		Explanation	"Although she is pretty girl but she is not selfish with her sister and also her brother moreover with her parents"
		Quotation	-
	Summary of Writer's judgment	Reaffirmation	"In conclusion, Tess is very care and also love with her family. All about her family is important to Tess".

Schematic Structures by Low Achiever (LA)

Literary response texts written by LA can be said to be inadequate. The text did not meet the purpose of writing which aims to present the analysis of theme (see Gibbons (2009, p.177). At the preliminary stage, LA did not provide a summary narrative of literary works being read. Even the LA did not relate at all the introduction with literature she read. Besides, the preview of the arguments were presented unclear.

In the section of expands-on, LA also did not provide a complete and clear arguments, as well as with quotation to support evidences. There is only one argument which says "she can change her life". But this argument does not correspond to the statements made in previous paragraph. Ultimately, LA failed to restate the interpretation or argument she made at the beginning of the paragraph.

Tabel 8. *Schematic Structure* **written by** *Low Achiever(LA)*

Student	Schematic Structures		
Low Achiever (LA)	*Introduction*	Context, background, synopsis	"The good product in our life not automatically . we can start it step by step. In this proses not easy. The obstacle can change with easy. If the first opinion make us sad or tragic we can come up…"
		Preview of argument	-
	Expands On Paragraph Two	Argument	"Tess can change her life"
		Explanation	-
		Quotation	-
	Paragraph Three	Argument	-
		Explanation	-
		Quotation	-
	Summary of Writer's judgment	Reaffirmation	"Happiness more expensive in life. Our full power can change it better".

In summary, it can be concluded that the participant-students' literary response text are somewhat developed. The writing organization indicates the students-writer had an effort to fulfil the purpose of writing literary response text. They started their text with a brief summary of the story then continued with a preview of arguments. Their expands-on phase, especially LA, lack of explanation, and evidence. It seems the students found problems in explaining the arguments they made earlier and in correlating it with the quotation from the story. There are several viable factors which can affect the result of the students' writing above. First, probably, the students, particularly LA, were not yet ready to move to the independent writing stage after participating in joint construction. According to

Gibbons (2009, p.124), students should move to the next stage of the cycle when the students are reasonably proficient in recognizing the selected genre. This means that if a student is not proficient in a particular phase, then the student is expected to identify the phases that he has not advanced. The unprepared students should, therefore, have more exposure to theme analysis in BKOF stage and more engagement with the standardized literary response text. The second reason is that the students were not used to think deeply and critically. They were reluctant in building an association between opinion and reasons.

Linguistic Features by HA, MA, and LA

Linguistic features of literary response text, as discussed in section 2, include a reference to people or specific terms, positive and negative evaluative vocabulary, simple present tense and citations. The literary response texts written by HA, MA and LA are successful enough in employing the proposed linguistic features. Table 9 summarizes the linguistic features used by the students.

Tabel 9. Language Features by HA, MA dan LA

	Reference	Evaluative Vocabulary	Simple Present Tense	Quoation	Connectives
Text HA	Yes, clear	Yes	Yes	Yes	Yes
Text MA	Yes, clear	Yes	Yes, but with grammar mistakes	Yes – No page and line	Yes, not grammatically correct
Teks LA	Yes, unclear	Yes, clear	Yes, but with grammar mistakes	No	No

According to table 9, the lingustic features adopted by HA was better than text MA and LA. HA's text has a clear reference about Tess and her family in the novel Tess of D'Urberville. HA was also mentioning Thomas Hardy as the author as can be seen in "Tess of the D 'Urberville is a novel written by Thomas Hardy ..." whereas MA wrote "Tess of D'Urbervilles by Thomas Hardy ... ". Evaluative

vocabulary in text HA includes faith and sorrow, whereas in the text MA No love and care. HA text uses simple present tense consistently like "It Tells about ..", or "The story begins ...". On the other hand, MA and LA used present tense that were not grammatical like "Tess feel a natural feeling ..." (by MA) and "She now feels her economic life" (by LA).

Data from Questionnaire

Table 10 below shows the perception of three students who participated in learning the concept of Genre-Based Approach (GBA). Based on table 10, the students considered GBA effective in guiding their writing literary response writing (item 30), and they gave a positive response to the stages of the writing of the GBA (item 7). Two of the participants, HA and LA, said that the joint construction phase (item 28), is a phase that helps them write a literary text response. While MA found BKOF (item 28) as a phase that contributes a lot in writing activities.

Tabel 10. Data from Questionnaire

Questionnaire	HA	MA	LA
1	Yes	Yes	Yes
2	Yes	Yes	Yes,
3	-	-	-
4	Concept which the author wants to convey to the readers	Various themes in the novel, for example STRUGGLE	Understanding the details of the story
5	Yes, to analyze what the author's perspective	Yes, theme analysis	Yes, to have a clear picture of the story
6	Yes	Yes	Yes
7	Just so so	Yes	Yes, (like)
8	Yes,	Yes	Yes
9	To argue	To give response, to understand, to criticize and to get literary meaning	To summarize, to analyze text, and to interpret the texts
10	Yes	Yes	Yes

11	Introduction, Expands on and summary of writer's judgment	Orientation, event, complication and resolution	Giving response by criticizing
12	What to analyze, and backgroung information of literary works	Background information	Background,major theme, and reviewing the content
13	Development of themes stated in intoduction	One or two paragraphs with conclusion and quotation	Explaining facts and main ideas
14	Advantages and disadvantages of literary works	Conclusion of all themes discussed	Theme reaffirmation
15	Yes	Yes	Yes
16	Connectives, reference, negative positive vocabulary, present tense, quotation	Tenses, linking verb	Simple present tense
17	Yes	Yes	Yes
18	To support argumentation	To srengthen the explanation	To support opinion, to affirm opinion
19	GBA	GBA	BKOF
20	BKOF, modeling, joint construction, independent writing	Analysis, introduction, body, conclusion	Determining themes, titles, developing the body or content of writing
21	Reading and discussion	To develop information and content	To build information and content, seek for solution
22	The model of theme analysis essay and the discussion of it	To have more understanding to text being read	The purpose of the writing
23	Writing collaboratively	Comprehending text in groups	Looking for topic, content writing, correcting draft, checking punctuation, grammar and revising
24	Yes	Yes	Yes
25	Writing essay or literary response with two themes	Writing with individual writing	selecting and developing topic
26	Yes	Yes	Yes
27	Grammar	Tense and generic structures	Language structure, punctuation, and content
28	Joint construction	BKOF	Joint construction
29	Yes, grammar and topic development	Not Really	Not successful
30	Effective	Yes, Effective	Yes, effective

All the participants, HA, MA and LA said that lecturer gave feedback or comments on their writing (item 27). According to the experts, to give feedback in writing activities will make the students manage to write a literary response text (Butt et al, 2000; Gibbons, 2009). Feedback can be given in the form of comments on the use of grammar (tense), generic structures, content as well as punctuation.

The questionnaire was also given to determine whether or not the students understand the content. From the responses obtained, it can be said that HA was thoroughly familiar with what was being taught in the classroom. This can be seen in most of HA responses which portray steps carried out by the lecturer. Therefore, HA was quite successful in writing a literary response text because of her understanding of the GBA, analysis of themes and language use. Conversely, MA and LA had no deep understanding of the GBA, the analysis of the theme, and language use. Then it is understandable if their writings were less successful.

5. Conclusion and Remark

It can be concluded that, first, the procedures which turned out to guide students to write literary response text are all of the phases of the GBA, ranging from BKOF, modeling, joint construction and independent writing. This is line with Tuan (2011) who states that the procedures in GBA do help students in improving their writing skills. It was shown by a positive attitude toward the application of GBA by the participant-students of Tuan's study. However, the most helpful phase, based on classroom observation and questionnaire, is BKOF and joint construction phase. In phase BKOF, lecturers provided questions that lead the students to understand the analysis of the theme. While in the joint construction phase, students had the opportunity to discuss and fix their writing by obtaining feedback from their peers and lecturer.

Secondly, the ability of the students to write literary response text was fairly good especially for HA and MA. This is indicated by the schematic structures and linguistic features which are comparable to the modeled text. While text written LA

was not successful because of the unclear structures, grammatical errors, and unrelated quotations.

Ultimately, the students consider the use of GBA can improve students' ability to write literary response text. They found that through GBA they can get feedback from peers and lecturers as what they went trough joint construction phase.

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IDEA-DETAILS TO ENHANCE NARRATIVE WRITING ACHIEVEMENT

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Abstract

Teacher is the creator and designer, the one who creates the design of media that will be used during the learning process. Teaching media for language learning especially in writing skill is needed since writing is the most difficult skill to be acquired. One of media for improving writing skill is picture-based media. In this case,Multifunctional Folklore Card (MFC), a medium designed and created for English learning by Bella, Rizqiyah, Tasykirah, Andani, Pangestu and Inderawati (2015), offers picture-based for writing skill learning particularly in narrative text. The term multifunctional in this media refers to its functions to be applied for improving students' English skill. MFC is a game; learning media with the focus on narrative since one of the materials for MFC is folklore (traditional story) of which features are character- match card, sequence card, and vocabulary card. A study of MFC has been conducted by Bella et al. (2015), itfocused on vocabulary achievement from students of MTs Ilham Palembang which let students to match similar meaning between local language and English.Besides using media for writing skill improvement, Idea-Details strategy also helps the learners to organize their narrative writing from MFC picture cards into a complete narrative text paragraph with the table of pre-writing activity on idea and details from those pictures.This paper aims to elaborate the use of MFC as a medium in narrative writing skill improvement and the use of Idea-Details as the strategy in helping students to organize their narrative text writing.

Keywords: MFC, Idea-Details strategy, Narrative Writing

1. Introduction

There are many ways to acquire writing skill; one of them is by using media. Picture based media or pictorial story series which is the part of Multifunctional Folklore Card (MFC) is a medium that can be used for narrative text writingto increase students' writing achievement. MFC itself is a tertiary learning media in the form of cards; it has three stages with card game which includesequence match, character match and vocabularymatch. It is a game about students understanding and achievement in a particular folklore (traditional folklore from South Sumatera). Implementing MFC for enhancing students' narrative writing achievement will use various folklores; MalinKundang, BawangMerahBawangPutih, The Legend of Bidar

Race, and Kemaro Island.The previous study applying MFC only used one story for vocabulary achievement of junior high school students, it was conducted by Bella, Rizqiyah, Tasykirah, Andani, Pangestu and Inderawati (2015).

Besides media, a strategy is needed for the use of the media in writing specifically narrative text to manage in steps. In this case, the writer will apply Idea-Details strategy to make the writing process using media more manageable. Peha (2003, p. 28) mentions, "A detail is the answer to a question a readermight have. Your audience may understand your ideas but want to know more about them." This strategy uses idea and details as the supporters of writing process. Raimes(2002, p. 309) says that one of the essential parts of writing is generating ideas. Harmer (2004) mentions that writing is not only difficult in generating the ideas, but also transferring these ideas into readable text.Moreover, idea and details are two things that cannot be separated each other; an idea means nothing without the supporting details. Idea-Details strategy will be used to help students generating the ideas that they get from the visual-aid media of MFC. Idea-Details strategy is introduced to help writers doing the pre-writing process to find out ideas and put more details to create the outline of the text that they will write.

Further, writing is one of the skills of English taught in schools. As English is a foreign language in Indonesia, it is not easy to write and compose words in the second language. Students have to understand the function of various forms, structures, and punctuation marks of Standard English and use them appropriately in communications. Some recent studies proved students' low achievement in writing. Megaiab(2014) measured students' proficiency of English writing in two senior high schools with 140 participants of first graders. The result of the study showed 1654 grammatical errors found. In PalembangFajri (2015) found that students in SMA Negeri 9 Palembang had errors related to grammar, spelling, punctuation, and word choices. Furthermore, Karolina (2006) in her action research found several difficulties that students encountered through the investigation. Students did not fully understand the tenses, the use of pronoun, and fail to arrange the story chronologically. Students in Indonesia need improvement.

Writing is not that difficult if the writer has the strategy, does the steps, makes lists for getting the idea, and develops them into paragraphs particularly for narrative text.Getting idea is the matter of gradually adding up little idea here and there and never let the paper blank by making a list, making a cluster diagram, researching, and free writing (Grenville, 2001). Therefore, a strategy of Idea-Details will be used to manage students' writing process in pre-writing for their writing text result. This strategy makes students be able to explore their first thought or idea as their response to the visual media of MFC for then applying it into written words. Moreover, narrative text relates to MFC of which basic instrument is folklore. Narrative writing requires students to imagine the situation of the story and deliver the imagination to the audience into written text.The process of narrative writing will be easy with steps and strategy.

This paper elaborates theimplementation of MFC as the media with Idea-Details strategy for writing management to enhance narrative writing achievement.

2. Theoretical Background

Multifunctional Folklore Card is picture-based media. The acronym of the media MFC is Multifunctional Folklore Card. This media had been developed by Bella et al. (2015). Moreover, this media had already been created in computer-game version and manual game board version. MFC as the pictures series media contain of a series of pictures that reflected the events in the story (picture – sequence match), the character from the story (character- match) and the series of vocabulary that exist in the story (vocabulary-match). Sequence match means that the students have to match the brief story sequence with the pictures that relate to the story. Character match allows the students to match their knowledge about the characters from the story for instance the background or the event relates to the character asked. Vocabulary match is applied by matching students' knowledge for the vocabulary both in English and Palembang language.

Teaching mediais an object that is used for teaching purpose to gain particular improvement or goal. Inderawati (2012) states that media and technology exist in

learning and teaching process for encouraging learners to improve their literacy. Further, visual symbols and the response from students to it are the new paradigm of literary appreciation. As the media, it has the important role for reader to get along with literary work (Inderawati, 2013, p. 13).Media in this case is able to attract the students in teaching process. It becomes supplementary verbal information and illustrates relationships in a way that is impossible with words. Heinich, Molenda, and Russel (1993) mention that media refers to anything that carries information between source and receiver for example film, television, photographs, projected visual, printed materials, etc.

Finocchiaro (1973) states that media can make class atmosphere more alive. Dale (1969) mentions that there are several things instructional media can do in the teaching process such as heighten motivation for learning, provide freshness and variety, appeal the students of varied abilities, encourage active participation, give reinforcement, assure order and continuity of thought, andwiden the range of students' experience. In general there are three kinds of media in learning process: visual aid, audio aid and audio- visual aid. Visual aid is media that can be touched and be seen by the students including picture, real object, map, realia and flashcard. In this case, Multifunctional Folklore card is the visual aid media since the element of MFC contains picture in cards to match with word-written cards. Media make students have a living classroom and attract students to respond more in the classroom activity.

During learning process teachers are required to be creative in creating ways to attract student's attention towards the lesson, for instance to select kind of appropriate media for student. As mentioned earlier, Multifunctional Folklore Card is picture-based media. Students are interested in pictures. As Dale (1969) has proposed that instructional media have to heighten student's motivation in learning which means that students have to be attracted so that they are able to get the objectives the teacher aims. It means that MFC already has the requirement of teaching media.

The term multifunctional in this media refers to its functions to be applied for improving students' vocabulary, writing and reading achievement. To put it another way, MFC has features to help students improving their English skills. The features

are character- match card, sequence card, and vocabulary card. Moreover, Folklore in MFC refers to the main materials used in this media which is traditional story taken from local and international folktales. The chosen stories applied in MFC are divided into several sequence and categorized for its features.

The display below isMFC in manual game board and computer version as presented by Bella et al. (2015).

Sequences Card	Picture series card	Game board
Character card	Vocabulary Card Fighting	Lucky Card tampak depan tampak belakang
Character questioncard Who is the name of Tua Adil's son?		
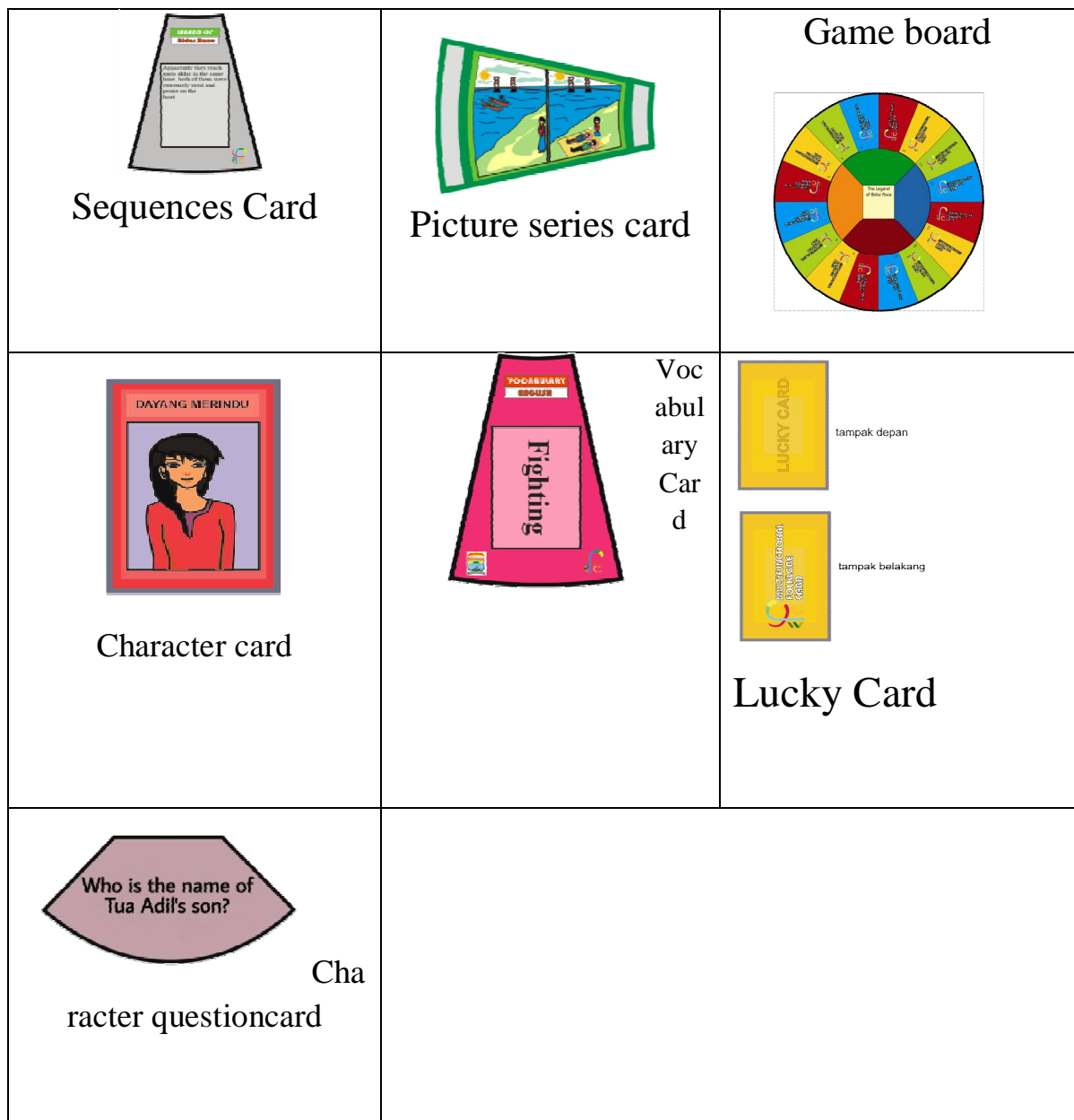
Figure 1.MFC Cards

Besides using MFC as the teaching media, the writer also applies Idea-Details as teaching strategy to make the process of teaching writing narrative text more detail and planned.

A detail is the answer to a question a reader might have. Detail is important in writing (Peha, 2003, p. 28). Idea-Details strategy is a strategy that can be applied in teaching writing whereas this strategy can develop student's ability in writing their narrative essay. Moreover, this strategy will lead the students to convey their ideas easily because this strategy has some steps to help the students to create a good essay.

Here is the schema of Idea-Details Strategy for teaching writing narrative text:

Figure 3.Idea-Details Table

Figure 4. Idea-Details Table

Idea-Details strategy is used in pre-writing process. The table above shows how Idea-Details strategy is applied to make sequence of events from a single sentence. Students just need to pick sentence that comes up from the picture (idea) and put the support in the left side of *Idea*. Then, they have to write the details that they encounter, anything they have in mind, to the *Details* in the right side. They do not have to make a complete sentence or a perfect sentence since it is a pre-writing activity, just write down anything that comes to mind that is related to the idea. Peha& Lester (2006, p. 58) mention that there are several categories that can be put into the *Details* chart such as action, feeling, setting, sights, sounds, and thought.

The most important part of a piece of writing isdetails of the writing idea (Peha, 2003, p. 32).

Additionally, a detail is the answer to a question a reader might have. The City University of New York (2012, p. 4) shows that idea development is included in the rubric for the writing assessment in its student handbook, "Reasons and specific details and examples from the text and from the writer's reading experience are used effectively to develop ideas." A detail is the measurement whether the idea is developed or not. Further, Monash University (2014, p. 12) tells that the writer cannot assume that the reader always knows everything. Likewise, Peha (2003) says that readers need supporting detail to understand writer's mind from the writing. In other word, supporting details in writing tell whether the idea has been well delivered or not. Hence, as stated by Peha (2003, p. 32), details are the most important part of writing.

According to Harries (1974, p.68), writing is an advanced skill of language learning.Oshima and Hogue (2006) put forward that writing is a process not a product. It means that writing needs a really advanced skill because the process of writing is not only in a single step. Harmer (2004) states that writing as a process has four main elements: planning, drafting, editing (reflecting and revising), and final version. According to Grenville (2001), writing also has the specific purpose for specific audience, they are to persuade, to inform, and to entertain. Writing is an advanced skill for students to develop since the basic elements for writing are divided into several steps to be completed with various purposes that make it even more complete.

This paper elaborates how narrative writing achievement could be enhancedby using MFC with Idea-Details strategy. It is narrative which becomes the focus of the writing. Narrative text according to Doddy, Sugeng, and Effendi(2008, p.44)is the kind of text that has social function which is to amuse, entertain, and deal with problematic events that lead to a crisis or turning point of some kind, which in turn finds a solution.Grenville (2010) cites that narrative is an imaginative writing that might be based on true story or just the result of imagination. Narrative involves

emotional feeling to grip readers' attention. Moreover, narrative text has some types including folklore, fairy tale, myth, etc.

The students are enquired to write narrative text by using MFC with Idea-Details strategy. As narrative text is a text that tells about sequence of imaginative events, its purpose is to inform or to entertain the audience. In this case, the students will write a story using MFC card that has pictures on it to generate their idea and write it on the Idea-Details chart. Then, they will be able to explore those ideas they have got from the pictures into details that can help them writing a narrative text. They will be able to develop the story using their own imagination to the story by adding some details. The writer allows students to write creative narrative text from their own result of development. By asking the students to write the story they know using MFC and Idea-Details strategy chart, it will help them increase their idea exploration in writing narrative text.

3. Conclusion and Remark

Writing is an advanced skill that needs to understand very well. Students mostly get difficulties in English writing due to its complex structure. However, only a few teachers create and apply creative media in teaching English writing, it makes students less involved in classroom and causes their low achievement. Teaching and learning process is teacher's field to be creative for attracting students towards the lesson, for instance to select a kind of appropriate media for student. The use of media is to appeal students, heighten their motivation, and encourage them to be active. Therefore, Multifunctional Folklore Cards (MFC) with Idea-Details strategy is created to help teachers improving students' narrative writing achievement. MFC has its feature related to the narrative with pictures to stimulate students' thought for writing while Idea-Details helps students to manage their writing in an easier process by using the charts. Students, by the help of media, will involve themselves in learning activities with the "live" atmosphere in classroom.

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DEVELOPMENT OF INSTRUCTIONAL MATERIALS BASED LOCAL WISDOM IN SOCIAL STUDIES

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Abstract

This research is the development of research that aims to develop instructional materials based on local wisdom social studies valid and practical and has a potential effect on students understanding on the values contained in the local culture. This study uses a model of development Borg and Gall consisted of three phases: a preliminary study, product development, and product trials. Gathering data using questionnaires, tests, documentation and data analysis using quantitative descriptive. Expert review of assessment results show the value of 83.3% (valid) for expert material and 82.5% (valid) for the media expert. In the test phase one to one and small group of learners obtained responses were very good (82.5%) showed the practicality of the use of teaching materials. In the field evaluation trials in Palembang obtained the pretest and posttest at 3.62 at 6.07 which shows an increase of 2.35 with N-Gain value of 0.4 with the medium category. While at Palangkaraya also an increase of 1.28 with N-Gain value of 0.3 with the medium category. The research results obtained by the product of teaching materials based on local wisdom valid, practical, effective learners with a positive response by 82.5% (excellent) on the use of teaching materials based on local wisdom in social studies.

Keywords: Instructional Materials Based Local Wisdom, Comprehension of Students

1. Introduction

Indonesia has a diverse local culture. The local culture has a unique individual. Along with the times, changes in lifestyle communities towards a more modern causes people prefer a new culture which is considered more practical than the local culture. Many factors cause the local culture is forgotten, ie the lack of public awareness on the importance of the role of local culture in life. Local culture would be appreciated if the culture is recognized properly. The values of the local culture if not maintained will eventually fade. One of the efforts to preserve it is through the utilization of local culture in the educational process.

Social studies is one of the subjects in junior high school who plays an important role in the development of culture. One of the learning objectives of social studies is to instill awareness of social values and humanity. Social studies will deliver the learning success of students in the culture conscious situation. They are expected to have the realization that he could not live apart from the social life of the broader culture. To achieve this, learning materials should be developed based on various potentials available in the vicinity of their lives (Kawuryan, 2015).

Every region in Indonesia has a culture with certain values of local wisdom. Wealth is the potential for education to develop learning resources based on local wisdom respective areas. However, some studies show that the potential of the local culture, the teacher has not been used optimally in the learning process. Learning while maintaining the textbook as a learning resource teachers handle the primary (Alexon, 2010).

Learning resources that exist in the school setting has not been used optimally. Learning resources in the community has not been intentionally programmed integrated as a social studies learning resource. This causes the social studies learning process becomes dry touch of social and cultural values (Al-Muchtar, 2007: 62).

Social studies learning material in textbooks at school little that addresses local wisdom in Sumatra and Kalimantan, for example relating to Palembang culture that limas house. Limas house as a result of cultural values of local wisdom that can be used as an ingredient in growing efforts Palembang awareness of cultural heritage. Currently limas house began to match with the presence of houses modern concept.

Research on local wisdom has been done, including by Alexon (2010) with the title Development of Culture-Based Integrated Learning Model (MPTBB) to Improve Student Appreciation of the Local Culture (Studies in Social Studies Subjects Elementary School). His research concluded that MPTBB proven to increase students appreciation of the local culture with the simultaneous mastery of the subject matter when compared to the learning model that has been done. Likewise Isputaminingsih (2013) in his study entitled Development of Learning Model Documents to Raise Awareness of Local Culture concluded that the document

model is proven successful in increasing awareness of local culture and student results. Both studies evaluated the learning model development in relation to the local culture, but no one has discussed about the development of instructional materials based on local wisdom.

Therefore, this study tries to discuss the development of instructional materials based on local wisdom with the formulation of the problem as follows: First, how to develop social studies instructional materials based on local wisdom valid for junior high school students. Second, how to develop social studies instructional materials based on local wisdom practical for students in junior high school. Third, how the potential effects social studies instructional materials based on local wisdom to the understanding of students in local cultural values.

2. Theoretical Backgroud

Instructional Materials

Instructional materials are all materials used to assist in the implementation of learning activities. Teaching materials according Mudlofir (2011: 128) is a set of materials arranged in a systematic written or unwritten so as to achieve the environment or an environment that allows learners learn best.

An instructional materials according to Majid (2008: 174), at least include a study guide for students or teachers, competency to be achieved, supporting information, exercises, worksheets and evaluation. The components should be considered in the preparation of teaching materials so that the teaching materials developed can be useful as optimally as possible.

The use of instructional materials in teaching will give some benefit. The benefits of teaching materials according Prastowo (2011: 27-28), namely: 1) to provide instructional materials in accordance with the demands of the curriculum taking into account the needs of the students, the teaching materials appropriate to the characteristics and settings or social environment of learners; 2) assist students in obtaining alternative teaching materials in addition to text books that are sometimes difficult to obtain; 3) ease teachers in implementing the learning.

Ministry of Education (2006) details the procedure for selecting teaching materials, some of them as follows: First, determine the basic criteria for the selection of instructional materials with identifying basic competencies. This is because every aspect of basic competencies there are other types of materials vary in learning activities. Second, identify the types of teaching materials. Learning materials can be divided into types of cognitive aspect of material (facts, concepts, principles and procedures), affective (giving a response, reception, internalization, and assessment) as well as aspects of the psychomotor (movement early, semi-routine and routine). Fourth, select the appropriate teaching material or relevant to basic competencies that have been identified earlier. Fifth, choose the source of teaching materials. Stages after determining the type of material is to determine the source of teaching material.

Development of instructional materials based on local wisdom in the study conducted by incorporating local culture in the social studies material with the aim to enhance the students understanding the local culture as an effort to preserve local culture.

Local Wisdom

Local knowledge is often called local wisdom can be understood as a business man using his intellect to act and behave towards something, an object, or event (Ridwan, 2007: 2).

Keraf (2010: 369) confirms that local knowledge is all forms of knowledge, belief, understanding or insight as well as custom or ethics that guide human behavior in life. All forms of local wisdom lived, practiced, taught and passed down from generation to generation as well as forming a pattern of human behavior towards fellow human beings, nature and the supernatural.

Local knowledge related to the specific culture and reflect the way of life of a community. Local wisdom resides on the local culture. Local culture is a term to distinguish a culture of national culture and global culture. The local culture is the culture of the people who occupy certain areas different from the culture of the people who live in other areas.

The existence of local wisdom has a function in the preservation of natural resources, human resource development, development of culture and science, as the adage, belief, literature, and pantanga, social meaning for example the integration ceremony communal / relatives, ceremonial cycle of agriculture, meaningful ethics and morals (Sartini, 2006).

Local wisdom does not directly provide economic benefits, but gradually local wisdom as a legacy of the past that will provide benefits to increased prosperity and peace through the character of the young generation is strong. Local knowledge becomes important and useful only when local communities who inherited the knowledge system will receive and claim it as part of their lives. In that way, local knowledge can be referred to as the soul of the local culture (Sibarani, 2010).

Local wisdom according Pudentia (in Sibarani, 2013) can be extracted from the cultural product with a profound interpretation. Cultural tradition as a cultural product containing various matters relating to community life and the life of its owner, eg system of values, and religious beliefs, social norms, work ethic, even the way the social dynamics taking place.

Local knowledge is not the same place and a different time and different tribes. This difference is caused by the natural challenges and their needs vary, so his experience in meeting their needs led to various systems of knowledge both environmental and social. The value of local knowledge which will be discussed in this study refers to the dimension of local knowledge, local culture, local skills, local sourcing and local social processes that are related to Palembang and Palangkaraya culture.

3. Method

Research procedure refers to the R & D cycle Borg and Gall (Sukmadinata, 2007). Data collection techniques in this study are: documentation used to obtain data on basic competencies, indicators and material and students needs. Documentation used at the preliminary study stage with analyzing the documents comprising the social studies syllabus in junior high school. The questionnaire used to collect information on the subject of validation and test subjects in the form validator feedback regarding

the validity of the products. Observation is used to obtain activity data of teachers and learners during the learning process using teaching materials based on local wisdom. Observations made on the pilot phase of products both in step one to one, small group and field evaluation. Tests performed on the stage of field evaluation trials to determine the students understanding after being given teaching materials based on local wisdom.

Meanwhile data analysis techniques used in this research is descriptive analysis of questionnaire data related to product validation. The results of questionnaire data is converted into a percentage to determine a response validator against social studies instructional materials based on local wisdom used in learning.

4. Result and Discussion

This research is a development to produce instructional materials based on local wisdom in social studies. This study took place in the Palembang and Palangkaraya junior high school. This study will be conducted over seven months from April to October 2015. The research process development of teaching materials based on local wisdom that has been done can be described as follows:

Pilot study was conducted to obtain preliminary information on instructional materials in teaching social studies. The first step to do a needs analysis to get information about problems, obstacles, and phenomena encountered in connection with social studies learning. The results of the discussion is concluded that the learning resources used in teaching social studies at the school only a textbook. In textbooks no one has addressed specifically the local culture which contains the values of local wisdom region. The values of local wisdom needs to be taught in order to increase awareness of local culture learners. The next step to identify basic competencies and indicators of social studies that will be used as teaching materials based on local wisdom. The final step analysis teaching materials that will be presented in teaching materials. The material will be developed based on the results of the discussion are: understanding the dynamics of human interaction with the environment, interconnectedness antarkomponen environment, human interaction with the natural environment, social, cultural, and economic, social diversity and

culture as a result of the dynamics of human interaction with diverse ethnicities, language, culture, traditional houses, traditional clothing and traditional weapons, folk songs and musical instruments, dances and folk performances, the diversity of religion and ended with the result of society's culture Indonesia in the past which includes the results of public culture Indonesia during praaksara, the Hindu-Buddha and the Islamic period.

In the product development stage, the first step is to discuss the preliminary results of the social studies teacher in the classroom that will be used to test teaching materials based on local wisdom. This activity is the first step in the process of development of teaching materials consist of activities that will determine some of the material presented in teaching materials. Based on the analysis of material obtained some materials related to the surrounding community of learners and provide examples of the values of local wisdom of such material.

Here is an example of the value of local wisdom Palembang and Palangkaraya in relation to the material dynamics of human interaction. Human interaction with the cultural environment in Palembang people seen in the establishment of the limas house which is a reflection of the value of life in a diverse society. Cultural values at limas house can be seen from the house on stilts with wood is a form of attitude towards the condition of the soil in the form of wet marshes and a hot air temperature. In wet soil conditions and hot environments, the design stage house is an appropriate solution. Floors that are not directly on the ground allow the building will not be submerged when it rains or the tide is rising. Temperature hot environment can also be minimized to the shape of the house is quite high. Cultural values can also be seen from the preparation of materials to build houses. Timber to be used are selected that have good quality and then immersed in flowing water so that the timber be strong. Religious values can be seen from the election Monday as the day to build and rituals in the implementation of development, and when the building is finished and about to be occupied. Religious values are also seen in the number of steps that are always in a matter of odd. They believe that the odd numbers will bring a blessing to those who occupy it, and if an even number then the family who occupy will have many difficulties. The social value in the limas house

can be seen in the presence or levels kekijing porch. Each gravestone or even become a symbol of the difference stile original lineage society Palembang. Gravestone (steps) The first is the lowest terrace, is a gathering place for groups of containers (kms). While the second gravestone, higher than the first gravestone is a gathering place for Kiagus (kgs) and masagus (mgs). And the third gravestone is a place for groups and families raden. Social nuance in a pyramid house can also be seen in the celebration ceremony. Where the law is determined by their social status, for example, groups of youth gathered at the gravestones first, middle-aged gathered gravestones second, and older people as well as people in tuakan or other respected gathered gravestones third, while the mothers gathered on the back or the kitchen.

While the human interaction with the environment on the Dayak culture seen from the application of the value of decorum in their daily lives, which comes from religion, mores and taboos system. For example, should not eat while standing, should not comb hair when people eat, not to be sewing clothes at dusk, as well as in the style of language and speech friendly election. Likewise, in the process of settlement of various cases of violations against the indigenous, usually done in two ways, namely the legal process and the reconciliation process. Legal proceedings settled amicably by both parties and some traditional leaders. The legal process is not looking for who is wrong and who is right, but instead look for common ground issues / cases being solved it. The next step is reconciliation (atonement). There are several ways of reconciliation according to the indigenous Dayak, namely: marital, adoptive brother, adoptive children and oath of allegiance. Customs is a way of life or a number of norms and values that govern the lives of the Dayak people so they called Keith bahadat or habitual life. Indigenous to the Dayak divided into two parts, namely customs governing the lives and customs governing the death ritual. Customs must be obeyed and manifested in the behavior and activities of daily living. People who do not adhere to the traditional branded as belom he bahadat or life is not habitual. Therefore, such a person should be shunned and driven in and out of the customary legal environment in which it is located. The values contained in this customary rule is: the value of harmony, stability and order.

Furthermore, the production of teaching materials based on local wisdom semifinished not yet been validated by the validation subject. Furthermore, this prototype will be examined through the validation and testing of products. Based on the questionnaire twice the data validation can be concluded that the teaching materials based on local wisdom indicates valid criteria, so it can be tested in learning. Recapitulation product validation test results shown in the following table:

Table 1 Test Results Validation Instructional Materials Based Local Wisdom

Validator	Score(%)		Criteria	
	Validation 1st	Validation 2nd	Validation 1st	Validation 2nd
Matter expert	79,2	83,3	Enough Valid	Valid
Media expert	77,5	82,5	Enough Valid	Valid

In the pilot phase of instructional materials, the researchers together teachers implement instructional materials have been prepared. At the time of trial test observations to obtain data to enhance social studies teaching materials. The results of the trial observation then discussed between researcher and teacher. Implementation of the trials carried out in several stages, namely the trial one to one, small group and field evaluation.

Trial one on one done by taking three students of Palembang junior high school. Based on the results obtained questionnaire responses of learners by 3.3% (excellent). This suggests that local wisdom based teaching materials practical for use in social studies learning. Some suggestions from learners to use language that is easily understood. Comments learners, presenting interesting teaching materials which enable them to understand the value of local culture in the dynamics of human interaction with the environment. Activities of students in the trial one to one of 55.5% can be concluded that active learners categorized quite active.

Small group trial conducted by taking 6 learners with different abilities. Learners are capable of high, medium and low. Based on the results obtained

questionnaire responses of learners by 3.3% (excellent). This suggests that local wisdom based teaching materials practical for use in social studies learning. Some comments from the students stating that the material in these materials correspond to the learning objectives. Activities of students in small group testing 63.8% can be concluded that active learners active categorized.

Field testing was done 2 places in Palembang and Palangkaraya junior high school. This stage is to look at the potential effects of teaching materials developed to the understanding of students in the values of the local culture. At this stage, researchers using observation, testing, and questionnaires to see active learners, the potential effect and the level of practicality of teaching materials that have been made. The results of field tests at Palembang junior hight school described as follows: based on the observation field test phase of 48% can be concluded that active learners categorized quite active. Meanwhile, after the use of instructional materials based on local wisdom gained an average value amounting posttest. Based on the results of field trials seen an increase in students understanding of the values of the local culture from 3.62 before using teaching materials be 6.07. Judging from the comparison of the average number of students in the pretest and posttest 3.62 by 6.07 means an increase of 2.45 and obtained N-Gain of 0.4 in the medium category. This suggests that local wisdom teaching materials have potential effects on students understanding on the value of local culture in the dynamics of human interaction with the environment. Based on the results of the participants' responses to the teaching materials based on local wisdom very well categorized with a value of 82.5%. According learners teaching material is easy to understand, but there are still questions that need further understanding. This instructional materials to help learners to understand the value of local culture in the dynamics of human interaction.

Meanwhile the results of field tests conducted at Palangkaraya junior hight school described as follows: based on the observation field test phase of 44% can be concluded that active learners categorized quite active. Meanwhile, after the use of instructional materials based on local wisdom gained an average value amounting posttest. Based on the results of field trials seen an increase in students understanding

of the values of the local culture before using teaching materials become. Judging from the comparison of the average number of students in the pretest and posttest amounted to 5.05 of 6.33 means that there is an increase of 1.29 with N-Gain value of 0.3 with category. This suggests that local wisdom-based instructional materials provide the potential effects on students understanding on the value of local culture in the dynamics of human interaction with the environment. The results of the participants' responses to the teaching materials based on local wisdom very well categorized with a value of 85%.

The conclusion of all the stages of development that have been implemented in the development of teaching materials based on local wisdom in social studies to practical use in learning and have a potential impact on students understanding of the values of the local culture. Later in the product development phase conducted validation experts (expert review) to determine the level of validity of teaching materials that have been prepared. In the assessment of experts (expert review) obtained an average result validation by subject matter experts by 83.3% with valid quality and average the results of validation according to media expert at 82.5% with a valid quality. Advice from subject matter experts and media experts as a basis for revisions prior to trial at a later stage. In line with this Reigeluth (in Warsita, 2008: 31) states that through the design, production and validation of generated products of assured quality and can fulfill its function to achieve the learning competencies that have been set.

In the pilot phase of small groups (one to one and small group) learners are given teaching materials that have been validated, then given a questionnaire sheet to find out opinions of students about the practicality of teaching materials. Some suggestions from learners to use language that is easily understood. Comments learners, the presentation of instructional materials interesting and appropriate to the learning objectives making it easier for them to understand the values of the local culture in the dynamics of human interaction with the environment. The final stage of testing of instructional materials, namely stages of field evaluation in Palembang and Palangkaraya junior hight school . At this stage niali gained an average of initial tests of 3.62 while the average value of the final test of 6.07. Based on the

comparison of the average value of the initial and final test has been an increased understanding of learners by 2.45. While at Palangkaraya junior hight school 5:05, while the average value of the final test of 6.33. Based on the comparison of the average value of the initial and final test has been an increased understanding of the learners of 1.29.

The result of field evaluation shows that the teaching materials based on local wisdom developed already practical and have a potential effect, is evident from the final value of learners increased and the ease of use of these materials to help students understand the values of the local culture at the material dynamics of human interaction with the environment. nstructional materials based on local wisdom compiled in an effort to improve students understanding of the local cultural values. The increase in students understanding of the values of the local culture is a manifestation of consciousness of students in the nation's culture. This is in line with the opinion of Wunderle (Kertamuda, 2011) which states that cultural understanding is one of the levels in the cultural consciousness. Once someone has the data and clear information about a culture, they can gain an understanding of the culture and what factors into the values of the culture.

Social studies teachers in pilot schools to appreciate the development of teaching materials based on local wisdom that can make students understand the wisdom of the local area and other areas based on the examples and the meaning behind the disclosure of such wisdom. This is in line with Prastowo (2011: 27-28) states that one of the benefits of instructional materials is to provide instructional materials in accordance with the social environment of learners.

5. Conclusion and Remark

Based on the research development of instructional materials based on local wisdom in social studies we concluded among other things: instructional materials based on local wisdom declared invalid after being validated by experts, and practical after tested to the students, so that the products of instructional materials based on local wisdom fit for use in the eye social studies. The potential effects of teaching materials based on local wisdom can improve learning outcomes of students after conducting field trials (field evaluation) through experiments in two places at Palembang and Palangkaraya, thus teaching materials based on local wisdom effectively utilized in social studies. As an accompanist impact of this research is the development of a positive response to the use of teaching materials based on local wisdom in social studies learning. Some of the weaknesses of instructional materials based on local wisdom in this study are: these materials are limited to the material dynamics of human interaction. While the weakness: in the learning process are not many students who ask or answer questions. It is suggested that in future studies can develop instructional materials based on local wisdom on other themes.

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MULTIMEDIA-ASSISTED DIRECT INSTRUCTION LEARNING MODEL ON STRUCTURES AND FUNCTIONS OF PLANTS TISSUE

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Abstract

This research was intended to find out students' level of understanding on the concept of structures and functions of plant tissue through implementation of multimedia-assisted direct instruction learning model. This study was conducted from June 2014 to February 2015. This research was carried out in an experimental, pretest-posttest control group design. The population in this study was students from class XI.IA1 to XI.IA5 inSenior High School1 Bandar Baru, Pidie, Indonesia, with the total of 125 students. The samples were determined by purposive sampling technique, and further divided into two classes, namely experimental class (XI.IA1) and control class (XI.IA2) consisting of 24 and 25 students. The data was collected by giving test consisting of 50 validated questions. It was obtained that the t-test value was higher than t-table value (10,81 > 2,01) at level of significance = 0,05. In brief, students' understanding on the concept of structures and functions of plant tissue had been improved through the implementation of multimedia-assisted direct instruction learning model.

Keywords: multimedia-assisted direct instruction learning model, structures and functions of plant tissue.

1. Introduction

The material relating to the structures and functions of the plant tissue is one of the basic competences (KD) that is learned by the XI[th] grade students in senior high schools. This basic competence contains the materials on various structures and functions of tissue substances that construct the plants' organs. Therefore, practical-based activities with sufficient infrastructures, teacher's capability in guiding practical work, and teacher's ability in utilizing the media and learning model properly are needed to develop students' comprehension on the concepts. The result of an observation on the learning process of the structures and functions of plants' tissue in class XI IA inSenior High School 1 Bandar Baru showed that students' achievement was still below the minimum passing grade

(KKM) which was 77. This indicated that the students had not yet understood the concepts.

The factors that caused students' lack of comprehension on the concepts were including: 1) the incomplete equipment of the biology laboratory that made teachers of Senior High School1 Bandar Baru spend less time for practical-based learning on the material concerning the structures and functions of plants' tissue; 2) the fact that teachers mostly used conventional teaching methods in which they transferred knowledge directly to students. This method involved a more active role from teachers while students remained passive. This condition made the students unable to directly witness the structure and various plants' tissues (the abstract concept) and became less motivated that hindered the students to comprehend the concept. Thus, in order to provide the students with lessons on the structures and functions of plants' tissue that can be comprehended more easily, the proper learning model and media need to be implemented.

In this study, a learning model of multimedia-assisted Direct Instructions in a form of prezi was implemented in the practical work to provide students with a more concrete learning experience. Direct Instruction is an appropriate learning model for a practical work. It allows students to improve their understanding on procedural and declarative knowledge that are well structured and can be learned step by step to enhance comprehension on the concept. In line with this, Suprijono (2011) mentions that Direct Instruction is designed for procedural and declarative (factual) knowledge as well as other skills comprehension. Direct Instruction is appropriate for explaining lessons in which teachers directly transfer the knowledge to students by making efficient arrangements and sharing the well-defined information or skills to be mastered by students (Slavin, 2011).

The prezi was used to compare the structures of various plants' tissues with the results from microscopic observation done by students. This media could be used as an enhancement for students after doing the practical work. The prezi itself was one of interactive multimedia. Binham (2013) states that prezi is one of

the presentation softwares beside Powerpoint that is used to make more interactive online and offline presentations so that the learning ideas can be delivered more easily. Prezi becomes superior because this program is facilitated with Zooming User Interface (ZUI) which enables the users to zoom in and out their presentation (Anonymus, 2013c). With the current employment of this facility, prezi was suitable to be used as a learning media in classroom to encourage students' comprehension on the concept.

The concept perception in learning is a stage of ability where someone can understand meaning or concept, situation, and the fact that one knows (Anonymus, 2013b). Concept comprehension can be differentiated into seven indicators, namely: (1) Restating a concept; (2) Giving examples and non-examples of the concept; (3) Presenting the concept into various representations; (4) Developing a need condition or sufficient condition of a concept; (5) Using, utilizing, and choosing certain procedure or operation; (6) Classifying objects based on certain characteristics or according the concept; (7) Applying concept in problem solving (Anonymus, 2013a)

In this study, the results of multimedia-assisted Direct Instructions implementation to enhance students' concept comprehension on the structures and functions of plants' tissue material were presented.

2. Method

The Developed Learning Model

In this case, the multimedia-assisted Direct Instructions learning model with prezi entitled "The Structures and Functions of Plants' Tissue" was organized in a form of offline presentation.

Research Object

The multimedia-assisted Direct Instructions learning model with was employed on 125 students of XI IA in Senior High School1 Bandar Baru. Based on the result of the pretest, two groups of research object were chosen. The first

group was class XI IA 1 as the experiment class with 24 students. Meanwhile, the second group was class XI IA 2 as the control class with 25 students. The experiment class was given treatment by the implementation of multimedia-assisted Direct Instruction learning model, while the control class was taught by the conventional learning model. The success of the implementation of multimedia-assisted Direct Instructions was determined by the difference of N-gain from the experiment and control class.

Kinds of Test

The kind of test that was used on pretest and posttest was multiple choice with the total of 50 questions. These tests were used to measure the improvement of students' concept comprehension.

Research Procedure

This study was carried out using Pretest Posttest Control Group Design. The pretest was given to both experiment and control classes before the learning process began. Then, the treatment by using Direct Instructions with a multimedia assistance was implemented in the experiment class and the conventional learning model was practiced in the control class. The posttest was given in both classes at the end of learning process to see the effectiveness of the implemented learning models.

Data Analysis

The data on students from experiment and control classes' concept perception was identified from the pretest and posttest scores. The "gain" was computed by reducing the posttest with the pretest score and then normalized with the formula proposed by Cheng et al. (2004) that is written as follow:

$$\text{N-Gain} = \frac{\text{Posttest Score} - \text{Pretest Score}}{\text{Maximum Score} - \text{Pretest Score}} \times 100$$

The rate of N-gain achievement was categorized into three categories, namely: high: N-gain > 0,7; middle: $0.3 \leq$ N-gain $\leq 0,7$; and low N-gain < 0,3 (Cheng et al., 2004).

The mean difference testing from the experiment and control class would be done with "t-test" if the data from the experiment and control class was distributed normally with the same variance (homogenous). Meanwhile, the "Mann-Whitney test" would be used if the data between the experiment and control class consisted of different variances (heterogeneous). Before the "t-test" and "Mann-Whitney test" were carried out, the data was first tested with the normality (the data of N-gain) and homogeneity tests between the experiment and control classes which was manually done using Microsoft Excel and Statistical Product and Service Solutions (SPSS) software version 16.0. The decision on the normality, homogeneity, t-test, and the Mann-Whitney test were taken based on the comparison of probability/significance (sig.) values with 95% validity rate (p<0,05).

3. Result and Discussion

Determining The Experiment and Control Class

The pretest data was used to note the XI IA in Senior High School 1 Bandar Baru students' concept perception before giving the treatment. The pretest analysis of concept perception between students in the experiment and control groups is presented in   Table 1.

Table 1. Mean Results from Pretest Score of Students in Experiment and Control Groups

Mean	Groups		Normality[*]		Homogeneity[**] (Exp & Ctrl)	Significance
	Exp	Ctrl	Exp	Ctrl		
Concept Perception Test	35,42	34,40	Normal χ^2 value (0,15) < χ^2 table (7,815)	Normal χ^2 value (1,62) < χ^2 table (7,815)	Homogenous F value (1,27) < F table (2,01) α (0,05)	Not significant t value (0,54)<t table (2,01)

Note: Exp = Experiment
Ctrl = Control
*) = Chi Square Test (Normal, χ^2 value < χ^2 table, α = 0,05)
**) = F test (Homogenous, F value < F table, α = 0,05)

Based on the above data analysis on Table 1, it was shown that students from both control and experiment groups had equal or insignificant difference in terms of ability. The similarity could be seen on the t-test value from either groups compared to the mean of concept perception test that showed the t value (0,54) < t table (2,01) on the level of significance (α) = 0,05. It means that there was no difference on experimental and control groups' students' ability before treatment.

Students' basic knowledge showed how much they understand the knowledge and concept concerning the learning material that was presented in this study. It was important for teachers to know students' ability before beginning the learning process due to students' different capabilities. Thus, teachers would know whether the students had fulfilled the required knowledge that was needed to face the material to be given. This information could assist teachers to plan the learning process which correspond the learning target to achieve a meaningful learning.

The basic knowledge the students had was one of the influencing factors that affected the concept comprehension on the material given by teachers. After conducting the basic comprehension test on the structures and functions of plants' tissue, the students were expected to improve their understanding on the concept. In the experimental class, the teacher employed the multimedia-assisted Direct Instructions learning model. Meanwhile, the control class was provided lesson in conventional learning method in which teacher employed the material from the Students' Work Sheet (LKS) and gave speech with question-answer session without having practical work.

Post-Treatment Concept Perception of Experimental and Control Groups Students

The improvement on students' concept perception could be indicated by calculating the difference of pretest and posttest scores (gain). The gain

normalization (N-gain) was employed to identify students' original scores as well as to clearly note the change on the level of concept understanding between the experimental and control classes before and after the treatment was carried out.
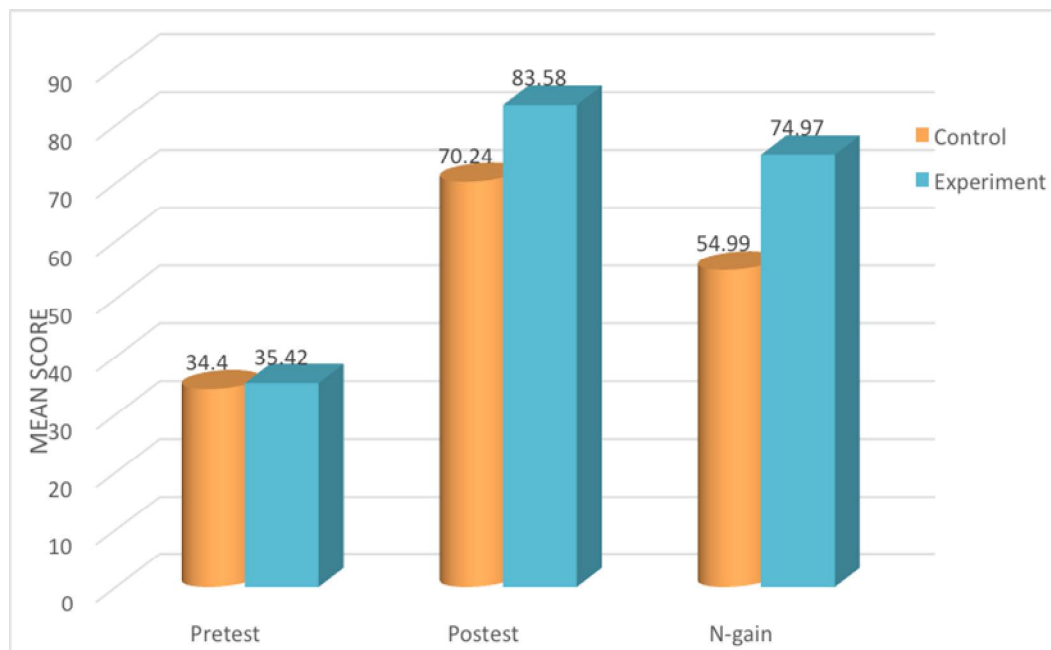
Figure 1. Pretest-Posttest Mean Scores Comparison and Structures and Functions of Plants' Tissue N-gain Concept Perception of Experimental and Control Groups' Students

Figure 1 above shows the mean of N-gain in experimental class that was 74,97 which was included in high category and N-gain mean of the control class that was 54,99 which was included in middle category. From this data, it could be concluded that there were some differences and improvement on students' concept comprehension of structures and functions of plants' tissue in the experimental class that was taught using Direct Instructions learning model with multimedia aid and the control class that was taught using the conventional learning model.

The concept perception was one of the measurements of students' accomplishment on the learning goals that was indicated by the ability to remember, explain, identify, and analyze the correlation between one concept and another in a learning process. The difference between both groups in terms of

concept perception in post-learning period was due to the distinct treatments given during the learning process. The multimedia-assisted Direct Instructions learning model that was implemented in the experiment class helped students to become more capable in developing concept. The relevant practical work led students to think actively without having the teacher explained the concept description constantly. On the other hand, the control class was dominated with a conventional learning model in which teacher deliver the lesson a form of speech with several question-answer sessions without employing any practical work.

The data analysis result of students' perception on the learning material regarding the structures and functions of plants' tissue showed a significant difference of post-learning period from the experimental class, as shown in Table 2.

Table 2 The t-test result on Concept Perception of Experimental and Control Groups

Groups		Normality*)		Homogeneity**) (Exp & Ctrl)	Significance
Exp	**Ctrl**	**Exp**	**Ctrl**		
74,97	54,99	Normal χ^2 value (-2,43) < χ^2 table (7,815)	Normal χ^2 value (4,61) < χ^2 table (7,815)	Homogenous F value (0,57) < F table (2,01) α (0,05)	Significant t value (10,81) > t table (2,01)

Keterangan: Exp = Experiment
Ctrl = Control
*) = Chi Square Test (Normal, χ^2 value < χ^2 table, α = 0,05)
**) = F Test (Homogenous, F value < F table, α = 0,05)

The statistical analysis result in Table 2 indicated that the t-value = 10,81 ≥ t-table = 2,01on the degree of freedom = 47 and α = 0,05. This number proved the significant difference of the improvement of concept perception between students from the experiment class which was given treatment with Direct Instructions learning model with multimedia aid and the control class which was

taught using the conventional method. From the result, it could also be seen that students of Senior High School 1 Bandar Baru taught using the multimedia-assisted Direct Instructions had better concept perception on the structures and functions of plants' tissue material than those who were given lesson in conventional method.

The result of this study was in line and therefore supported by several other previous studies, such as one conducted by Setiawan, et al. (2010) who states that through the implementation of Direct Instructions, all students would have the opportunity to learn and understand the whole knowledge as well as other skills that encourage students to be more focus and creative. In addition, Sakti (2012) points out that the direct interface (Direct Instructions) learning model with Macromedia Flash animation-based media assistance would have a significant effect on the improvement of students' perception on physical concepts and their learning interest.

4. Conclusion and Remark

Based on the explanations presented on the previous sections, it could be concluded that the implementation of multimedia-assisted Direct Instructions learning model could significantly enhance Senior High School1 Bandar Baru students' concept perception on the structures and functions of plants' tissue in an effective way.

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IMPROVING EIGHTH GRADERS' FUNCTIONAL READING ACHIEVEMENT THROUGH COLLABORATIVE STRATEGIC READING (CSR)

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Abstract

The objectives of this study were (1) to find out whether or not there was a significant difference in students' functional reading achievement before and after they were taught through Collaborative Strategic Reading (CSR) and (2) to find out whether or not there was a significant difference in functional reading achievement between the students who were taught through CSR and those who were not. This study was a quasi-experimental research method that applied non-equivalent control group research design. The population of this study was the eighth grade students of one of the junior high schools in Palembang in academic year 2015 - 2016 and the number of sample was 76 students, that was selected by using purposive sampling technique. The data of this study were collected by using a pre-test and a post-test and were analyzed statistically by using paired and independent sample t-test. The results of this study revealed that (1) there was a significant difference in students' functional reading achievement before and after they were taught through CSR (mean diff=18.87, and ρ-value=.000) and (2) there was a significant difference in functional reading achievement between the students who were taught through CSR and those who were not (mean diff=12.11, and ρ-value=.000). Therefore, it can be concluded that CSR is effective in improving the students' functional reading achievement.

Keywords: CSR, Functional Reading Achievement, Eighth Grade Students.

1. Introduction

Reading is one of the four language skills which are identified as paramount importance in the English teaching and learning process besides listening, speaking, and writing (Brown, 2001). Reading is important because the learners can gain the information through the reading text. It also influences the learners in improving their other language skills and language components, for instance, writing, grammar, and vocabulary. According to Harmer (2007), the good reading texts provide good models for writing, and provide opportunities to introduce new topics, to stimulate discussion, and to study language (e.g,

vocabulary, grammar, and idiom). As reading is an integral part of people's daily lives, taken very much for granted, and generally assumed to be something that everyone can do; therefore, getting students to read English text is an important part of teacher's job.

People have different perspective on reading purposes; some of them just think that reading as written words. According to Berardo (2006), reading has three main purposes; they are reading for survival, learning, and pleasure. In addition, Reynolds and Janzen (2007, p.1678) state that there are four typical general purposes of reading, corresponding to four basic types of reading. The four types of reading are developmental reading, studying, functional reading, and recreational reading.

One of the kinds of reading that people do essentially to function in the day to day world is functional reading (Rog, 2012). The examples of functional text that people usually read are directions, a recipe, a map or menu, the ingredients on a package, directories, forms to fill out, signs, and even public transportation schedules. Indeed, this type of reading activity is actually the kind least taught at schools (Rog, 2012). In Indonesia, the curriculum for English lesson of Junior High School has included functional text as one of reading materials for being learned and taught (School-Based Curriculum, 2006). Furthermore, based on Peraturan Pemerintah Republik Indonesia No.32 Tahun 2013 about National Standard of Education, English is one of the subjects which is included in the national examination, and reading is one of the skills that will be tested in this test. Since the students of Junior High School are examined in their reading ability, it is necessary for students to understand functional English texts.

However, reading in the national language is challenging for junior high school students of Palembang. As shown by the result of the study conducted by Diem, Purnomo, Ihsan, Sofendi, and Vianty (2015) which focused on functional reading in Bahasa Indonesia, the functional reading of junior high school students in Palembang was 57.20. On the other hand, for English as a foreign language, Yustika (2015), Azkarani (2015), Intan (2015),

Wicaksono (2015) who did the research in English functional reading of junior high schools in Palembang discovered that the students' score of functional reading achievement was below the standard of Indonesian National Education, which is 75.00. These results of studies show that the students' functional reading achievement both in Bahasa Indonesia and English in Palembang were low.

Problem in English reading was also faced by the students of SMP Negeri 10 Palembang. Based on the interview to the English teacher of SMP Negeri 10 Palembang, the teacher said that the problems of the students in learning English is the difficulty in understanding the text, lack of vocabulary, and less concentration. The writer also observed the teacher in the classroom, and found out that teaching of English reading mainly focused on reading passages and did exercises. The activity that was done in the classroom focused on the individual assignment. As a result, the students showed no enthusiasm in learning English.

The strategy that is used by English teachers can also influence the learning outcome of students. In other words, the students may not be motivated to learn English if the materials and strategy that are used are monotone. According to Brown (2001), the role of teacher is to provide the creative materials and strategy for students to increase their motivation in order to make them become the successful learners. The writer chose the authentic materials as the teaching materials that were used during the treatment. Using authentic materials in teaching reading can give a lot of benefits for the students because the students will have more inspiration to use the language, and they have become accustomed to exposure the language in real communication (Anjani, 2014). In relation to the strategy in teaching reading, there are so many alternative strategies of which the teachers can apply, one of them is Collaborative Strategic Reading (CSR).

In this study, the writer focused on using Collaborative Strategic Reading (CSR) to improve the students' functional reading achievement. According to Klingner & Vaughn (1998), Collaborative Strategic Reading, or

CSR, is one of the interactive approaches that function to help the students understand how to comprehend the text well while working cooperatively. It leads to gain in terms of student achievement, participation, and motivation. CSR consists of four comprehension strategies that students apply before, during, and after reading in small cooperative groups. These reading strategies are: (a) preview (before reading), (b) click and clunk (during reading), (c) get the gist (during reading), and (d) wrap-up (after reading). Therefore, the writer was interested in doing a research entitled "Improving Functional Reading Achievement of the Eighth Grade Students of SMP Negeri 10 Palembang through Collaborative Strategic Reading (CSR)." Thus, the problems of this study were formulated in the following questions: 1) Was there any significant difference in students' functional reading achievement before and after they were taught through Collaborative Strategic Reading (CSR)? and 2) Was there any significant difference in functional reading achievement between the students who were taught through Collaborative Strategic Reading (CSR) and those who were not?.

2. Theoretical Background

According to Richards and Renandya (2002, p.276), in English teaching activity whether it is as a second language or foreign language, reading is one of language skills which receives a special focus. There are a number of reasons for this. First, many foreign language students often have reading as one of their most important goals. They want to be able to read for information and pleasure, for their career, and for study purposes. Second, written texts serve various pedagogical purposes. Extensive exposure to linguistically comprehension written texts can enhance the language acquisition. Good reading texts also provide good models for writing, and provide opportunities to introduce new topics, to stimulate discussion, and to study language (e.g, vocabulary, grammar, and idioms).

Functional text is one of the texts that should be learned by the students besides transactional text and genre text. According to Rog (2012), functional reading is a type of reading that people do essentially to function in the world, day to day. Reynolds and Janzen (2007) simply define functional reading as, "the reading that is required to accomplish some personal or social as opposed to instructional goal (p.1678)." In other words, functional reading is one form of reading that people usually do in daily life for their social purposes, arises from real-world needs, helps people out, and solves a problem in a (hopefully) straightforward way. Therefore, it is very important to learn functional reading because its goal is to prepare the students to survive in society by helping them to cope with everyday reading experiences.

Collaborative Strategic Reading was developed by Klingner and Vaughn in 1998. They define CSR as, "an excellent technique for teaching students reading comprehension and building vocabulary and also working together cooperatively (p.32)." It means that Collaborative Strategic Reading is a technique which can improve the students' reading comprehension, increase their vocabularies, enhance cooperative skills, and enrich content area learning during the activity. As Klingner and Vaughn state that the goals of CSR are to improve reading comprehension, and increase conceptual learning in ways that maximize students' involvement.

Meanwhile, Bremer, Vaughn, Clapper, and Kim (2002, p.1) briefly define that CSR is a reading comprehension practice that combines two instructional elements: (a) modified reciprocal teaching, and (b) cooperative learning or students pairing. In reciprocal teaching, teachers and students are working together in understanding the text by concerning key features of text through summarizing, questioning, clarifying, and predicting.

CSR consists of four comprehension strategies that students apply before, during, and after reading in small cooperative groups. Klingner and Vaughn (1998) describe the four strategies as follows:

a. *Preview*: a strategy to activate students' prior knowledge, to facilitate their predictions about what they will read, and to generate interest. Preview consists of two activities: (a) brainstorming and (b) making predictions.

b. *Click and clunk*: a strategy that teaches students to identify parts of a passage that are hard to understand during reading, then using four "fix-up" strategies when they realize their failure to understand text.

c. *Get the gist*: a strategy to help students identify main ideas or the most important information in a passage during reading.

d. *Wrap up*: a strategy that teaches students to generate questions and to review important ideas in the text they have read. Wrap up consists of two activities: (a) generating questions, and (b) reviewing.

During CSR, the students are divided into small group consists of 4-6 students each group, and perform a different role. In this technique, role is an important aspect of CSR because cooperative learning seems to work best when all group members have been assigned in a meaningful task. Thus, students are assigned roles in CSR lesson that they must fulfill together.

In relation to teaching materials, the writer chose authentic materials as teaching materials during the treatment because authentic materials can increase the students' interest in reading class. Berardo (2006) states that one of the main reasons for using authentic materials in the classroom is that to introduce the students how the language is actually used. Language of authentic materials is not artificial because it is not made for classroom need, but the world use. In this case, the teacher serves as as a guide show the learners that authentic materials are the representative of the actual use of language spoken and written by native, and to give the awareness and necessary skills for students to understand how the language is used in the real situation.

3. Method

This study was a quasi-experimental research method that applied non-equivalent control group research design. According to Creswell (2012, p.309), "Quasi-experiments are experimental situations in which the researcher assigns, but not randomly, participants to groups. This is because the experimenter cannot artificially create groups for the experiment." There were two groups in this study, the experimental group and the control group. Both the experimental group and the control group received the pre-test and post-test. Before having the post-test, the experimental group was given the treatment by using Collaborative Strategic Reading (CSR) for eighteen meetings, while the control group was not given. The population of this study was 470 students from all the eighth grade of SMP Negeri 10 Palembang in academic year of 2015/2016. The writer used purposive sampling technique because the samples of this study were seleted based on the following criteria; the students were taught by the same English teacher, and they had the same reading level, level 3. The experimental group was 39 students from VIII. 2, while the control group was 37 students from VIII.1.

Before doing a try out to know whether the questions given are valid or not, the writer conducted the content validity check by having feedback from two validators. Then, the writer checked the validity and the reliability of the test before the reading test was given to the samples. The test was tried out to 39 non-sample students who were in the same grade. The validity of the test was measured by using Corrected–Item Total Correlation. After the result of the test was obtained, there were twenty three questions which were invalid. Those twenty three invalid questions were directly discarded. The result of the try out was also used to measure the reliability of the test. In order to know the reliability of the test, as Tavakol and Dennick (2011) states that the test will be reliable if the reliability coefficient is 0.70 and preferably higher. Then, the writer checked the reliability of the test by using Cronbach's Alpha in SPSS version 22 for windows. Based on the calculation, the reliability coefficient

was 0.97, and it means that the test was considered reliable. Thus, there were 37 items for reading test to be given to the samples of this study.

After the valid and reliable questions were obtained, the writer gave a reading test as the pre-test and the post-test to the experimental and the control group. Then, to analyze the score of the tests, the writer used a standard formula t-test to compare the result of test between the two groups. The writer examined the data by using paired sample t-test to find out whether there was a significant difference in pre-test and post-test scores in the experimental group. Then, the writer used independent sample t-test to see the significance in the post-test scores between the experimental group and the control group. Before analyzing the data by using independent sample t-test and paired sample t-test, the writer had checked the normality and the homogeneity of test. The writer used SPSS 22 windows version to analyze the data.

4. Result and Discussion

The Distribution of the Functional Reading Achievement Score

The results of the reading test of the experimental group and the control group were distributed based on five categories: Excellent, Good, Average, Low, and Failed. The range of score is between 1-100.

Table 1
The Score Distribution for the Experimental Group and the Control Group (N=76)

Score Range	Category	Experimental Group				Control Group			
		Pre-test		Post-test		Pre-test		Post-test	
		N	%	N	%	N	%	N	%
86-100	Excellent	1	2.56	7	17.95	0	0	1	0.27
71-85	Good	7	17.95	29	74.36	10	27.03	14	37.84
56-70	Average	16	41.03	3	7.70	22	59.46	19	51.35
41-55	Poor	14	35.90	0	0	5	13.51	3	8.11
0-40	Failed	1	2.56	0	0	0	0	0	0
Total		**39**	**100**	**39**	**100**	**37**	**100**	**37**	**100**

As shown in Table 1, based on the result of pre-test in the experimental group, there was only one student (2.56%) in the excellent category, and the result of post-test showed that seven students (17.95%) were in the excellent category, more than half of the students (74.36%) were in the good category, three students (7.70%) were in the average category, and none of students was in the poor and failed category anymore. While in the control group, the result of pre-test showed that more than half of the students (59.46%) were in the average category and none of students was in the excellent and failed categories. After doing the post-test, there were many students in the control group who were still in the average category and only one of them (0.27%) was in the excellent category.

The Results of the Statistical Analyses

The normality of the test is to check whether the data are normally distributed or not. In determining the normality of the data, one sample of Kolmogorov-Smirnov Z test was used.

Table 2
The Result of Normality Test (N=76)

Group	Pre-test				Post-test			
	Mean	Std. dev	Sig.(2-tailed)	KSZ	Mean	Std. dev	Sig.(2-tailed)	KSZ
Exp. Group	60.13	13.648	.200	.097	78.97	10.584	.077	.134
Control Group	64.59	10.584	.080	.136	66.86	10.315	.121	.129

Based on Table 2, the significance (2-tailed) of the pre-test of the experimental group was .200 and the post-test of the experimental group was .077. For control group, the significance (2-tailed) of the pre-test was .080 and

the post-test of the experimental group was .121. Since all of the values were higher than 0.05, it could be concluded that the data were normally distributed.

Homogeneity tests were done to know whether the sample groups from the population had similar variances. The writer used Levene's test to know the homogeneity in groups (experimental and control groups). The data were homogeneous if significance > 0.05, the results of the significance of the pre-test and post-test in the experimental group was (.542>0.05) and the results of the significance of the pre-test and post-test in the control group was (.118 >0.05), the results of the significance of the pre-test in the experimental and control groups was (.238>0.05), and the results of the significance of the post-test in the experimental and control groups was (.098>0.05). Therefore, it could be stated that data in experimental and control groups were homogeneous.

Paired sample t-test was used to check whether or not there was a significant difference in students' functional reading achievement before and after they were taught through Collaborative Strategic Reading (CSR). The result of the test could be seen in the following table:

Table 3
The Result of Paired Sample T-Test

Group	Test	Mean	Mean Diff.	t	df	Sig.(2-tailed)
Experimental	Post-test	78.97	18.84	11.337	38	.000
	Pre-test	60.13				
Control	Post-test	66.86	2.27	1.637	36	.110
	Pre-test	64.59				

Based on the paired sample t-test of the experimental group, the mean score of the post-test (78.97) was higher than the mean score of the pre-test (60.13) with the mean difference 18.84. Since the significance (2-tailed) was lower than 0.05, the null hypothesis (H_01) was rejected, and the alternative

hypothesis (*H₁1*) was accepted. Therefore, it could be stated that there was a significant difference in students' functional reading achievement before and after they were taught through Collaborative Strategic Reading (CSR).

Second, in the control group, the mean score of the post-test (66.86) was higher than the mean score of the pre-test (64.59). Then, the mean difference between the post-test and the pre-test was 2.27 at the significance value (2-tailed) 0.05. Because the significance (0.110) was higher than 0.05, it indicated that there was no significant difference from the pre-test and the post-test of the control group.

Independent sample t-test was used to check whether or not there was a significant different in functional reading achievement between the students who were taught through Collaborative Strategic Reading (CSR) and those who were not. The result of the test could be seen in the following table:

Table 4
The Result of Independent Sample T-Test

Group	N	Pre-test				Post-test			
		Mean	Mean Diff.	Std Dev	Sig.(2-tailed)	Mean	Mean Diff.	Std Dev	Sig.(2-tailed)
Exp. Group	39	60.13	4.46	13.648	0.116	78.97	12.11	5.838	.000
Control Group	37	64.59		10.584		66.86		10.315	

The result of independent sample t-test showed that the mean difference of pre-test in the control group was higher than in the experimental group (64.59>60.13) and the significance (2-tailed) was higher than 0.05 (0.116>0.05). Since ρ-value>0.05, it means that there was no significant difference in pretest of reading achievement of both experimental and control groups. Whereas, in the post-test, the mean difference of the control group and

the experimental group (12.11) was significantly different since the significance (2-tailed) was less than 0.05 (0.000<0.05). It could be concluded that the null hypothesis (H_02) was rejected and the alternative hypothesis (H_12) was confirmed. In other words, there was a significant difference in functional reading achievement between the students who were taught through Collaborative Strategic Reading (CSR) and those who were not.

Based on the statistical analyses, the writer attempted to describe some interpretations. First, statistically the students in the experimental group showed progress in their reading achievement after the treatment. The result showed that there was a significant difference in their reading achievement after they were exposed through CSR. The data analysis showed that the mean score of pre-test and post-test of experimental group increased, and the *p*-value of paired sample t-test was less than 0.05. The improvement itself could happen because after the experimental group was assigned pretest, the writer gave them the treatment for one month.

Second, the writer compared the total of the mean difference in the experimental group to the mean difference of control group to know which one was more significant on reading achievement. It was found that there was also a significant difference in the mean score of the post results in the experimental and control group. The reason is that functional reading achievement in control group is not significantly improved. However, both control and experimental groups started at the same reading level that was third level. During the teaching and learning activity, the students in control group also learned about functional texts, and the teacher just explained the materials briefly, and then asked the students to do the assignment individually which could make the students not enthusiastic during teaching and learning activity. Therefore, it could be stated that the strategy, which was used in this study, could help the students to improve their reading achievement, especially tho help the students who had difficulties in understanding functional texts.

The improvement could also be seen from the score distribution of the pre-test and the post-test. In the experimental group, there were five categories:

excellent, good, average, poor, and failed. After the treatment, their reading achievement was in excellent, good, and average categories. None of the students was in the poor and failed categories anymore. While in the pre-test of the control group, the students' performances were in good, average, and poor categories. Then, in the post-test of the control group, the students were divided into four categories: excellent, good, average, and poor categories. It means that even there were some students in experimental group which were in poor and failed categories, but they could improve their score in the post-test result after they were taught through CSR. Whereas in the control group, there was only one student which was in the excellent category, and each category did not change significantly. This was the reason why there was a significant difference between post-test of experimental and control group.

Thus, it could be assumed that Collaborative Strategic Reading (CSR) can be an alternative strategy to improve functional reading achievement of the students at SMP Negeri 10 Palembang because CSR helped the students to improve their functional reading achievement. As Klingner and Vaughn (1998) state that the goal of CSR are to improve reading comprehension, and increase conceptual learning in ways that maximize the students' involvement. The result of this study is in line with the findings of Rosalina (2014) and Prawati (2013) who applied this strategy in their reading class with the different type of texts. Rosalina (2014) applied CSR technique for improving reading comprehension achievement of narrative text in SMA PGRI 109 Kota Tangerang while Prawati (2013) applied Collaborative Strategic Reading (CSR) in improving reading expository texts in SMAN 2 Bangkinang - Kampar Regency, Riau Province. The results of their studies showed that CSR is an effective strategy in improving the students' reading comprehension achievement. In addition, the use of authentic materials such as magazine, newspaper, and brochure during the treatement gave positive impact to the students, the writer found out the students were more enthusiastic when they were taught by using authentic materials because they were never taught by using those materials before. They were motivated because they directly could

see English newspaper or magazine, and feel the atmosphere like they were in the real life not in the classroom. As Berardo (2006) states that using authentic materials can increase the students' interest in reading. This statement was also supported by the result study of Putri (2015) that showed using authentic materials as a means of teaching reading comprehension to the tenth grade students of SMA Negeri 9 Palembang was an effective way to improve their reading comprehension achievement. In summary, the strategy and the teaching materials that were used in this study could help the students to improve their functional reading achievement and make them motivated in learning English.

5. Conclusion and Remark

Based on the findings and interpretations of this study, the use of Collaborative Strategic Reading (CSR) could be applied in teaching reading especially functional texts for the eighth grade students in junior high school level. CSR could also help the students to improve their functional reading achievement. It could be seen from the students' functional reading achievement after given the treatment by applying Collaborative Strategic Reading (CSR). There was also a significant difference in functional reading achievement between the students who were taught through Collaborative Strategic Reading (CSR) and those who were not. Then, using authentic materials as the teaching materials made the students motivated in learning English.

This study offers some suggestions. First, the teachers who teach reading in English should apply strategies that can help students to improve their reading achievement. Collaborative Strategic Reading (CSR) can also serve as the alternative strategy in teaching English reading. It is effective to improve the students' reading achievement and recommended to the teachers who teach English in the classroom. In this case, the use of various reading material sources such as authentic materials can be done by English teachers to provide the students with different learning materials that most English teachers only focus on the use of textbook. Before giving the students the authentic texts, the

teacher should consider about the students' reading level in order to get good implementation of the authentic texts. It means that the teacher should check the readability level of the text.

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AN ANALYISIS OF THE RELATIONSHIPS AMONG RELIGIOUSITY, MOTIVATION, AND ENGLISH COMPETENCE OF THE STUDENTS OF ENGLISH STUDY PROGRAM, FACULTY OF TEACHER TRAINING AND EDUCATION, SRIWIJAYA UNIVERISTY

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Abstract

This study is aimed at finding out the religiousity level, English learning motivation, and English competency of the students of English Education Study Program, Faculty of Teacher Training and Education, Sriwijaya University as well as relationships among the three variables. This is a descriptive and correlational study in which the findings aree statistically described and correlated. It is found that the students' level of religiousity is high. The students' level of learning motivation is also high. The students' English competency is 45.7 % is in Low Intermediate category, 24.9 % was in Elementary category, 19.9 % was in High Intermediate category, and 9.8% was in Advanced category. There is a signficant relationship between religiousity and learning motivation. However, there is no significant relationship between religiousity and English competency and there is no significant relationship between learning motivation and English competency either.

Keywords: Religiousity, learning motivation, English competency

1. Introduction

Education is a social institution which is established for transferring knowledge and values from generation to generation. Therefore, education has principles, methods and objectives. It can be specified that education is learning, knowledge, skill and habit of a group transferred from one generation to the next through teaching and training. As a social institution, education carried out objectives and programs. In applying the programs, It includes some components and has various dimensions. The human component consists of

educators, students, teachers and social environments. In education program, at least there are three dimensions such as planning, implementing, and evaluating. Those dimensions are meant to achieve the targets which have been set before. Several problems usually come up in managing the programs which might influence the intended quality.

PISA (2009) categorised Indonesian students' learning score below the average score set by the Organization of Economic Cooperation and Development (OECD) which ranked 57[th] out of 65 countries. Indonesia was on the 61[st] on mathematics and 60[th] on science. Furthermore, based on the Human Development Index of UNESCO in 2011, Indonesian's rank was on the 124[th] out of 187 countries which was below other ASEAN countries such as Singapore (26[th]), Brunei Darussalam (33[th]), Malaysia (61[st]), Thailand (103[rd]) and Philippines (112[nd]).

The globalization has also brought changes in any fields. This has caused many concerns in the field of education particularly in the awareness of technology mastery as well as information technology. In addition, the volume of science & technology and information which must be accessed and mastered have also highly increased. Some tendencies come up as the result of the changing itself. According to Nata (2012:2) those are possibly a challenge and a chance for education.

For Indonesians, education is the main concern to create an intelligent and skillful generation which has a strong diversity concept and excellence in science & technology and fervent in faith. Article 1 section 1 of national education system no 20/ 2003, cited in Tyas (2012 : 14)

".. education is conscious and deliberate efforts to create a teaching and learning process atmosphere so that the students can actively develop their own potentials used to have a spiritual power of religion, a self-control, intelligences, a noble character and skills which are necessary for themselves, society, nation and state. "

Moreover, Sujarwo & Mulyadi (2008 : 2) said that making a conducive environment in order to gain an optimal learning process in developing students self-potential is the central activity to empower and train the students to be independent in using their skills and knowledge. They further state

" The purpose of education is to generally make an environment which enables   students to expand their talents and skills optimally so that they are able to actualize   themselves and can fully function agree with their personal and people necessities.   Every people has different talents and abilities, therefore it needs variant education   treatments. One of the possibilities to elaborate talents and abilities for the students is   a learning activity.

International bereau of education (UNESCO–IBE)   in a report entitles *Learning The Treasure Within* in 1996 put four education pillars on the 3rd millennium namely learning (how to) to know, learning how to act, learning how to live together (other people) and learning how to become (a good person) Gundara (2011:295).

The transformation in many fields always associates education in a broad defenition. Alex Inkles and David Smith research cited in Budiman (1996 : 35) they conclude that education is the most efective way to change human. Furthermore, they state the impact of education is three times more powerful than other efforts.

To achieve success in education programs, it needs many settlements from many components and dimensions. One of them which can improve the quality of learning outcomes is the ability to indentify the students' socio-cultural background, intelligence, orientation and including level of religiosity and learning motivation. This research will identify the correlation among religiosity, motivation in learning English and English competence of the students.

The objectives of this study are (1) to find out the religiousity level of the students of English Education Study Program, (2) to find out the English

learning motivation of the students of Enetenceglish Education Study Program, (3) to find out the English Competence of the students of English Education Study Program, (4) to find out the relationships among religiousity, English learning motivation, and English competence of the students of English Education Study.

2. Theoretical Background
The concept and defenition of religiousity

To reach the objectives of learning process, religiosity or faith is regarded as one of the stimulating factors in seeking knowledge including teaching and learning process. It is a fact that one of the factors influencing students learning outcomes is conducive atmosphere implemented as learning environment. The conducive atmosphere is related to how the lecturers motivate and explain the students how the religious obligations take a role in study. Lecturers as the facilitators are humane components in teaching and learning which used to create professional human resources (Rustopo dan Sutrisno, 1993 : 193)

Students' religiosity is part of personality which is very essential. Any kind of attitude and behavior will be influenced by the level of the students' religiosity. This has impacts toward learning motivation because religion (Islam) gives a strong encouragement for every moslem to study as expressed in Quran by questioning reciprocally whether people who know and who don't are the same. Afterwards, In Quran it is stated that God will elevate the degree of the believers and knowledgeable. Hadith of prophet Muhammad (Pbuh) stated that learning is obligations for every moslem either for male or female. On one side, religion extends a motivation to learn and on the side of the learner, it can improve their faith because they testify verses of Quran.

Learners have various levels of religiosity and motivation which could define them differently from other learners. Therefore, Identifying learners' religiosity and motivation could be the reason to create better teaching and

learning environments. The information of learners' religiosity and motivation could enact the learners to be more aware of the diversity among them which means the educators will more concern, care and look for the appropiate strategies which possibly fit with the students' level of religiosity and motivation.

Religiosity is a psychology construct because it is an abstract concept and functions as a variable of research, it needs to be operationally described by showing indicators. These are observable and measurable. Religiosity is an abstract word noun which is rooted from word religion in English. Yetti quoted from dictionary, it defines that *religio* is from Latin *relego* which means recheck and contemplating the conscience.

Motivation in teaching and learning English

Motivation is a individual desire which leads to an action or a behavior. Brown (1987 : 114) interprets that "Motivation is commonly thought of as an inner drive, impulse, or desire that moves one to a particular action." This impulse is reactions to fill some necessity and to fullfill those needs a individu will do actions. In Brown's opinion, "… human beings… have needs or drives that are more or less innate, yet their intensity is environmentally conditioned" (Brown, 1987: 114).

Finnocchiaro quoted by Larsen-Freeman (2000) emphasize that in teaching process, the educators should keep the learners' motivation. Further, the teachers must, raise and increase learners' motivation. Only with high motivations a success of learning will be optimal. Lightbown & Spada (1999: 39) stated some researchs show that positive attitudes and motivations correlate with foriegn language learning success. Directing students' attention to lessons including the material and teaching and learning activities become very important obligations for teachers.

As well as making efforts to let the students have positive attitudes and motivations in learning, this effort is part of the role of teachers and other environment. Lightbown & Spada (1999: 39) stated directing the learners to have internal motivation will be more useful than giving external motivation in learning foreign languages. Sullo (2007) also stated internal control psychology

as known as internal motivations will give big impacts rather than external factors. Eventhough external motivations appearing from lure of rewards or punishments give some impacts, it doesn't make those behaviors last longer; it will hold off as long as the rewards or punishments exist. Brown (2001:76) additionally stated negative effects of giving rewards are addictive. Only with rewards either things or scores, learners will do something or study. Otherwise, when it is no longer they don't need to make assignments anymore.

English Competence

Students' English competence is obtained by giving TOEFL like test. TOEFL like test is English language test in which the questions are similar to TOEFL. This test consists of three sections namely section 1 (Listening) tests the comprehension of various spoken English. The first section is divided into three parts which are Part A, B and C. Part A consists of 30 questions for 30 short dialogues. Part B consists of 8 questions for 8 long dialogues. Part C consists of questions for 3 monologs or talks. Section 2 (Structure) tests the understanding competence of English grammar which consist of 40 completing sentence question. Grammar is tested starting from simple to complex sentences. The tested grammar is grammar implemented to communicate either written or spoken. Section 3 (Reading) tests reading competence. This part consists of 50 questions for 5 or 6 distinct texts. It tests how far someone comprehends about English texts and English vocabulary mastery.

3. Method

This is a descriptive study in which the charateristics of the students of English Education Study Program are described. The charateristics are the students' religiousity, learning motivation, and English competence. A corelational analyis was used to find the relationships among the religiousity, motivation, and English competence. The sample of this study was the 2^{nd}, 4^{th}, and 6^{th}

semester students of the English Educatation Study Program, Faculty of Teacher Training and Education, Sriwijaya University consisting of 221 students. The data for religiousity and learning motivation were collected through religiousity and learning motivation ready-made questionaires. TOEFL prediction was given to find the students' current English competence.

4. Result and Discussion
Students' Religiousity

The students can be categorised as religious since almost 95% of the students have high religiousity level. There is only one student (5.5 %) who has medium regiousity level. There are no students who have low religiousity level. The students' religiosity on the questionnaire ranged from a minimum of 36 to a maximum of 100 with the mean of 90.46 and a standard deviation of 6.450.

Table 1

Students' Religiousity Level

No	Specification	Data	
1	Total Items	25	
2	Respondents	221	
3	Respondent's Highest Score	100	
4	Respondent's Lowest Score	36	
5	5 Respondent's Highest Score	96 97, 98, 99, dan 100	
6	5 Respondent's Lowest Score	36, 72, 77, 78, dan 79	
7	Respondent's Average Score	**90**	
8	Respondent's Mode Score	91	
9	Respondent's Median Score	89	
10	Respondent's Range Score	64	
11	Respondent's Standard Deviation Score	6.450	
12	Respondent's Highest Score	186 responden (78,7%)	Score 86 – 100
13	Respondent's High Score	34 responden (15.8%)	Score 70 – 85
14	Respondent's Medium Score	1 responden (5.5%)	Score 54 – 69
15	Respondent's Low Score	0 responden (0%)	Score 37 – 53
16	Respondent's Very Low Score	0 responden (0%)	Score 20 – 36

Table 2

Religiousity Distribution

Score Interval	Category	Frequency	Percentage
86 – 100	Very High	186	78,7%
70 – 85	High	34	15.8%
54 – 69	Medium	1	5.5%
37 – 53	Low	0	0%
20 – 36	Very Low	0	0%
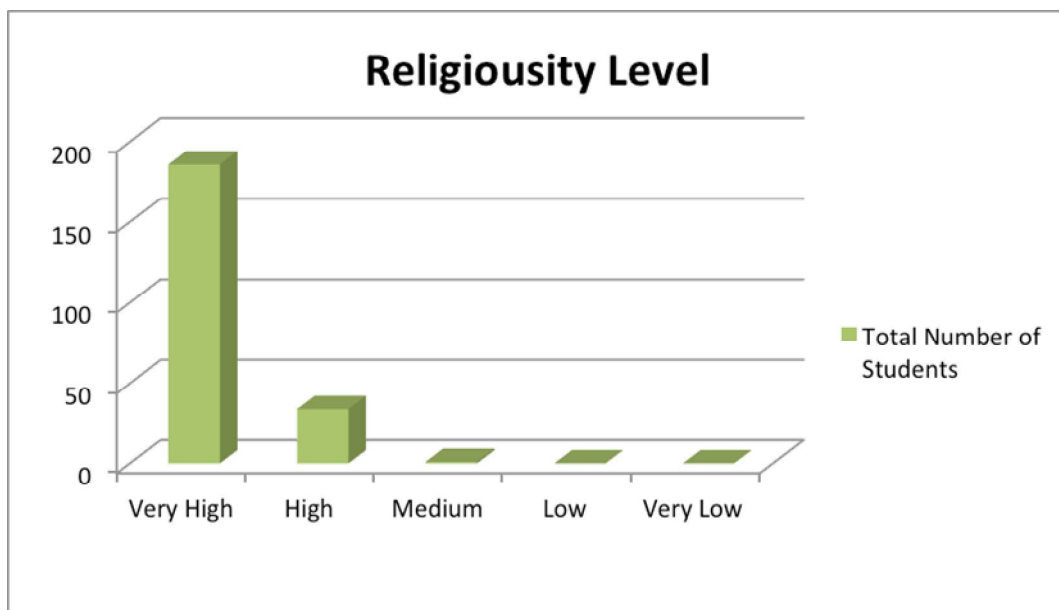
Students' Learning Motivation

The students can be categorised as highly motivated since more than 80% of the students have high motivation level. There are 8 students (4.1 %) who have low motivation. the students' motivation on the questionnaire ranged from a minimum of 11 to a maximum of 124 with the mean of 103.64 and a standard deviation of 13.169.

Table 3
Students' Learning Motivation Level

No	Specification	Data	
1	Total Items	25	
2	Respondent	221	
3	Respondent's Highest Score	124	
4	Respondent's Lowest Score	11	
5	5 Respondent's Highest Score	120, 121, 122, 123, and 124	
6	5 Respondent's Lowest Score	11, 35, 67, 68, and 76	
7	Respondent's Average Score	**103**	
8	Respondent's Mode Score	105	
9	Respondent's Median Score	112	
10	Respondent's Range Score	113	
11	Respondent's Standard Deviation Score	13.169	
12	Respondent's Highest Score	78 respondents (32,6%)	Score 110 – 125
13	Respondent's High Score	104 respondents (47%)	Score 95 – 109
14	Respondent's Medium Score	31 respondents (16,3%)	Score 80 – 94
15	Respondent's Low Score	6 respondents (2.7%)	Score 65 – 79
16	Respondent's Very Low Score	2 respondents (1.4%)	Score < 50 – 64

Table 4
Motivation Distribution

Score Interval	Category	Frequency	Persentage
110 – 125	Very High	78	32.6 %
95 – 109	High	104	47 %
80 – 94	Medium	31	16.3 %
65 – 79	Low	6	2.7 %
< 50 – 64	Very Low	2	1.4
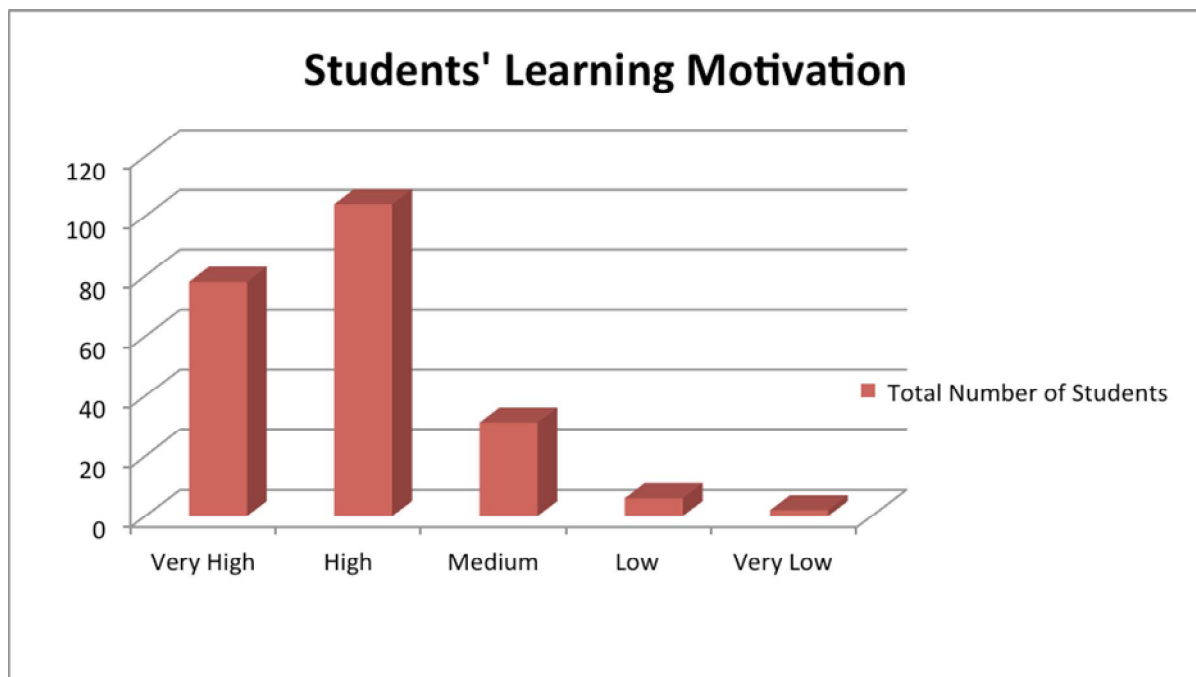
The Students' English Competence

As shown in table 2, there were 18 or 9.5% students whose score were 525 – 677 (Advanced), 47 or 19.9% students whose score were 480 - 520 (High Intermediate), 101 or 45.7 % students whose score were 420 - 480 (Low Intermediate) and 55 or 24.9% students whose score were 310 - 420 (Elementary). It was found that the students' lowest TOEFL score was 313 and the highest score was 593 with the mean of 453.72 and a standard deviation of 49.103 as shown in table 1.

Table 5
The Score Distribution of the Students' TOEFL Score (N=221)

Score Interval	Category	Description	Frequency	Percentage
525 – 677	*Advanced*	Has fully operational command of the language: appropriate, accurate and fluent with complete understanding.	18	9.5 %
480 – 520	*High Intermediate*	Has operational command of the language, though with occasional inaccuracies,	47	19.9 %

		inappropriacies and misunderstandings in some situations. Generally handles complex language well and understands detailed reasoning.		
420 – 480	*Low Intermediate*	Has partial command of the language, coping with overall meaning in most situations, though is likely to make many mistakes. Should be able to handle basic communication in own field.	101	45.7 %
310 – 420	*Elementary*	Basic competence is limited to familiar situations. Has frequent problems in understanding and expression. Is not able to use complex language.	55	24.9 %
Total			221	100%

(Carson, et al., 1990)

As shown in table 2, there were 18 or 9.5% students whose score were 525 – 677 (Advanced), 47 or 19.9% students whose score were 480 - 520 (High Intermediate), 101 or 45.7 % students whose score were 420 - 480 (Low Intermediate) and 55 or 24.9% students whose score were 310 - 420 (Elementary).
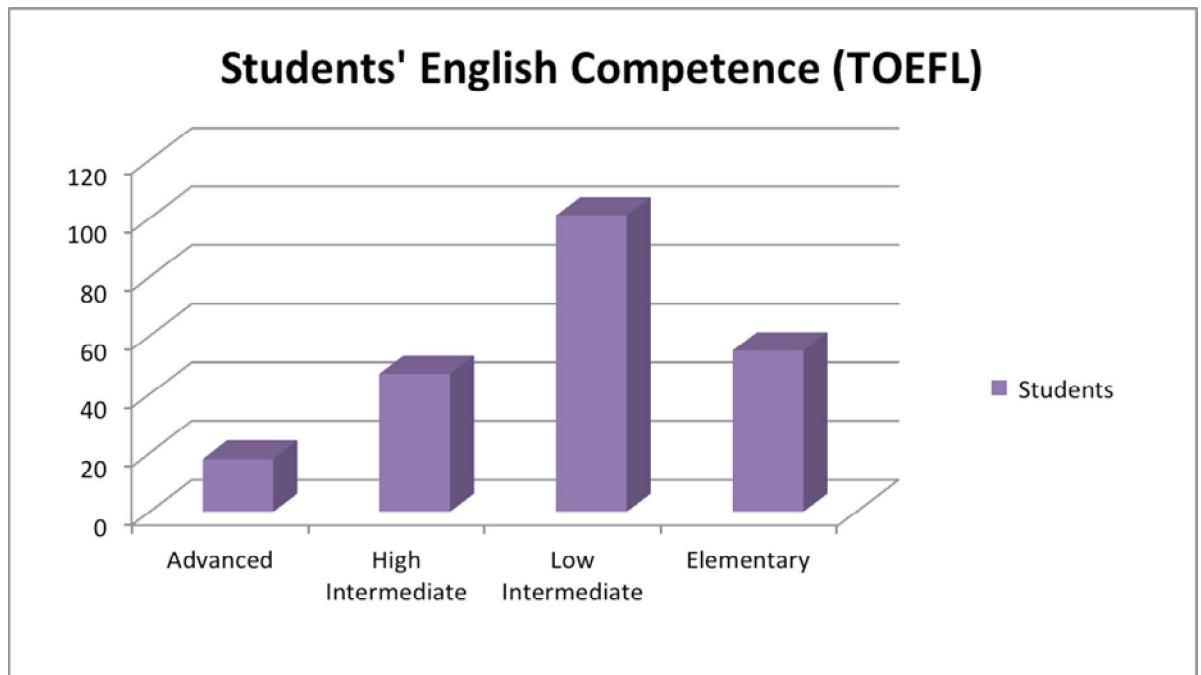
As shown in Figure above, most of the students' TOEFL score was low intermediate. The total number of students who obtained this level was 101. Meanwhile the least number was advanced. There were only 18 students in this level. It can be assumed that most of the students' English competence were not required yet for English study program level.

Relationships among the Three Variables

Table 6
Relationships among Religiousity, Learning Motivation, and English Competence

Variables	Religiosity	Motivation	English competence
Religiosity P (value) < 0.05 Sig (2-tailed)	1	.171* .011	-.067 .321
Motivation P (value) < 0.05 Sig (2-tailed)	.171* .011	1	.059 .381
English competence P (value) < 0.05 Sig (2-tailed)	-.067 .321	.059 .381	1

Correlation is significant at the 0.05 level (2-tailed).*

A correlation was considered to be significant if the r-obtained was higher than r-table (r-obtained > r-table) which was based on the total of the sample and *p value* (probcompetence) was lower than 0.05 ($p < 0.05$). The correlation result showed that there was one significant correlation among religiosity, motivation and English competence. It was between religiosity and motivation with r-obtained (.171) > r-table (.131) and *p value* (.011 < 0.05) furthermore the correlation index number was not given minus (-) symbol which means the direction of the correlation was positive (the same direction). On the other hand, there was no significant correlation between religiosity and English competence with r- obtained (-.067) < r- table (.131) and *p value* (.321 > 0.05) and the correlation index number was negative (opposite direction). Last, there was no significant correlation between motivation and English competence with r-obtained (0.59) < r-table (1.31) and *p value* (3.81 > 0.05) with positive correlation index number.

5. Conclusion and Remark

Three conclusions are drawn in this study. First, the students' English competence level is mostly categorised low intermediate. Second, in general, the students' motivation and religiousity were categorized very high. Third, there is only one significant correlation among the students' English competence, motivation and religiousity. It is the correlation between students religiuosity and motivation based on the degree of correlation coefficient. However, there is an insignificant correlation between English competence and motivation. There is also no correlation between English competence and religiousity. It can be assumed that the students' motivation in learning English is influenced by their level of religiousity, on the other hand, English competence level is not influeced by students' motivation and religiuosity. It may be determined by learning styles, habit, TOEFL strategies and background knowledge.

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TEACHING READING BY USING TEA PARTY STRATEGY TO THE EIGHTH GRADE STUDENTS

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Abstract

The aims of this quasi experimental study were to investigate whether or not there was (1) a significant improvement of students' reading comprehension achievement after being taught by using Tea Party strategy, and (2) the significant difference of reading comprehension achievement between the students who were taught by using Tea Party strategy and those who were not. The population of this study was 282 eighth graders of one state junior high school in Palembang. The sample chosen was 60 students who were divided equally to the experimental and control groups. In collecting the data, pretest and posttest that consisted of 40 items were given to both groups. The result showed that there was a significant improvement in students' reading comprehension achievement after getting the treatment and there was a significant difference of the students' reading comprehension achievement in both groups.

Keywords: *reading comprehension, Tea Party strategy*

1.   Introduction

Language is one of the important things in human's life. It is used every day in our communication. Without language, we cannot communicate and understand each other. Clark (2013) states that language is an extremely important way of interacting with the people around us. But, in this world, almost every country has its own language. For making the communication easier, people can use English as the international language which has the different position in every country. Like in Indonesia, Nordquist (2012) states, English has no special administrative status but is recognized as a lingua franca.

In Indonesian school, English nowadays is taught from the elementary to the university level. Depdiknas (2004) states that there are four skills which

must be mastered by the students. But, reading skill gets the most attention in English teaching. In the Graduation Competency Standard of English (Depdiknas, 2004), where English is in the National Examination, the students are required to understand the text or non-text by determining the implicit information, overview and main idea and interpreting the meaning of words, phrases and sentences.

However, reading skill is still difficult for many people. Based on the research, Hamra and Syatriana (2010, p. 34) state that some difficulties in reading skill appear because of some different reasons, they are: the lack of vocabulary, learning support, language knowledge, the pronunciation difficulties, the lack of the application of reading strategies, the lack of reading skill and interest, reading amount and reading motivation. One of the ways for solving these difficulties is by choosing the appropriate strategy in teaching English.

From the informal interview to the English teacher of a state junior high school in Palembang, it was found that some difficulties above are also gotten by the students. Reading was taught by using the method which is very commonly used in every school, where the teacher only asks the students to read aloud, translate into Bahasa Indonesia individually and the last is doing the exercises. It is not interesting and the students often get some difficulties in understanding the text. So that, the writer tries to apply Tea Party strategy in teaching reading.

Tea Party strategy is the fun and interactive strategy for teaching reading which has found by Beers. From the book description, Beers (2003) states that this strategy is transparent and accessible to adolescents. Some English teachers have used this reading strategy for helping the students to be more motivated in learning and it was successful. One of them is Fitriani (2013). The result of the study showed that, the students who were taught by using the Tea Party strategy got higher scores than who were not taught by using the Tea Party strategy. It is because the strategy varies the classroom activities and movement to keep the students from getting bored or disengaged. By applying

this strategy, the students will not only be motivated, but they also will be helped in understanding the text which they will learn by doing the prediction in interactive way.

2.   Theoretical Background

Tea Party Strategy

According to Colorado (2007), tea party strategy is one of the cooperative learning strategies which promotes learning and fosters respect and friendships among students. Then, Camp (2012) states that, tea party strategy is a wonderful reading strategy that she used often with her struggling readers to help them practice the critical skill of making and confirming predictions. It worked well because students were then already exposed to the style of the text before they went into it, and read with interest to see if their predictions were correct or not. In brief, it is the strategy which is able to make students to encourage their reading comprehension which is done before going to the text and done in active way.

The reason of choosing the Tea Party strategy in teaching reading is because this strategy has many benefits which will affect the teaching and learning process. Julie (2012) and Colorado (2007) state that there are some benefits of using the Tea Party strategy, they are: Tea Party gets adolescents up and moving around the classroom, which they are often anxious to do. It will vary the classroom activities and movement to keep them from getting bored or disengaged; by using this strategy the dependent readers are able to work with their peers to make predictions and connections that will give them something to look for when they read. The dependent readers who are not always able to make inference on their own, will be helped by their classmates; this strategy will also establish classroom norms and protocols that guide students to contribute, stay on task, help each other, encourage each other, share, solve problems, give and accept feedback from peers.

Teaching Procedure by Using the Tea Party Strategy

According to Beers (2003), these are the steps in applying the tea party strategy in teaching reading to the adolescent students in the classroom:

Creating Cards

The teacher uses index cards or small sheets of paper to write the phrases, sentences, or words from the text that the students will read without paraphrasing the text. The teacher must choose the phrases that offer insight into characters, plot, setting, and conflicts.

Having Students "Socialize"

The teacher passes out cards and let students roaming around the room, talking and chatting individually about the information on the cards and what they think the text will be about between ten-to-twelve minutes. As students study the phrases on their cards, they begin to develop an outline in their minds about the story and text elements. They gain insight into possible settings, characters, cause and effect relationships, the sequencing of the material, and gain insight into what the story will be about.

Returning to Small Groups

The teacher lets students to meet in small groups (four-to-five students per group is ideal) to discuss their predictions and what they think is happening in the story or text.

Recording Predictions

The teacher asks the students to write a collaborative "We Think" statement. The paragraph can begin with, "We think that this selection is about…".

Sharing "We Think" Statements

The teacher asks the groups of students to share their "We Think" statements and asks them to explain how they reached their prediction.

Reading the Selection

The teacher lets the students to read the text which is used for the Tea Party. The teacher can use literature circles or allow for a specific time for students to read the text. If the students used large pieces of chart paper for

their predictions, let them post it around the room for others to reflect on as they read and review the text.

Doing Reflection and Discussion

The teacher lets the group of students discuss how they differed from the actual text and let the students review the words and phrases chosen during the initial Tea Party and converse with how they created relationships in their mind during that activity and how the relationship changed during the actual reading of the text.

3. Method

Research Design

This study was conducted by using quasi experimental research method and non-equivalent control group design of research. The pretest and posttest in the form of reading test was administered to both experimental and control groups. The treatment was only given to the experimental group by teaching them by using Tea Party strategy for 12 meetings.

Population and Sample

The population of this research was all of the eighth grade students of SMP Negeri 52 Perumnas Talang Kelapa Palembang. There are 282 students from seven classes of the eighth grade students. Then, the sample of this research was taken by using purposive technique sampling by determining the similarities of two classes. In this study, based on the informal interview to the English teacher, the samples which were chosen were the students of $VIII_4$ and $VIII_6$ class. The total samples were 80 students, 40 students from each class. After matching the pretest score, there were only 30 pairs of students who got the same scores. Thus, there were 60 students used as the samples, 30 students in control group and 30 students in experimental group.

Data Collection

To collect the data, a reading test was administered to both groups before and after the treatment given. The reading comprehension test consisted of ten short recount texts followed by forty items.

Validity and Reliability Test

The content validity of the reading comprehension test was checked by giving the test instrument to three raters to make sure that the test content is relevant with the purpose of the study and the syllabus. Based on the expert judgments, it was known that the reading comprehension test instrument was appropriate and could be used as the test instrument of this study. After that, try out test was administered to 36 eighth grade students of SMP Negeri 54 Palembang by giving the 60 items of the test. The results of try out test were used to analyze the validity of each item. The result of *Cronbach Alpha* showed that only forty items were valid. After getting the valid items, reliability was also analyzed by using *Guttman Split-Half*, since the coefficient of the reading test was 0.760, higher than 0.70, the instrument was considered reliable

Data Analyses

Two kinds of analysis were used to answer the hypotheses in this study. First, to know whether there was a significant difference in students' score before and after getting the treatment, paired sample t-test was applied. Then, independent sample t-test was used to see the difference of pretest and posttest in both groups. SPSS 20 was used in analyzing all the data obtained.

4. Result and Discussion

Descriptive Statistics

Table 1
The Score Distribution of Reading Comprehension Test (N=60)

Score Interval	Level of Achievements	Experimental				Control			
		pre		post		pre		post	
		N	%	N	%	N	%	N	%
86-100	Very good	1	3	2	7	1	3	0	0
71-85	Good	15	50	26	87	15	50	22	73
56-70	Average	9	30	2	7	10	33	8	27
41-55	Poor	4	13	0	0	3	10	0	0
≥40	Very poor	1	3	0	0	1	3	0	0
	mean	68.26		78.70		68.26		73.10	

As shown in table above, the result of posttest showed satisfying result made by the students in experimental group. All of the students could reach the level above Average after getting the treatment. Meanwhile, students in control group also had an improvement, but it was not as good as the experimental one.

Paired Sample T-Test

To know whether or not the Tea Party strategy gives significant improvement on students' reading comprehension achievement at SMP Negeri 52 Palembang, the result of students' pretest and posttest scores in experimental group are compared by using paired sample t-test. Based on the analysis, it was found that the p-output is 0.000 and t-value is 6.249. It means that there is a significant improvement since the p-output is lower than 0.05 and t-value is higher than the t-table, 2.045.

Table 2
The Result of Paired Sample t-Test

Experimental				Control			
Mean		Mean diff	t / Sig.	Mean		Mean diff	t / Sig.
Pre	Post			Pre	Post		
68.27	78.70	10.43	6.249	68.27	73.10	04.83	2.763
			0.000				0.010

Independent Sample T-Test

To know whether or not there was a significant difference between the students who were taught by using the Tea Party strategy and those who were not, the result of students' posttest scores in both groups were compared by using independent sample t-test. Based on the analysis, it was found that the *p*-output was 0.000. Since it was lower than 0.05, it can be concluded that there was a significant difference of students' reading comprehension achievements who were taught by using the Tea Party strategy and those who were not.

Table 3
The Result of Independent Sample t-Test

Group	Mean	Mean difference	t / Sig.
Experimental	78.70	5.600	4.750
Control	73.10		0.000

5.   Conclusions

In this study, the writer concluded two things. First, from the result of paired sample *t*-test, it was found that there was a significant improvement in the students' reading comprehension after being taught by using Tea Party strategy. It was because of the use of Tea Party strategy which can help the students' to get the better reading comprehension result. It is in line with what Camp (2012) states that, tea party strategy is a wonderful reading strategy that is used often with the struggling readers to help them practice the critical skill of making and confirming predictions. It worked well because students were then already exposed to the style of the text before they went into it, and read with interest to see if their predictions were correct or not. In brief, it is the strategy which is able to make students to encourage their reading comprehension which is done before going to the text and done in active way.

Second, from the result of independent sample *t*-test, it was found that there was a significant difference between the students who were taught by using Tea Party strategy and those who were not. It was also besauce of Tea Prty strategy that has many advantages in teaching reading comprehension.

According to Julie (2012) and Colorado (2007), Tea Party gets adolescents up and moving around the classroom, which they are often anxious to do. It will vary the classroom activities and movement to keep them from getting bored or disengaged. Then, by using this strategy the dependent readers are able to work with their peers to make predictions and connections that will give them something to look for when they read. The dependent readers who are not always able to make inference on their own, will be helped by their classmates, so that this strategy also establishes classroom norms and protocols that guide students to contribute and help each other.

To sum up, because of its advantages, the use of Tea Party strategy was effective to help the students in improving their reading comprehension. Through the use of Tea Party strategy, the students can practice the critical skill of making and confirming predictions, stay on task, help each other, encourage each other, share, solve problems, give and accept feedback from peers.

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ACCOMPLISHMENT OF ADOLESCENT DEVELOPMENTAL TASKS OF TENTH GRADE STUDENT OF PUBLIC SENIOR HIGH SCHOOL 3 AT TANJUNG RAJA

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Abstract

Developmental tasks were the tasks that have to be fullfilled during periods of individual lifetime. It would bring happiness if these tasks accomplished successfully. If individual was failed to accomplish these tasks, he or she might be having troubles through his/her life and being neglected. Fifty nine of tenth grade students were chosen as subject by systematic random sampling. Applying the *Developmental Task Inventory* (ITP) developed by Sunaryo Kartadinata et.al., the data showed that accomplishment of adolescent developmental task of the students was not optimal yet. At this period, students need to achieve individuality level but they have accomplished self-awareness and carefulness levels. This research findings could be considered by school counselors in developing guidance and counseling program for the students.

Keywords: Adolescence, Adolescent Development Task, Level of Achievement of the Adolescent Developmental Task

1. Introduction

Adolescence is transition period from childhood to adulthood. In this period, individual have to be growing maturity physically, emotionally, and socially throughout developmental tasks. Fullfilment of developmental tasks would be important in individual lifetime. Research by Nurisani (2013) Zadrian Ardi (2012) found that the accomplishment of developmental tasks could influenced accomplishment of developmental tasks in the next periods. It also could be a foundation of guidance and counsing program for the students.

To develop guidance and counseling program for the students, school counselors have to considered data of developmental tasks to be accomplished. The data would be a baseline information for guidance and counseling services. In the process of develop program, school counselor have to do this step by

step. Begin with the first step in assessing student's need and their environment, the counselors considered about subject matter to help students in achieved dependency and developmental tasks. In spite of this, school counselors could help students being better in their life and having a positive attitude. The baseline data would be as preventive activities in helping students.

School counselors would apply the Developmental Task Inventory (ITP) developed by Sunaryo Kartadinata et. al., to measure developmental task accomplishment level in adolescence period. There are seven levels of developmental tasks accomplishment.

1. Impulsive level (Imp)

    In this level, individual are placed themselves being apart from others, and caused by behavioral factor. They are depending on their environment for punishment and reward, and also being oriented for now, neither the past nor future.

2. Self protective level (Pld)

    In this level, individual can be characterized by control and benefit when they interact with others. They lay on opportunistic and hedonistic principles. They tend to think unlogically, stick to stereotype and blame outsiders.

3. Conformistic level (Kof)

    This level is characterized by (1) care about self performance and social acceptance, (2) tend to think streotype, (3) care about external norm, (4) behave in order to be adored, (5) being calm emotionally, (6) low in self instrospection, (7) group difference based on external attributes, (8) afraid to be rejected, (9) insensitive to individuality, (10) being sin if they are not obey the norm.

4. Self awareness level (Sdi)

    In this level, individual can (1) think alternative way, (2) see future and probability, (3) care in benefit and opportunity, (4) have problem solving

orientation, (5) think how to get through life, and (6) adapt to role and situation.

5. Carefulness level (Ska)

In this level individual (1) act based on internal values, (2) have self-reliance as decision maker and well behave, (3) see emotional, motive, and self perspective, (4) care about mutualistic relationship, (5) have goals, (6) tend to see things happened in social context, (7) think more complex and based on analysis.

6. Individualistic

This level indicate (1) individuality awareness increased, (2) awareness of emotional conflict between dependency and independency, (3) more tolerant to self and others, (4) existing individual differences, (5) tolerant to conflict, (6) differences between internal and external life, (7) knowing self complexity, and (8) caring about social changes and problems.

7. Otonom level (Oto)

Individu in this level (1) have a comprehensive way of life, (2) tend to be self realistic and objective, (3) care about social justice, (4) integrate contradictive values, (5) care about self-fulfillment, (6) initiative to give internal conflict solution, (7) respect to others independency, (8) awareness to interdependency, and (9) express emotion with conviction and happiness.

During adolescence periode, there are several developmental aspects that adolescent need to be achieved. The important aspects are (1) foundation of religiousity, (2) foundation of ethic behavior, (3) emotional maturity, (4) intellectual maturity, (5) awareness of responsibility, (6) social role of male and female, (7) self acceptance, (8) economic dependency, (9) preparation for career, (10) maturity of peer relationship, and (11) preparation for marriage and family life. According to Kartadinata, adolescents should achieve individuality level for those aspects.

2. Method

The data of a single variable about accomplishment of developmental tasks were collected by *Developmental Task Inventory* (ITP) and analyzed by *Developmental Task Analyzed* (ATP), developed by Sunaryo Kartadinata et. al. There were 59 students of senior high school in Public Senior High School 3 at Tanjung Raja chosen as subject used systematic random sampling. There were 23 males and 36 females.

3. Results and Discussion

Based on analyzed data, accomplishment level of developmental tasks were in the table 1 below.

Table 1 Amount of students achieved level of developmental task and developmental aspect

Developmental Aspects	Accomplishment level			
	Kof (3)	Sdi (4)	Ska (5)	Ind (6)
Foundation of religiosity	0	24	35	0
Foundation of ethic behavior	0	23	35	1
Emotional maturity	0	35	23	1
Intellectual maturity	0	23	36	0
Awareness of responsibility	2	31	26	0
Social role of male and female	0	25	34	0
Self acceptance	3	32	24	0
Economic dependency	0	33	26	0
Preparation for career	1	29	28	1
Maturity of peer relationship	2	22	32	3
Preparation for marriage and family life	0	22	36	1

On the average, accomplishment level of developmental tasks were on carefulness level (fifth level) and self awareness level (fourth level) due to more students in the developmental aspects. Accomplishment on the 5th level appeared for foundation of religiousity, foundation of ethic behavior, social role of male and female, maturity of peer relationship, and preparation for marriage and family life. In the meantime, the 4th level brought out emotional maturity, awareness of responsibility, self acceptance, and economic dependency.

The students were not in the level of individualistic yet. The accomplishment of developmental tasks contributed by individual environment. This environment would bring life to local content of developmental tasks. In this case, parents contributed the first environment to individual. Adolescents can fulfill what people demanding from them. They should otonom in that way, but social environment of the students could not trust the adolescents doing anything by themselves. Not only parents, teachers should also facilitate students to learn how to fulfill the tasks that people want them do.

Beside the social environment of family, peer, and school, the accomplishment of developmental tasks depend on physical maturity. It would influence the way students learn how to achieve developmental tasks.

Levels of accomplishment of developmental tasks as research findings could be considered by school counselor in deciding goals of guidance and counseling services. It was also considered in developing guidance and counseling program for students. Implementation of guidance and counseling program would help students to accomplish developmental tasks. The counselors teach the students how to adapt to social environment. It means that adolencents can reach social expectation. The students in adolescence period of lifetime would be happy in their lives. They might be successful in academic and social life.

4. Conclusion Remark

Implementation of ITP (Developmental Tasks Inventory) can be a part of need assessment process. The data would be a baseline information to develop program and services for the students. It would make easier for school counselors to run guidance and counseling services so that student can learn how to accomplish developmental tasks as it were expected. Research findings showed that the tenth grade students of senior high school at Tanjung Raja have been accomplished the level of carefulness and self awareness. They should be helped to reach individualistic level with good attention to social expectations.

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MULTIMEDIA DEVELOPMENT ON SPORTS HEALTH SUBJECT FOR THIRD SEMESTER STUDENTS OF PENJASKES FKIP UNSRI

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Abstract

The purpose of the research is to develop the results of software learning in the form of *Compact disc* (CD) for sports health effort lectures. Interactive CD is expected to be used to handle learning limitation adversity and to help students understanding the subject and improving appreciation, motivation, and independence. This study is a developmental research. The method used in this study is descriptive procedural where product development follows the procedures to produce a product. There are three basic steps that must be taken by the lecturer of the sports health subject; issue conceptualization, product making, and product trials. The study population is third semester students in physical education and health (Penjaskes) major that take the Sports Health course, Indralaya class. The method used in this research is statistics descriptive in analyzing the final result data. This research is to produce CD that can be used for teaching and learning in Penjaskes FKIP Unsri. The products which developed in CD are (1) teens' RH, (2) environtmental health, (3) healthy life style and the effect of smoking, drinking, and drug abuse, (4) healthy eating behavior and balanced menu concept.

Key Words: Multimedia Development, Sports Health Subject

1. Introduction

The advances in science and technology that grows very rapidly and globally these days are forcing the higher education to improve the quality of education and learning continuously to produce high quality graduates. The college is asked to always be responsive to changes that occur in all life aspects. As the *agent of changes,* universities must always be ready for changes in terms of organization, management and content substance of academic programs. The

quality of learning that is implemented in college is very influential on the result of their education quality. The quality of education can be reached if the learning process organized smoothly, directed, and correspond to the learning objectives.

Quality learning should produce useful and aimed competencies through the proper procedures, so that it needs systematic and synergic connections between the various factors such as the professors, students, materials, media, facilities, and learning systems into one in a learning process. Lecturers that are able to facilitate the learning process, relevant witn the curriculum, teaching materials that provide various stimulis and pleasant, exciting, challenging, and meaningful environtment are needed to achieve high quality learning. High quality learning strongly supports the achievement of expected competencies.

Lecturers as the implementer of curriculum and various learning activities are required to be prepared for changes. Access to the cutting-edge materials, insights and learning skill is needed to make the learning process becomes conducive. In addition, the motivation and learning readiness of students need to be improved considering the lack of learning time, the very broad material scope, the very fast acceleration rate in the fields of science, technology and art, the limitation of learning media type and amount, and the lack ability to use the media. This can make a classroom atmosphere unable to motivate student to do the learning activities. According to the Ministry of Education (2005: 3), the learning process issues in college include the following; 1) There are still lecturers who do not master the material, 2) Lecturers limitation in accessing new information, 3) Lecturers cannot convey the material using media optimally, 4) Students are still not given the space to think creatively.

Sports health subject is one of the subjects held in Penjaskes UNSRI. The credit of this lecture is 2 credits consisting of theory and practice for each credit, which is carried out in third semester. This course provides an understanding of science that includes the philosophy of sports science, the

notion of healthy living, teens' RH, environmental health, healthy lifestyle and effects from smoking, drinking, and drug abuse, healthy eating behavior and balanced menu concept.

The learning process of Sports Health subject in Penjaskes during this time still has many shortcomings and needs to be addressed. The lecturers are the only source of information, so that the students are less active and creative, and learning methods used are still relatively monotonous and lack utilizing the learning media provided. The learning process that occurs is not motivating, interesting, fun, and meaningless for the students. These circumstances make the competence of the lecture less achieved.

From the phenomenon above, the ability of the lecturers still needs to be improved, especially if associated with the task of a lecturer in the current globalization era. Utilizing the advances in information and communication technology *(ICT),* especially computer technology in the learning activities are expected to solve learning problems encountered. The selection of appropriate media can help conveying the message properly, effectively, efficiently, creating and enriching the learning experience, presenting a picture of an event as close or as real as possible, and increasing the activites and skills of the students. From the description above, the researchers are interested in developing learning media through model research and development in the learning process of Sports Health subject. This research and development is expected to produce a media in the form of learning CD for an effective learning process of Sports Health subject. This multimedia is expected to assist the student in the learning process to achieve the competence. The students can use these learning CD using a computer available in the faculty computer laboratorium or in their home.

2. Theoretical Background

Sports Health Subject Description

This subject is compulsory subjects given in the third semester, amounting to 2 credits, which consist of theory and practice for each credit. This course provides an understanding of science that includes the philosophy of sports science, the notion of healthy living, teens' RH, environmental health, healthy lifestyle and effects from smoking, drinking, and drug abuse, healthy eating behavior and balanced menu concept. After completing this course, students are expected to be able to teach sports health and become a role model for the people in his neighborhood in the habit of healthy ways of living. The students activities during the lecture are following the presentation of the material through lectures, assignments, discussions, questions and answers, and practices.

Learning Theory that Underlying the Learning Multimedia

An understanding of the underlying theory of learning multimedia is a very important thing to have. The learning theory is utilized to systematize the findings, predict, create hypotheses, and give explanations that required. According to Bower (2006: V), there are hundreds of learning theories viewed from various new perspectives, ideas, phenomenons, experiments and investigations directly with a variety of methods. Learning is closely related to the changes of behavior, whereas the study of the changes of behavior is the learning psychology. Learning psychology laid the foundations of the birth of learning theory, the theory that attempts to explain why there is a change of behavior on an individual.

Heinich, et al (2006: 15-18) states that learning psychology that underlies the use of media and technology in learning can be viewed from four perspectives: *behaviorist perspective, cognitivist perspective, constructivist prespective, and social psychological perspective. Behaviorist perspective* indicates learning as

changes in behavior as a result of the interaction between the stimulus and response. *Cognitivist perspective* looks at the results of learning not only involves the stimulus and response, but also concerned with the learning process of the learning outcomes. *Constructivist perspective* is a learning theory that emphasizes the student experience, not only the cognitive knowledge, whereas *Sociological perspective* is the theory of socio-psychological study that are considered to be a mediator for the cognitivist and behaviorist theory. In addition of the learning theories that underlying the learning multimedia, there is still a highly influential learning theory. The theory is Cybermetic Learning Theory. This theory developed in line with the technology and information developments. Cybermatic sees that learning process is important, but more importantly is the information system processed that the students will learn. The information from messages or materials will determine the process.

Multimedia Concept

Heinich (2006) defines multimedia as a combination of two or more media formats that integrate to produce the information programs or educational programs. Robin and Linda in Suyanto (2005: 21) state that multimedia is a tool that can create dynamic and interactive presentations that combine texts, graphics, animations, audios, and video images.

Multimedia can be used as a communication system. It is being a system because it is a group of objects that relate and work together to produce a desired result. According Gayestik in Sunaryo (2005: 2), multimedia is an interactive computer-based communication system that capable of creating, storing, serving, and implementing video or animation. With computer technology it is now possible to store, manage and restate the source of sounds and videos in a digital format. In addition, students can also control the delivery of elements of diverse media.

Media Role in Learning

Media learning is often defined as something that can bring information and knowledge in the ongoing interaction between lecturers and students. Media acts as the intermediaries in charge of helping convey the message of learning. Learning occurs inside a process of communication between lecturers, students and teaching materials. In this situation, the media is needed to smoothen the process of communication in learning. The media usage is indispensable in the learning process at the college. The media usage is a creative and systematic efforts of a lecturer to create learning experiences for students. Sudarsono (2004: 6) states that the primary roles of the media in education are; 1.providing a concrete experience to students, 2.serving as a tool of communication and interaction between the students and the media, and the learning is an important source of learning. The benefits of media usage in learning stated by Kemp (1985: 3) that there are some research results that show positive impacts on the media usage including: the delivery of the lessons become more standardized, learning more interesting, interactive and efficient, the quality of learning could be improved, learning can be given anytime, anywhere, developed a positive attitude and the teachers' role can be changed more positively.

Multimedia in Learning

Computer is a media that has the potential to improve the effectiveness of the learning programs. Learning with computer multimedia provides packaging materials that are translated by using the computer as a learning tool. Moreover, the computer also has the ability to store, manipulate the information as needed, even capable of displaying various forms of media in it. Advancements in computer technology at this moment actually could be used in learning. Learning with utilizing multimedia has been believed gaining a lot of benefit. Learning that involves multimedia gives a chance to students to achieve more because students are given more opportunity to deal directly with

a computer. Computer multimedia presentation can be used as an effective technology media for relevant learning and teaching materials. Computer assisted learning program is a good multimedia learning programs that allow intensive interaction between the learning and computers. Multimedia has many advantages such as able to change the nature of static reading into dynamic reading activities with the new dimension member in words. Multimedia can be a trigger that can be used to expand the scope of the text. Multimedia is not only providing more texts but also able turning the texts with sounds, images, musics, animations, and videos. With an attractive presentation, multimedia is expected to make a fun learning that allows the repeat of the learning process.

The Principles of Learning Multimedia

There are four important multimedia components according to M. Suyanto (2005: 21). The first one is the computers to coordinate what is seen and heard to interact, if there is no computer then it is not a multimedia but a mix media. The second one is multimedia must provide *links* that connect people with the information and if there is no *link* then it is called a bookshelf, not a multimedia. The third one is there should be a navigation tool that guides us to browse the interconnected information networks, if there is no navigation then it is called a film, not a multimedia. The fourth one is multimedia provides a space to gather, process, and communicate information and ideas of its own, if there is no space then it is called a television not a multimedia.

Allesi in Sunaryo (2005: 2) reveals that a good learning computer program should include four activities; 1) Informations / messages (the lecture materials) must be presented in a matrix, 2) Students should be directed, 3) Students are given exercises, and 4) The achievement of student learning outcomes should be assessed. The fourth aspects are the basis for the development of learning multimedia program, besides in the program should be started with a preliminary explanation of the objectives that want to be

achieved, the clear using instructions, and if it necessary, the examples or demonstrations as well as the next tasks.

3. Method

DEVELOPMENT METHOD

Development procedure according to Borg & Gall (2003) research and development are processes used to develop or validate the products which are used in education and learning. Development procedure is done for designing, making and evaluating (validation) this research, using steps which is adapted by the Borg and Gall (1983). The steps are:

a. Determining subjects

b. Doing requirements indentifying

c. Specifying materials

d. Developing learning design that includes: 1) Determine the purpose of learning which is the standard of competence 2) Conduct learning analysis 3) Identify the behaviors and characteristics of students 4) Formulate the basic competencies 5) Develop learning materials 6) Develop test items 7) Develop learning strategies 8) Establish an evaluation / assessment

e. Developing learning multimedia software includes: 1) Making *a flow chart view* and scriptwriting 2) Collecting materials 3) Product making process

f. Product evaluation, which is intended to obtain data in order to revise the product. This stage involves: 1) Material experts 2) Media experts 3) Students for trial

g. The final result in the form of Sports Health subject learning CD

Research Subject

Trial subjects or respondents involved in this research are 40 Penjaskes UNSRI third semester students who took the Sports Health subject. Instruments obtained through testing are classified into two, quantitative and qualitative data. Qualitative data in the form of criticism and suggestions are stated by media experts, material experts, and students that gathered and elaborated to improve this learning multimedia product. Quantitative data analysis in this research is using descriptive statistical analysis, in the form of very less, less, enough, good, very well questions, converted into quantitative data with the scale of 5 by scoring from 1 to 5. The steps in the data analysis are: 1) collecting raw data, 2) scoring, 3) converting the score obtained into a value with scale of 5 by using a conversion reference.

4. Result and Discussion

Validation Results and Product Testing

In the process of developing learning multimedia products, products that were developed need to go through a validation process and testing. The validation process in this study consisted of media validation with media experts and material validation by material experts. The trial process was then performed on the students with the same characteristics as the potential users. This process was done so that the products developed feasible for lectures.

Validation Product Results Data by Material Expert

Validation of the learning multimedia material products in each product carried out in accordance with the expertise of the substantive material of developed learning CD. This was done in order to obtain accurate feedbacks based on each expertise, because these inputs will be used to revise the learning CD material prior to the trial. The validator for the development of sports health

learning materials was Dr. Iyakrus M.Kes while the validator for the development of teaching media was Dr. Meirizal Usra, M.Kes.

Product validation of Learning Materials Quality Aspects

The validation of the learning materials quality aspects consist of 11 items. The results of the validation by the material experts of learning materials quality aspect can be seen in Table 1 below.

Table 1. Assessment of Learning Materials Quality Aspects by the Material Experts

No.	Rated aspect	CD-1		CD-2		CD-3		CD-4	
		Score	Kri	Score	Kri	Score	Kri	Score	Kri
1	Clarity of standard formula and basic competencies	4	B	5	SB	4	B	5	SB
2	Basic competencies suitability and competency standards	4	B	5	SB	4	B	5	SB
3	Clarity of learning instructions	5	SB	4	B	5	SB	4	B
4	Accuracy of the material selections that were made into media	4	B	4	B	5	SB	5	SB
5	Accuracy of language choice in describing the material	4	B	4	B	5	SB	4	B
6	Clarity of example	4	B	4	B	4	B	4	B
7	Ease of learning menu selections	4	B	5	SB	5	SB	4	B
8	Provision of training	4	B	5	SB	4	B	5	SB
9	Ease of problem solving manuals	4	B	5	SB	5	SB	5	SB
10	Compliance with the material	4	B	5	SB	5	SB	4	B
11	Availability of key answers	5	SB	5	SB	5	SB	4	B
Amount		46		51		51		49	
Average		4.18		4.63		4.63		4.45	
Value			B		SB		SB		SB

Information
Kri: Criteria
SB: Very Good
B: Good
CB: Pretty Good
KB: Not Good
SKB: Very Not Good

Based on Table 1, the scores on each item are included in the criteria of good and very good. While the average scores ranged from 4.18 to 4.63 after conversion to the scale of 5, the average obtained scores are generally included in the criteria of good and very good.

Product validation of Content / Material Aspect

Validation on the quality of content / learning material aspect consists of 12 items. The results of the validation by the material experts can be seen in Table 2 below

Table 2. Assessment Scores of Content / Learning Material Aspect by Material Experts

No.	Rated aspect	CD-1		CD-2		CD-3		CD-4	
		Score	Kri	Score	Kri	Score	Kri	Score	Kri
1	Content / material corectness	4	B	5	SB	5	SB	5	SB
2	Material depth	4	B	5	SB	5	SB	5	SB
3	Material sufficiency for the achievement of competence	5	B	5	SB	5	SB	5	SB
4	Material / concept clarity	4	B	5	SB	4	B	5	SB
5	Material actuality	4	B	5	SB	5	SB	4	B
6	Example clarity	4	B	5	SB	4	SB	4	B
7	Animation accuracy to explain the material	3	CB	5	SB	5	SB	4	B
8	Video accuracy to explain the material	4	B	5	SB	4	SB	4	B
9	Image selection accuracy that associated with the material	5	SB	5	SB	5	SB	4	B
10	Formulation problems conformity with competence	4	B	5	SB	4	B	5	B
11	Problem formulation clarity	5	B	5	SB	5	SB	4	B
12	Problem level of difficulty		B		SB	3	CB	4	B
Amount		48		60		56		53	
Average		4.00		4.00		4.66		4.41	
Value			B		B		SB		SB

Based on Table 2, the scores on each item are included in the criteria of good and very good, whereas the average scores ranged from 4 to 4.66 and after converted to a scale of 5 the scores average value obtained is included in the criteria of good and very good

Products Validation Results Data by Media Experts

Interactive multimedia products validation was developed for each product which was made in accordance with the expertise in order to obtain accurate feedbacks based on each expertise. The media expert validator for each product was validated by Dr. Iyakrus, M.Kes.

As for the aspects that were validated by media experts on the developed

products were view and program aspect, comments and general advice, and conclusion. The results of the evaluation of media experts in the developed products and the developed multimedia products aims to make the researcher obtaining data in the form of media experts assessment to revise and improve developed products, before it is used by the user. The evaluation results by the media experts on the developed display products validated by Dr. MeirizalM.Kes.

Table 3. Display Aspect Assessment Score by Media Experts

No.	Rated aspect	CD-1		CD-2		CD-3		CD-4	
		Score	Kri	Score	Kri	Score	Kri	Score	Kri
1	*Background* color selection accuracy	5	SB	5	SB	2	CB	4	B
2	*Background* writing color harmony	5	SB	5	SB	2	CB	4	B
3	Music selection accuracy	5	SB	5	SB	2	KB	2	CB
4	Animation conspicuousness	5	SB	5	SB	3	CB	4	B
5	Animation clarity	5	SB	5	SB	4	B	4	B
6	Video sound clarity	4	B	5	SB	2	KB	4	B
7	Narration clarity	4	B	5	SB	3	CB	5	SB
8	Video size	4	B	5	SB	2	CB	4	B
9	Video and material (contextual) relevance	4	B	5	SB	2	CB	5	SB
10	Button placement	5	SB	5	SB	3	B	4	B
11	Button consistency	5	SB	5	SB	2	CB	5	B
12	Button size	5	SB	5	SB	4	B	5	SB
13	Button color selection accuracy	5	SB	5	SB	5	B	5	SB
14	Text color selection accuracy	5	SB	5	SB	5	B	5	SB
15	Typeface selection accuracy	5	SB	5	SB	5	B	4	B
16	Font size accuracy	5	SB	5	SB	3	CB	5	SB
17	Image clarity	5	SB	5	SB	4	B	4	B
18	Color images clarity	4	B	5	SB	4	B	4	B
19	Iimage size accuracy	4	B	5	SB	4	B	4	B
20	Slide design display	5	SB	5	SB	4	B	5	SB
21	Each slide composition	5	SB	5	SB	2	CB	4	B
Amount		99		105		77		90	
Average		4700		5.00		3.67		4.28	
Value			SB		SB		B		SB

Based on Table 3, the scores on each item are included in the criteria of good and very good. While the average scores ranged from 3.67 to 5. Once converted to the scale of 5, the average scores obtained generally included in the criteria of good and very good. Validation on the programming aspects was

done with the intent to get feedbacks and suggestions for the improvement of the developed products. The expert assessment results of programming aspect were done by Dr. Meirizal Usra, M.Kes.

Table 4. Assessment scores Aspects of Programming by Media Experts

No.	Rated aspect	CD-1		CD-2		CD-3		CD-4	
		Score	Kri	Score	Kri	Score	Kri	Score	Kri
1	Student interactivity level with media	4	B	5	SB	3	CB	5	SB
2	Ease of interacting with media	5	SB	5	SB	4	B	5	SB
3	Usage manual clarity	5	SB	5	SB	4	B	4	B
4	Navigation structure clarity	5	SB	5	SB	3	CB	4	B
5	Ease of button usage	5	SB	5	SB	4	B	4	B
6	Animation speed	5	SB	5	SB	4	B	4	B
7	Animation settings	5	SB	5	SB	4	B	4	B
8	Feedback on students' responses	4	B	5	SB	4	B	4	B
9	Text efficiency	4	B	5	SB	3	CB	4	B
10	Slide usage efficiency	4	B	5	SB	3	CB	4	B
Amount		46		50		38		42	
Average		4.60		5.00		3.80		4.20	
Value			SB		SB		B		SB

Based on Table 4, the scores on each item are included in the criteria of good and very good, whereas the average scores ranged from 3.80 to 5.00. After converted to the scale of 5, the average value scores obtained are generally included in the criteria of good and very good. The trial was given to 40 students by providing learning CDs to be learned and to give the questionnaire as conducted by material and media experts. In addition, observations and interviews with respondents were done to obtain inputs and comments on the products developed. The trial results of each product from the display aspect include of 10 items. The assessment results in the display aspect of the testing process can be seen in Table 5 below.

Table 5. Score Display aspect in Phase Trial

No.	Rated aspect	CD-1		CD-2		CD-3		CD-4	
		Score	Kri	Score	Kri	Score	Kri	Score	Kri
1	Clearly legible handwriting	4.7	SB	4.7	SB	4.60	SB	4.2	B
2	Usage manual clarity	4.43	SB	4.2	B	4.80	SB	4.2	B
3	Ease of menu selection	4.57	SB	4.2	B	4.30	SB	4.5	SB
4	Ease of button usage	4.43	SB	4.1	B	4.30	SB	4.5	SB
5	Function buttons clarity	4.7	SB	3.8	B	4,10	B	4.4	SB
6	Music voice support	4.43	SB	4.2	B	4,10	B	4.8	SB
7	Video image clarity	3.86	B	3.9	B	3.90	B	3.0	B
8	Video sound clarity	3.57	B	4	B	3.80	B	3.9	B
9	Image color clarity	4.57	SB	4.3	SB	4.20	B	4.0	B
10	Animations attractiveness	4	B	3.5	B	4.30	SB	4.7	SB
Amount		43.26		40.90		42.20		43.20	
Average		4.326		4.09		4.24		4.32	
Value			SB		B		SB		SB

Based on Table 5, the scores on each item are included in the criteria of good and very good, whereas the average scores ranged from 4.09 to 4.32. Once converted to the scale of 5, it average scores obtained is generally included in the criteria of good and very good. The trial results of each product from the content aspect include of seven items. Results of the assessment aspect of the content / material in the test can be seen in Table 6 below

Table 6.scores Aspects of Content / Content in Phase Trial

No.	Rated aspect	CD-1		CD-2		CD-3		CD-4	
		Score	Kri	Score	Kri	Score	Kri	Score	Kri
1	Material clarity	3.86	B	4.2	B	4.40	SB	4.4	SB
2	Language directness	3.86	B	4.2	B	4.50	SB	4.1	B
3	Language clarity	4	B	4.3	SB	4.40	SB	4.0	B
4	Video was clarifying the material	4.29	B	4.8	SB	4.30	SB	4.4	SB
5	Image was clarifying the material	4	B	4.9	SB	4.30	SB	4.2	B
6	Formulation of the problem clarity	4.43	SB	4.1	B	3.40	B	4.2	B
7	Problem difficulty level	4	B	3.5	B	3.50	B	3.8	B
Amount		28.44		30		28.80		29.1	
Average		4.06		4.29		4.11		4.15	
Value			B		SB		B		B

Based on Table 6, the scores on each item are included in the criteria of good

and very good, whereas the average scores ranged from 4.06 to 4.329. Once converted to a scale of 5, it average scores obtained is generally included in the criteria of good and very good. The trial results of each product from the learning aspect include of 11 items. The assessment results of the learning aspect in the test can be seen in Table 7 below.

Table 7. Learning Aspects Scores in Trial Phase

No.	Rated aspect	CD-1		CD-2		CD-3		CD-4	
		Score	Kri	Score	Kri	Score	Kri	Score	Kri
1	Easy to learn material	4.14	B	4.3	SB	4.60	SB	4.3	SB
2	Challenging / interesting material	4.14	B	4.2	B	4.70	SB	4.3	SB
3	Understanding that this material is useful in daily life	4.43	SB	4.8	SB	4.50	SB	4.7	SB
4	Ease of learning menu selection	4.14	B	4.2	B	4.70	SB	4.5	SB
5	Learning instructions clarity	3.86	B	4.2	B	4.30	SB	4.1	B
6	Problem solving manual clarity	4.43	SB	4.1	B	4.00	B	4.5	SB
7	Problem and material compliance	4.29	SB	4.2	B	4.00	B	4.6	SB
8	Feedbacks on students' answers	4	B	4	B	3.80	B	4.1	B
9	With multimedia, learning was more enjoyable	4,86	SB	4.8	SB	4.60	SB	4.9	SB
10	With multimedia, learning was more interesting	4,86	SB	4.8	SB	4.30	SB	4.9	SB
11	Multimedia help learning	4.7	SB	4.7	SB	4.80	SB	4.9	SB
Amount		47.85		49.8		48.30		48.3	
Average		4.35		4.52		4.39		4.39	
Value			SB		SB		SB		SB

Based on Table 7 it can be seen that the scores on each item included in the criteria of good and very good, whereas the average scores ranged from 4.35 to 4.52. Once converted to the scale of 5, it average scores obtained is generally included in the criteria of good and very good.

5. Conclusion and Remark

Based on the research and development of multimedia for Sports Health subject of Penjaskes FKIP UNSRI students described above, it can be concluded as follows: 1. This research and development has resulted in 4 (four) learning multimedia products in the form of Sports Health lecture material

learning CD for students of Penjaskes FKIP UNSRI. 2. From the material substance and learning aspect, as well as media aspect, the model developed decent multimedia CD can be used for lectures, because through the model trials of the respondents generally has a good and very good scores.

The suggestions by the conclusions are: 1. It needs a test of the models that have been developed to determine the level of effectiveness of the product with bigger number of respondents and 2. To support the learning process, the learning infrastructures, such as laboratory, need to be optimized.

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GEOMETRIC COMMUNICATION SKILLS PROFILE OF MTS STUDENTS IN CONTENT LINES AND ANGLES

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Abstract

Learning math is a social activity (social activity). As mathematics itself, inseparable from mathematics learning social activities. Unfortunately, traditional learning forget the social nature of learning in mathematics. Mathematical communication is an important component in learning mathematics, tool to exchange ideas, and to clarify the understanding of mathematics. The importance of communication skills in mathematics because mathematics is essentially a language filled with notations and terminology so that the concepts that form can be understood by students if it has mathematical communication skills, but the ability of mathematical communication is often overlooked. Communication is part of the geometric mathematical communication skills. Geometric communication plays an important role in improving the understanding not only related to the topic of geometry alone. This paper describe how geometric communication ability MTs students. The test results are given indicates 5% have aexcellent geometric communication skills, 18% good, 42% medium, 25% less and 10% very less. From the answers given students' communication skills geometric limitations shown by the students answered questions tend to be brief, without the process of how to get it. For better results the authors suggest teachers should apply the model of student-centered learning, so that students can be actively involved in learning and provide opportunities for students to communicate his ideas.

1. Introduction

Mathematics learning is a social activity (social activity). As mathematics itself, inseparable from mathematics learning social activities. Unfortunately, traditional learning to forget the social nature of learning mathematics that interfere with students' mathematical development. Interaction between students, as well as teacher communication with students, is important as a way to maintain the potential of mathematics students. Thus, communication plays an important role in mathematics as the students' social activities in the community. Mathematical communication is an important component in learning mathematics, tool to exchange ideas, and to clarify the understanding

of mathematics. According Qohar (2011) mathematics is the language of symbols in which every person who studied mathematics requires the ability to communicate using the language of symbols. The importance of communication skills in mathematics because mathematics is essentially a language filled with notations and terminology so that the concepts that form can be understood by students if it has the ability mathematical communication. But unfortunately, communication ability is often overlooked.

In addition, according Asikin (Yonandi, 2010) the importance of ownership of communications capabilities mathematically that help sharpen the way students think, as a tool to assess student understanding, helped temper the students organize knowledge of mathematics them, helping students build their knowledge of math, enhance the problem solving mathematical, advancing pealarannya, building self capabilities, improve social skills, as well as useful in establishing the mathematical community.

Silverman and Thompson (Clarke, 2012) also suggests that students' participation in communication or conversations about their math activity (including reasoning, interpretation, interpret) is essential for developing mathematical understanding interconnected.

Activities including communication mathematically according Sumarmo (2006) are: declare a situation, drawings, diagrams or real objects into the language, symbols, ideas, or mathematical models, explain ideas, situations and relationships mathematics verbally and in writing, listening, discussing and writing about math, reading with understanding a mathematical representation, estimate conjecture, make the argument, a definition, and generalizations, and revisits a mathematical description in their own language.

According to the NCTM (1989) provides communication skills in math as:

1. The ability to interpret mathematical ideas through speech, writing, and is able to demonstrate and illustrate visually;

2. The ability to understand, interpret, and evaluate mathematical ideas through oral, written or other visual form;

3. Ability to use the term, mathematical notation, and its structures to present ideas, describe relationships, as well as models of the situation.

The phenomenon suggests that in the implementation of daily mathematics instruction, teachers are still rarely provide opportunities for students to communicate his ideas. The results of observation the author in some schools show that learning mathematics is generally less activity involves students optimally so that students are less actively involved in learning. Besides, most of the students looked closely following any explanation or information from teachers, students rarely ask questions so engrossed in his own teacher explains the material.

Geometry is a branch of mathematics that has been taught since elementary school level. Learning geometry helps students develop logical skills (Nur'aini, 2012). In addition, through learning geometry also help students to understand the other content of the math, help develop problem-solving abilities. There are many mathematical concepts and procedures that can be explained by geometric representations. Learning geometry tends to abstract one of the issues that makes the material more severe geometry. Geometric communication is one part of mathematical communication. Geometric communication skills is the ability of students to communicate the results of his thinking both orally and in writing on the topic of geometry. Indicators geometric communications capabilities in this study consisted of:

1. Using a mathematical language to express the concept of lines and angles through pictures or objects of the concept is clear.

2. Explaining ideas, situations, and relationships math orally or in writing about real objects or pictures associated lines and angles.

3. Listen, discuss, and write about the topic of lines and angles.

4. Read the presentation of mathematical writing and compiling the relevant questions.

5. Make a summary of the lines and corners with its own language.

In this paper we describe how geometric communication skills of MTs students in Palembang on material lines and angles.

2. Method

This study is a qualitative descriptive, aimed to describe how students' geometric communication skills of MTs Students in Palembang on the material lines and angles. Data obtained through tests and interviews, and observations during the learning process. Interviews with students performed to obtain clearer data so that researchers can find out how students' geometric communication skills.

3. Result and Discussion

Of the indicators measured geometric communication skills by researchers, the test focused on the indicators 1 and 2 while the indicator 3.4 and 5 measured during the learning process takes place through observation.

Problems example

Indicators: Explaining ideas, situations, and mathematical relationships in writing about real objects or pictures associated lines and angles.

Consider the following picture
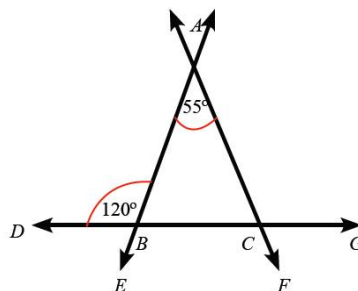
Give a reason why the sum of angles BAC and ACB equals with angle ABD.

Indicators: Using mathematical language to express the concept of lines and angles through pictures or objects of the concept is clearly

How to calculate the angle formed between the hour hand and the minute hand on a clock image below and how much?
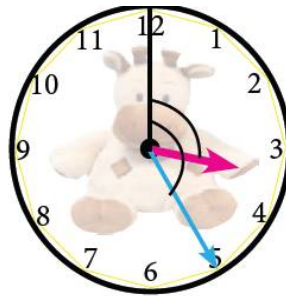
From the test results and observations obtained 4 students have excellent communication skills geometric, 13 students categorized well, 30 students were categorized, 18 were categorized less and 7 were categorized very less. These results are summarized in the following table the results as

Many students	Frequent (%)	Cattegorize
4	5	Very good
13	18	Good
30	42	Medium
18	25	Less
7	10	Very less

From the analysis of the authors of the test results, interviews and observations, geometric communication skills of students characterized by the lack of delivery of ideas in the form of concepts of self-esteem, so communication is going to be limited. Limitations of mathematical communication skills are also shown in the material geometry.Students didn't give reason or description in answering the questions, the students' answers tend to be brief, without the process how to get it, and in answer to oral questions, the answers tend to be what their students. Besides learning that takes place during this time gives less opportunity for students to express their ideas in solving the problem. According to the study authors should be done to accommodate the development of communication skills for students in mathematical communication implement reflection, discussion, and revision of math understanding. When students are challenged to think and reason about a mathematical idea, it will communicate the idea to others in writing or orally. In addition, other students will have an opportunity to build knowledge and motivated to think more sharply.

4. Conclusion and Discussion

From the research that has been conducted concluded that limited communication skills geometrical them are shown students to answer the questions tend to be brief, without the process of how to get it during the learning process of students tend to be silent almost no one ask the question, if given the questions with multiple strategies students tend to use the same way as exemplified by the teacher, with said judgments do not give new ideas. For better results the authors suggest teachers should apply the model of student-centered learning, so that students can be actively involved in learning and provide opportunities for students to communicate his ideas.

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DEVELOPMENT OF INTERACTIVE MULTIMEDIA BASED MULTIPLE INTELLIGENCE ON THE SOUND WAVES FOR STUDENTS OF CLASS XII SENIOR HIGH SCHOOL

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Abstract

This study aims to produce interactive multimedia based multiple intelligence on the sound waves for students of class XII High School are valid, practical and know the potential effects of use. The method used is development research by adapting Rowntree development model which consists of several steps: (1) the planning stage; (2) the development stage; and (3) the evaluation stage. Phase evaluation is done by using Tessmer formative evaluation model consisting of five stages, namely: (1) self evaluation; (2) The expert review; (3) one-to-one evaluation; (4) small group; and (5) field test. Data collection techniques used are sheets of expert validation, questionnaire responses and test student learning outcomes. The results showed on the stage of expert reviews on a percentage of average total validator experts of 93.6% to the category of very valid and at the stage of a small group average percentage of 96.78% with a very practical category. The test results on the field test phase obtained N-gain of 0.69 which showed an increase in the potential effects of the use interactive multimedia based multiple intelligences on the sound waves included in the medium category. Based on the results of this study concluded that interactive multimedia based multiple intelligences on the sound waves for students of class XII High School developed have been valid, practical and have a potential effect on improving student learning outcomes.

Keywords: development research, multimedia interactif, multiple intelligence, sound waves

1. Introduction

Physics is one of the subjects that exist in secondary education. Physics learn the concepts that are abstract, microscopic and macroscopic. So far, most teachers teach subjects dominated physics lecture method and rarely uses interactive media to involve all the potential and capabilities of the students. The material which is abstract physics course difficult to visualize and display the process before the students directly. Moreover, the facts contained in the

materials physics also not entirely be displayed significantly to the presence of students. For learning physics more interesting and students more easily understand the concept of physics well, it is necessary for innovation in learning physics, namely the integration of information and communication technology in the form of interactive multimedia (Wiyono, 2014).

The use of interactive multimedia facilitate students in learning physics concepts that are abstract and microscopically. This is because the animation in interactive multimedia can present things that are not visible and difficult to imagine (Wiyono, 2013). In addition, the integration of elements such as text, images, animation and video to optimize the role of the senses in the students receive information and transfer it to memory.

One of the causes of the importance of using media in teaching and learning is actually caused by the fact that all human beings are different (Sutijati, 2010). Interactive multimedia that exist today generally provide learning material presentation of physics are the same for each user by assuming that the characteristics of all the users is homogeneous. In fact, every user has different characteristics both in terms of skill level, learning style, background and intelligence. Supposedly an interactive multimedia system can provide learning materials that the difficulty level according to the user's ability and learning how to present the material in accordance with intelligence users. In other words, interactive multimedia system should be able to adapt zoom to a wide variety of user characteristics, so as to have a high learning effectiveness including its intelligence characteristics (Wiyono, 2012).

Humans are gifted by the Creator of the brain that has the dimensions of a complex intelligence, particularly complex in terms of its potential (Hadi, 2006). Only in educational practice in many countries for centuries, including in Indonesia brain potential is not yet developed for the education system prevailing until now only focused on the outside part of the left brain. The left brain play a role in the processing of mathematical logic, words (verbal) and the dominant sequence for learning. While the right brain that deal with the rhythm of the music, pictures and creative imagination had not yet received a

proportionate for developed (Kushartanti, 2004). Optimization of the brain is very necessary considering that the various steps to promote this life, including to improve human welfare required new ideas from the brain are balanced.

2. Theoretical Background

Results of research by experts of accelerated learning and modern learning methods showed that if all the intelligence grown, developed and involved in the learning process, it has the potential of improving the effectiveness of learning and learning outcomes (Gunawan, 2007: 231). Multiple intelligences or commonly referred to as multiple intelligences is some intelligence or talent of the students in solving various problems in learning Azizah (2014) (in Wiyono, 2015). According to Gardner intelligence is divided into eight intelligences such, visual-spatial intelligence, logical-mathematical intelligence, verbal-linguistic intelligence, interpers kinesthetic intelligence. Howard Gardner's theory can make learning more interesting and varied for each student will have the opportunity to develop its intelligence (Uno and Mohamad, 2010).

According to Armstrong (1996), the multiple intelligences learning strategy is one way of accessing information over eight lanes of existing intelligence on each student, but to opt back all the intelligence together in a unity that is unique in accordance with needs. So that students are able to solve the problems of learning in an amazing way. With the theory of multiple intelligences, allowing teachers to develop innovative learning strategies are relatively new in the world of education. Nonetheless, there is no set of learning that works effectively for all students. Each student has a certain tendency on the eight intelligences that exist.

As one form of innovation in learning physics, researchers integrate the teaching of physics, interactive multimedia and multiple intelligences. Selection of multimedia as a learning medium must have the basic considerations, which are based on the analysis of material needs and characteristics of students (Riyana and Susilana, 2007). Based on the syllabus

of subjects Physics 2013 high school curriculum, material sound waves is one of the materials studied in class XII High School. Wittmann (2003) on the research results mention that a sound wave is the material difficult to understand because a lot of misconceptions in understanding equation. Sadoglu research results (2013) also mentioned that students have difficulties in understanding and delivering propagation through the medium of up to ketelinga listener. Based on the results of the analysis, the researchers chose the material sound waves to be poured into interactive multimedia to help students to more easily understand the material sound waves. As in choosing the type of intelligence that is applied in multimedia are developed, researchers conducted a preliminary study to determine the dominant intelligence XII student of Mathematics and Science in SMA Negeri 1 Banyuasin I were involved in trials of multiple intelligences, with a percentage of 3, include the interpersonal intelligence of 37.5%, logical-mathematical intelligence amounted to 15.63% and the musical intelligence of 14.1%. From these data, the researchers chose two of the three dominant intelligence to be used in the ineteraktif multimedia musical intelligence and mathematical logic. Then both the intelligence will be combined with visual-spatial intelligence and verbal linguistics. Election of the four intelligence is based on the consideration that the material sound waves that are abstract and microscopically there are many things that need to be explained and visualized to students. In addition, there needs new ideas from the brain of a balanced and optimal use of learning by using intelligence left brain and right brain in order to both get a share proportional to be developed in the world of education.

Based on this background, the researchers are interested in developing interactive multimedia based on multiple intelligences (musical intelligence, visual-spatial intelligence, verbal intelligence linguistic and logical-mathematical intelligence) on the material sound waves to class XII High School.

3. Method

This study uses Development Research method with the model Rowntree development and use Tessmer eevaluation. Flow of this research can be seen in Figure 1:

Gambar 3.1. Prosedur Penelitian Pengembangan Model Pengembangan Rowntree
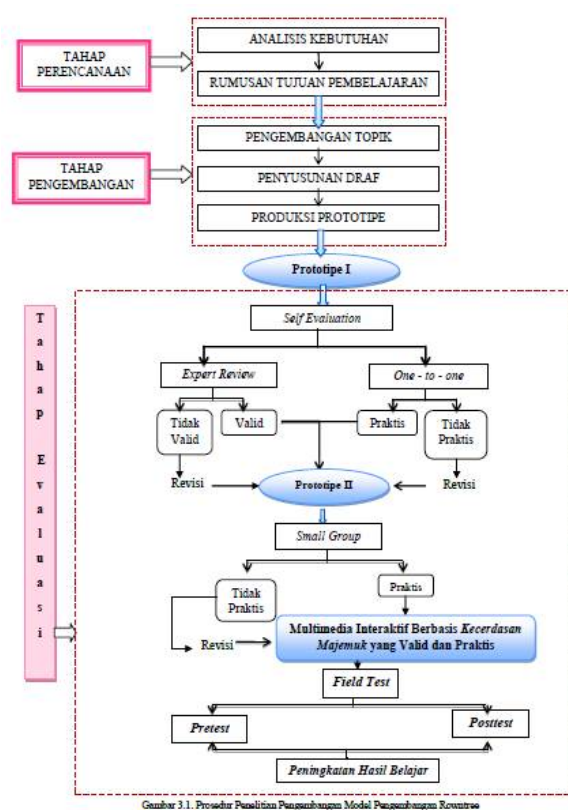
To obtain the necessary data in this study used data collection techniques as follows :

1) To get the validation of expert validation of a questionnaire used sheets and pieces of advice.

2) To get the practicality evaluation evaluation of one to one and small group used a questionnaire sheets and pieces of advice.

3) To determine the potential effects of products on learning outcomes of students used a field test

Data from the validation results of experts (HVA) in the score and made in percentage then grouped according to the following categories:

Table 1. Category Expert Validation Results

(Wiyono, 2015)

Percentage (%)	Category
$86 \leq HVA \leq 100$	Very Valid
$70 \leq HVA < 86$	Valid
$56 \leq HVA < 70$	Less Valid
$0 \leq HVA < 56$	Invalid

Data from the evaluation of one to one and small group (HEOS) in the score and made in percentage then grouped according to the following categories:

Table 2. Evaluation Results Category *One to One* and *Small Group*

(Wiyono, 2015)

Persentase (%)	Kategori
$86 \leq HEOS \leq 100$	Very Practical
$70 \leq HEOS < 86$	Practical
$56 \leq HEOS < 70$	Less Practical
$0 \leq HEOS < 56$	Impractical

To view the N-gain in each group used the following equation:

$$< g > = \frac{(skor\ post\ test) - (skor\ pre\ test)}{(skor\ maksimum) - (skor\ pre\ test)}$$

N-gain results obtained will be categorized based on the following Table 3.

Table 3. Category N-gain (Hake, 1998)

Category	N-Gain
High	$(< g >) \geq 0{,}70$
Medium	$0{,}70 > (< g >) \geq 0{,}29$
Low	$(< g >) < 0{,}29$

4. Result and Discussion

Development of multiple intelligences based interactive multimedia sound wave that the researchers did use Rowntree development model which consists of three stages, namely: (1) the planning stage (planning); (2) the development stage (development); and (3) the evaluation stage (evaluation).

The planning stage

Based on the analysis of acquired competence syllabus potential to be loaded into multiple intelligences based interactive multimedia which describe the sound wave. Sound waves are abstract enough material to learn and many require explanation visualization to enhance students' understanding, but but the objects on the material sound waves can not or hardly presented directly in the classroom. Therefore, by using interactive multimedia, such objects can be presented directly in front of the students so that learning physics is more meaningful (meaningful learning). Not only that, the development of interactive multimedia in order to achieve the learning objectives established in accordance with the benefits of learning media according to Rusman (2012), which clarify the meaning of learning materials are delivered, so that students better understand and further enable students to achieve the learning objectives well.

The development phase

From the competence of the selected researchers compiled a derived materials (JM) and Multimedia Content Outline (GBIM) which will be published in multiple intelligences based interactive multimedia sound waves. Before performing multimedia authoring researchers first create a flowchart and storyboard as a guide in making multimedia. In the process of making researchers used a computer program to auto-merge some multimedia aspects that could involve the senses of sight and hearing of students during the learning. This is consistent with that put forward by Asyhar (2011) is a multimedia learning involves the senses of vision and hearing through the

media text, visual silent, visual motion and audio as well as computer-based interactive media and information and communication technology. Researchers use Sothink SWF Quicker application to create interactive multimedia on the material sound waves because Sothink SWF Quicker have a lot of animation effects on text created. At this stage of development, created the first and following prototype is the Main Menu Page Views Interactive Multimedia.

Figure 2. Main Menu Page Views Interactive Multimedia

Evaluation phase

Evaluation used is a formative evaluation aims to determine the validity, practicality and potential effects of the use of interactive multimedia sound waves intelligence-based compound. In the evaluation phase consists of:
a) Self Evaluation

At this stage the researchers checked himself against the prototype 1, a result the researchers found some errors and shortcomings as functions of the navigation keys that are not in accordance with the hyperlink is desired, or a button that does not work, see an opening page that is less attractive, the main page, the choice of music less varied, as well as some text typing wrong. From the findings of researchers to revise that first prototype is ready for validation by experts.

b) Expert Review

Prototype 1 which has passed the next phase of self evaluation submitted to the validator 3 to be validated. Validator checking, analyzing and

assessing prototypes 1. Then validator gives ratings and comments on the validation sheet that has been provided. Prototype 1 is still to be improved based on the comments and suggestions validator the addition of animation or video examples of objective and close in everyday life. Based on the percentage of votes obtained by the average total validator validator vote was 93.6%. Seen from table 1 that percentage included in the category of very valid. Validation results obtained from the interactive multimedia are as follows:

Table 4. Validation Results Interactive Multimedia

Hasil Penilaian Validasi Ahli pada Tahap *Expert Review*			
Validator (Expert)	**Indikator / Aspek yang Dinilai**	**Rerata skor**	**Persentase (%)**
1	**Aspek Materi (*Content*)**		
	Kesesuaian materi dengan bidang kurikulum yang terkait	3,1	77,5
	Mengandung informasi yang cukup luas	3	75
	Kemudahan uraian materi untuk dipahami	3	75
	Evaluasi pembelajaran	4	100
	Rerata Aspek Materi (*Content*)	3,3	82,5
2	**Aspek Media (*Lay-Out*)**		
	Secara visual menarik minat siswa	4	100
	Kejelasan teks yang ditampilkan	4	100
	Kemudahan navigasi	4	100
	Kesesuaian penyajian materi dengan kecerdasan majemuk yang digunakan	4	100
	Rerata Aspek Media (*Lay-Out*)	4	100
3	**Aspek Materi (*Content*)**		
	Kesesuaian materi dengan bidang kurikulum yang terkait	4	100
	Mengandung informasi yang cukup luas	4	100
	Kemudahan uraian materi untuk dipahami	4	100
	Evaluasi pembelajaran	4	100
	Rerata Aspek Materi (*Content*)	4	100
	Aspek Media (*Lay-Out*)		
	Secara visual menarik minat siswa	3,7	92,5
	Kejelasan teks yang ditampilkan	4	100
	Kemudahan navigasi	3	75
	Kesesuaian penyajian materi dengan kecerdasan majemuk yang digunakan	4	100
	Rerata Aspek Media (*Lay-Out*)	3,68	91,9
Rerata Keseluruhan Hasil Penilaian Validasi Ahli pada Tahap *Expert Review*		3,75	93,6

c) One to One

At this stage the first prototype tested on 3 students of class XII Mathematics SMAN 1 Banyuasin I with different abilities that each low, medium and high based on the recommendations provided by the subject teachers of physics who taught in the class. At this stage, students are asked to do a study with a prototype 1. After learning students are asked to complete a questionnaire and provide comments and suggestions to improve the prototype

1. Based on the questionnaires filled out by the students calculated the percentage of the average total judging of students to see the level of practicality prototype 1. from the calculations, the percentage of the average total student judging by 97.69%. Based on the percentage of table is categorized as very practical.

d) Small Group

At this stage the second prototype tested on 9 class XII student of Mathematics SMA Negeri 1 Banyuasin I with details of low student academic ability 3, three students and three students were high based on the recommendation of subject teachers of physics who taught in the class. Students doing the learning, guided by the researcher as if he were in a real learning in the classroom. After the learning process is completed the students were given a questionnaire sheet to be filled by students. Based on the calculation of the value of a questionnaire completed by the students obtained percentage of the average total student responses amounted to 96.78%. The mean overall questionnaire stage one to one and small group was 97.24%. Based on Table 2 shows that the percentage of interactive multimedia intelligence-based compound that researchers have developed a sound wave is very practical. Questionnaire results obtained from the four multimedia interakktif are as follows:

Table 5. Results Questionnaire Interactive Multimedia

No.	Nama	Rerata Tanggapan	Persentase (%)
1.	A.A	3,92	98
2.	A.N.F	4	100
3.	A.W	4	100
4.	I.W	4	100
5.	K.S.N	3,92	98
6.	L.A.W.R	3,31	82,75
7.	R.Y	3,69	92,25
8.	V.E.P	4	100
9.	Y.A	4	100
Rerata keseluruhan		3,87	96,78 (Sangat Praktis)

e) Field Test

At this stage based interactive multimedia multiple intelligences sound wave that has been expressed very valid and very practical tested in actual class with the subject of the research students of class XII Mathematics and Science 1 SMAN 1 Banyuasin I totaling 30 students with allocation of 6 hours of lessons (three meetings) including meeting for the initial test and final test. This stage aims to determine the potential effects and responses of students to the interactive multimedia sound waves intelligence-based compound. At the first meeting the students were given an early test. During the learning process students use multiple intelligence based interactive multimedia sound waves that have very valid and very practical and at the end of the meeting students were given a final test to determine student learning outcomes. By looking at the students' learning hail from the value of the initial test and final test score gain normalized sought, obtained by N-gain 0.69 and table 3 based on improving student learning outcomes included in the medium category.

Based on the evaluation the researchers did it can be concluded that the multiple intelligences based interactive multimedia sound waves to class XII SMA expressed very valid and very practical, as well as having the potential effects on student learning outcomes in the medium category.

And field test results as follows:

Figure 3. Field Test Results
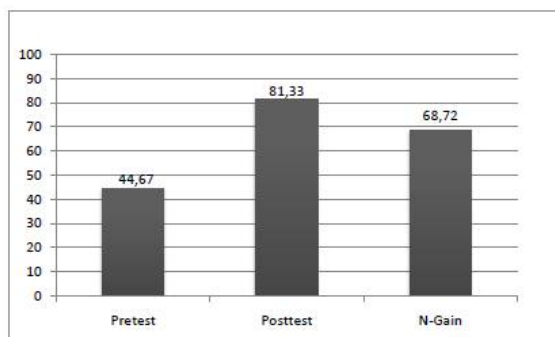
5. Conclusion and Remark

Based on the research-based interactive multimedia development of multiple intelligences in matter of sound waves to class XII student high school, can put forward some conclusions, namely:

1. Has been successfully developed multiple intelligences based interactive multimedia on the material sound waves are very valid with a percentage of average total 93.6%.

2. Has been successfully developed multiple intelligences based interactive multimedia on the material sound waves are very practical with a percentage of the average total of 96.78%.

3. Has been successfully developed multiple intelligences based interactive multimedia on the material sound waves that have a potential effect on student learning outcomes with N-gain of 0.69 and into the category of medium

Advice

Based on research that has researchers do, then suggestions that researchers provide include:

1. Conduct research-based interactive multimedia development of multiple intelligences to other physical materials,

2. Applying for a computer-based learning materials physics that have a need to be visualized.

3. Taking into account the diversity of intelligence on students in the implementation of the learning process.

4. For developers who will use Sothink SWF Quicker, in order to develop more innovative multimedia product for teaching physics at other material.

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CORRELATION ANALYSIS AMONG FOREIGN LANGUAGE ANXIETY, READING ANXIETY, AND READING ACHIEVEMENT OF STUDENTS OF PUBLIC HEALTH FACULTY OF SRIWIJAYA UNIVERSITY

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Abstract

The objectives of this research are to (1) to determine whether there is a significant correlation between the level of students' anxiety in the foreign language and the ability to read text in foreign language; (2) to know whether there is a significant correlation between the students' level of anxiety in the foreign language reading and the ability to read text in foreign language, and (3) to find out whether there is a significant correlation among students' level of anxiety in the foreign language and anxiety in the ability to read text in foreign language and students' reading ability of Faculty of Public Health students Sriwijaya University. This research is a correlational study. The samples of this research are the 240 students of English Education Study Program chosen purposively. The data were gathered by using 2 ready-made questionnaires and TOEFL Reading Section test. The results of this research showed that (a) there was no correlation between students' foreign language anxiety level and reading achievement as shown in Pearson Correlation 0.046 and R-square 0.002; (b) there was statistically correlation between students' reading anxiety level and reading achievement as shown in Pearson Correlation 0.196 and R-square 0.038; and (3) students' foreign language anxiety level and students' reading anxiety level were statistically correlated, as shown in Pearson Correlation 0.199 and R-square 0.04.

Key words: foreign language anxiety level, foreign language reading anxiety, reading achievement.

1. Introduction

In the university level, foreign language learning still considered as the most difficult task for most of the college students. The problem and difficulty those appeared througout the learning process issued traumatic experience to escalate their foreign language skills, especially on their reading skills. Negative views of the literacy skills, especially reading skills have made Indonesia as the most suffered of illiterate adult age country with the highest quantity, both in East Asia or the Pacific region, which is about 69% or about 15,000 million young adults age (UNESCO, 2008). Becoming worse, the results of research on reading literacy skills owned by language learners is reported by the Programme for International Student Assessment (PISA 2012, page 5) shows that Indonesia ranked second bottom after Qatar, of the total members of the 34 PISA countries. It represents that the skill to read a foreign language text of Indonesian youth generation is still lacking.

From the description above, the values of reading skills is still considered to be complex. The complexity of the components of reading skills, both directly and indirectly influenced by internal and external factors (Grabe & Stoller, 2001, page 188). In other words, the success of English language learners in reading skill depends on linguistic factors, the number of diction which is owned by the learner, and also the social background of the learners. In addition, there are other factors which affect reading skills for learners of foreign languages, namely language skills, motivation, anxiety, and cultural backgrounds of the learners (Sellers, 2000, hal.515).

Talking about anxiety in learning a foreign language, MacIntyre and Gardner (1994, page 284) define it as "a state of tension and anxiety related to the context of foreign language learning, including reading skills." In other words, the situation involving the negative emotion reaction when the process of learning a foreign language starts (MacIntyre, 1999, as cited by Dornyei, 2005, page 199). Then, this anxiety on foreign language is seen as complex situation, in terms of self-assessment, trust, affection and behavior related activities of foreign language learning, and that resulted in their uniqueness in the process of language learning (Horwitz et al, 1986,

p. 128). Therefore, this anxious state provides significant influence in foreign language learning in both the formal and informal learning. In its connection with reading skills, anxiety in foreign language generates special difficulty that the learners should be able to understand dictions they had never read before, so in the end learners experienced frustration or give up on understanding the content of that reading text and encounter anxiety. The anxiety that appeared throughout process of reading activity in foreign languages known as anxiety in reading (Saito et al, 199, p. 205).

A study that has been conducted by Wu (2011, p. 273) describes there is a significant relationship between anxiety in reading with anxiety in a foreign language. In that study, the correlation coefficient indicates the value of 0.68 which means that learners with a high level of foreign language anxiety tend to have a high level of anxiety in reading foreign language text either. In addition, the result shows no significant correlation between anxiety level of learners' in reading text in foreign language with learners' reading skills itself. Statistically, learners with a foreign language high level anxiety has the lower ability to read text in foreign language than the learners with medium and low anxiety levels. In other words, the result of the study shows a significant negative correlation between foreign language anxiety and the learners' ability to read text in foreign language. The results of this study are supported by Jafarigohar (2012, p. 159).

From the explanation above, it entered the writer to discuss more about the relationship between anxiety in foreign language (language anxiety), anxiety in reading text in a language (reading anxiety) and the students' ability to read text in a language (reading achievement) to the students of the Faculty of Public Health (non-English major students) in Sriwijaya University. This quantitative research conducted to answer these problems. The measuring instruments used are two different types of questionnaires were used to further examine the anxiety level of students in foreign language and to measure the anxiety level of students in reading text in foreign language. In addition, the researchers gave a reading test to determine the level of

students' reading skills. To support the quantitative data, researchers conducted interviews and direct observation in order to strengthen the existing findings. By getting to know the anxiety level of the learner in the process of learning a foreign language is expected to optimize the learning outcomes of learners themselves.

2. Theoritical Background

2.1. Foreign Language Anxiety

There are two differences in the meaning of anxiety in the process of learning a foreign language. First, anxiety is seen as a learners personal innate character (trait anxiety) as described by Pavlenko (2005, p. 33), anxiety is seen as temporary anxiety just as emotional reactions to the situation at hand (state anxiety) is expressed by Dornyei (2005, p. 198), and special anxiety in a state (situational-specific anxiety) by Ellis (1994, p. 480). Differences in other anxiety conditions is whether the anxiety affects positively on the progress of the progress of learning a foreign language (facilitating anxiety) as proposed by Pavlenko (2005, p. 33) or the anxiety negatively affect the process of learning a foreign language (debilitating anxiety) by Spolsky (1989 , p.113).

The relation to the process of learning a foreign language, foreign language anxiety specifically a manifestation of learners' anxiety state itself. Horwitz et al (1986, p. 127) states that foreign language anxiety in the realm of action involving third worry: anxiety in communication, fear failure and the fear of negative judgment from others. Anxiety in communication (communication anxiety) is an anxiety that affects the process of language learning, in which learners themselves have less self control to the classroom situation where learners continuously experienced regulatory process. In the second sphere, the fear of failure (test anxiety) appears on the manifestation of the desire to be the best. Additionally, concerns over the negative assessment of people around (fear of negative evaluation) is defined as "fear of the

judgment of others, the fear of judgment, and expectations are too much on the judgment of others (Horwitz et al, 1986, p. 128).

2.2. Foreign Language Reading Anxiety

Reading is one subject of the affective domains. Furthermore, anxiety regarded as one of the affective factors is provide connection with learning process of reading skills. Anxiety that arises during the process of reading text in foreign language known as anxiety in the foreign-language text reading (Saito et al, 1999). In addition, Saito also explains that there are two aspects that can cause anxiety in the foreign-language text reading, those are vocabulary and very complex writing system and cultural values in the text are still poorly understood. Therefore, consciously or not foreign language learners will feel anxious by the moment they try to understand the meaning of new vocabulary of a foreign language.

The results of the study shows that anxiety can impede language learners' comprehension by damaging readers' cognitive work system while that system responsibles on information processing from the content of reading text. As a result, readers are anxious to experience problems with cognitive ability that in the end ultimately affect the lack of the readers' comprehension. To read text in foreign language cause anxiety and lead to the lack of language learners' achievement "in conjuction of students' levels of reading anxiety and general foreign language anxiety (Saito dkk, 1998, p. 202). In line with the foregoing, Zbornik & Wallbrown (1991, p. 3) in their study confirms that anxiety in reading text in foreign language bore a special aspect of anxiety in general that led to the act of reading language learners itself.

2.3. Reading Achievement in English Language Teaching

Reading is one of the academic language skills. In academic life, reading is one way in getting new information that gives the possibility to increase understanding of the content of the discourse that is read. Also, read the language learning strategies used as a standalone, whether reading activities aimed to the learning process or to improve language skills (Grabe & Stoller, 2001, p. 187).

In addition, the ability to read text in a language requires the reader to get information of a discourse. Nowadays, research in foreign language text reading skills focused on increasing the reading skills of learners, such as the introduction of new vocabulary, the organizational structure of discourse and reading strategies.

2.4. Reading Achievement on the Basis of Foreign Language Anxiety and Reading Anxiety

In the relationship between anxiety in reading foreign language text and reading achievement, research conducted by Sellers (2000, p. 512) and Jafarigohar (2012, p. 19) states that there is a significant relationship between anxiety in foreign language and learners' foreign language reading skills. In this case, the anxiety in reading text in foreign language related to, but distinct from, the anxiety in the foreign language. Clearly, the learners with a high level of anxiety in the foreign language and anxiety in foreign language reading text has a low comprehension on discourse understanding.

3. Method

This research was correlational method. There were 240 samples of the study chosen purposively. The data were gathered by using two ready-made questionnaires (FLCAS and FLRAS questionnaire) and TOEFL Reading Section test. The instruments were tried out and checked out by using Cronbach's Alpha method. The questionnaire of FLCAS consists of 33 items were all valid and reliable items after the try out. The instruments were considered reliable as the cronbach's alpha

coefficient 0.756 for the FLCAS questionnaire, 0.849 for FLRAS questionnaire, and 0.738 for the reading test. They were higher than the r-table at the significant value of 0.05. The normality test using Kosmolgorov-Smirnov test was also conducted to check the normality of the data. The normality test result showed that the significant value of the three instruments were 0.097 for FLCAS questionnaire, 0.200 for the FLRAS questionnaire; and 0.200 for the reading test. Since the significant value was higher than 0.05, the data was considered normal.

4. Results and Discussion

The data from the questionnare showed that the students' score of foreign language ranged from 67 t0 129; 27 students (11.25%) had low level of foreign language anxiety, 212 students (88.33%) felt medium level of foreign language anxiety and 1 students (0.42%) had very high level of foreign language anxiety. In other words, most of the students were in medium level of foreign language anxiety. The description of the students' foreign language anxiety level can be seen in the following table.

Tabel 1.1
Description of Students' Foreign Language Anxiety Level

Scale	Category	Total	Percentage
33-76	Low	27	11.25%
77-120	Medium	212	88.33%
121-165	High	1	0.42%

Description of students' foreign language reading anxiety scale can be seen in the following table. The students score ranged from 33 to 165. They were distributed into 3 categories; 22 students felt low level of foreign language reading anxiety (9.2%), 217 students with medium level of foreign language reading anxiety

(90.42%) and only 1 student in high level of foreign reading anxiety scale (0.42%). In other words, most of the students were in the medium level of foreign language reading anxiety, as described in Table 1.2

Table 1.2
Description of Students's Foreign Language Reading Anxiety Level

Scale	Category	Total	Percentage
33-76	Low	22	9.2%
77-120	Medium	217	90.42%
121-165	High	1	0.42

Talking about students' reading achievement, the score ranged from 0 to 50. There were 35 students (14.58%) had low reading achievement; 194 students (80.83%) were in medium reading achievement and 11 students (4.58%) had high reading achievement. From the description above, it can be seen that students mostly had medium reading achievement. The detailed information can be seen as follows.

Table 1.2
Description of Students's Reading Achievement

Scale	Category	Total	Percentage
0-16	Low	35	14.58%
17-33	Medium	194	80.83&
34-50	High	11	4.58%

Pearson Product Moment statistical analysis was applied to find the correlation between students' foreign language anxiety, foreign language reading

anxiety, and reading achievement. The results showed that the correlation coefficient between students' foreign language anxiety and reading achievement 0.046 with the significant value of 0.477. The significant value was higher than .000, the correlation was not significant. Regression analysis showed R-square 0.002 means that only 0.2% foreign language anxiety contributed to students reading achievement. Besides, to see the significance, the writer did t-test. The output showed that t-value 0.713 and the significance value 0.477. T-table with the significance value 0.05/2=0.025 with df= n-2= 240-2= 238 was 1.19698. T-value<t-table 0.713 < 1.19698 means that H0 was accepted. It can be concluded that students' foreign language anxiety scale did not contribute to students' reading achievement. The detailed information can be shown in the following table.

Table 3
Output of Regression Analysis between X_1 and Y

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.046[a]	.002	-.002	5.975	1.516

a. Predictors: (Constant), LanguageAnxiety

b. Dependent Variable: ReadingAchievement

Then, the correlation analysis was also done to see the correlation between foreign language reading anxiety and reading achievement. The results showed that the correlation coefficient was 0.196 with the significant value 0.002. Regression analysis showed R-square 0.038 means that only 3.8% foreign language reading

anxiety contributed to students reading achievement. Besides, to see the significance, the writer did t-test. The output showed that t-value 3.077 and the significance value 0.002. T-table with the significance value 0.05/2=0.025 with df= n-2= 240-2= 238 was 1.19698. T-value>t-table 3.077 >1.19698 means that H0 was rejected. It can be concluded that students' foreign language reading anxiety scale contributes 3.8% to students' reading achievement. Table 4 shows the detailed information.

Table 4
Output of Regression Analysis between X_2 and Y

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.196[a]	.038	.034	5.866	.038	9.467	1	238	.002

a. Predictors: (Constant), ReadingAnxiety

b. Dependent Variable: ReadingAchievement

Next, the correlation coefficient among the two independent variables and reading achievement was 0.199. Then, the data collected was analyzed by using multiple regression analysis. Regression analysis showed R-square 0.04. It means that only 4% of students' reading achievement was influenced by the two independent variables. Besides, to see the significance, the writer did t-test. The output of students' foreign language anxiety showed that t-value -0.581 and the significance value 0.562. T-table with the significance value 0.05/2=0.025 with df= n-2= 240-2= 238 was 1.19698. T-value<t-table -0.581 >1.19698 means that H0 was accepted. It

can be concluded that students' foreign language anxiety contributes to students' reading achievement negatively. At last, t-value of students' foreign language reading anxiety was 3.042 with the significance value 0.03. The t-value > t-table 3.042 > 1.9698 showed that H0 was rejected. It can be concluded that the students' foreign language reading anxiety level contributed to student's reading achievement. Table 5 showed the detailed information.

Table 5
Output of Multiple Regression Analysis between Two Independent Variables (X_1 and X_2) and Y

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	15.419	3.971		3.883	.000		
	LanguageAnxiety	-.026	.044	-.040	-.581	.562	.833	1.200
	ReadingAnxiety	.109	.036	.212	3.042	.003	.833	1.200

a. Dependent Variable: ReadingAchievement

Based on the findings, we can see that most non-major English students of Public Health Faculty of Sriwijaya University had medium level of FLCAS, FLRAS and reading achievement. The result of the statistical analysis revealed that there was no correlation between students' foreign language anxiety and students' reading achievement. Then, there was only 3.8% contribution of students' foreign language reading anxiety on student's reading achievement. Only 4% of students' reading achievement was influenced by the two independent variables.

Based on those findings, some interpretations can be drawn. First, although the correlation was not significant, the result still give us some important information regarding the role of self-regulated learning in students' learning. Based on the data, we can see that most of the students had medium level of foreign language anxiety, medium level of students' foreign language reading anxiety and medium level of student' reading achievement as well. In other words, their foreign language anxiety did not give a lot contribution on their reading achievement; their foreign language reading anxiety contributed 3.8% on reading achievement and also 4% contribution on students' foreign language anxiety and reading anxiety toward the students' reading achievement. Based on the findings, the mean score of each variable in the medium level. In other words, we can say that students are not really good at facilitating their level of anxiety both in FLCA and FLRA. Implementation is very important as it shows the reality of a plan. Unfortunately, it is not easy to execute a plan as it needs a lot of effort, courage, and high committment. Therefore, students still need to reduce or at least minimize their level of the two kinds of anxiety in ELT in order to help the students learn and achieve better.

5. Conclusion and Remark

Based on the findings, it was found that most of the students had medium level of FLCA, FLRA and reading achievement. Despite of the importance of anxiety in ELT, the result of this study showed that there was no correlation between FLCA and reading achievement. There was statistically correlated with students' reading achievement. Level of FLCA and FLRA also showed statistically correlation among the two independent variables and reading achievement. This implied that students might often feel anxiety in their ELT and learning activities. It means, they still need to improve their ability in reading foreign language texts as they are still very weak in managing their level of FLCA and FLRA anxiety.

Regarding the importance of students' anxiety in language learning in supporting someone's success in learning, it is very important for teachers to encourage the students to be as relaxed as possible. Therefore, it is expected that teachers apply interesting and meaningful teaching methodsduring the teaching and learning process which can encourage the students to improve their reading achievement.

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DEVELOPING CHARACTER BASED INTERACTIVE LEARNING MEDIA TO FACILITATE STUDENT'S SELF-LEARNING OF CAPITA SELECTA MATHEMATICS (A RESEARCH ON MATHEMATICAL CRITICAL AND CREATIVE THINKING SKILLSOF MATHEMATICS DEPARTEMENT STUDENTOF TEACHER TRAININGAND EDUCATION FACULTY OF SILIWANGI UNIVERSITY IN TASIKMALAYA)

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Abstract

The objectives of this research are to design and develop character-based Interactive learning media to facilitate autonomous learning of college students in the course Capita Selecta to develop critical and creative thinking mathematical skills. Research methods and properties of the beginning of the study in the first phase of theoretical studies, mainly carried out in the literature study and consideration of the rational, empirical studies conducted when testing teaching materials and instruments interactive critical and creative thinking skills mathematically. The sample in this research is mathematics education students who take courses capita selecta math 3 group are 110 people. Data are collected to measure the ability to think critically and mathematicallycreative through a written test, while learning autonomy used to measure Questionnaire with Likert scale. The Results of the Research is that a character-based interactive learning media facilitate self-learning in the course Capita Selecta. The ability to think critically and mathematically creative of Students are adjusted at a high level qualifications. The Highest error of mathematic critical thinking made by students are at the focus indicator while the highest error of mathematic creative thinking are at the originality indicator.

Keywords: character-based interactive learning media, mathematical critical thinking, mathematical creative thinking, autonomous learning.

1.   Introduction

In development countries, computers have been part of the learning process in the classroom. But in Indonesia, Although a growing fast of schools are equipped with computer labs, the use of computers for learning, including mathematics, has been still not optimal. Therefore, research on the effectiveness of the using computers in

teaching is necessary and the use of computers for educational purposes, especially mathematics education can be further improved. Curriculum 2013, are designed with the aim to prepare the Indonesian people have the ability to live as a person and a citizen who believed, productive, creative, innovative, and affective and able to contribute to the society, nation, state and world civilization. Satisfy these objectives students LPTK as mathematics teacher candidates should be prepare themselves to be part of the development of technology. The advantages of interactive multimedia applications of mathematics in explaining a concept can require students to explore and analyze, try out and explore the concept also the principles contained in the object problem.

The presence of the development science and technology provide opportunities for all to students to unimpeded access information relevant of their needed and demands; explore and find their own mathematical concepts contained in the computer program given. This will touch up an optimal utilization of the ability of students, so critical thinking and mathematically will be increased.

The one objective of the Faculty of Theacher and Education Siliwangi University in Tasikmalaya is to prepare of teachers in middle and high school in accordance with the neededthe both of quantity and quality. While one of the missions of Mathematics Education departement FKIP Sliwangi University is organizing a quality education to prepare skilled in mathematics education professionals. Based on this fact, students in Mathematics Education departement as mathematics teacher candidates need to prepare themselves to the maximum to be able to fill up the mission of Mathematics Education departement. To carry out this mission one of the subjects that a provision student teachers in middle and high school is a Capita Selecta Math. This subject discusses more depth some selected topics in mathematics and secondary school as well as the way they are presented in accordance with the secondary school mathematics curriculum and secondary regulations. Scope of the subject include: topicsmiddle school math and essential and

common misconception (misconception), or a topic that is considered difficult for students and teachers and middle school of math.

To facilitate self-learning students, the use of instructional media is one of the alternatives in the development process of learning to be better. Muhammad (Samsudin, Ahmad, 2008), available at online interactive http://pendidikansains.blogspot.com/2008/01/peran-multimedia--mmi-in html, stressed the importance of the media as a tool to stimulate the learning process. Through the use of instructional media, independently students better understand certain materials that seem abstract has easily visualized. In addition, students are expected as a mathematics teacher candidates are motivated and able to actively participate in classroom learning. Kusumah, Y (2008: 4) also that one of solution is deemed appropriate to realize the self-learning is the application of information technology as a medium of learning mathematics, which provide opportunities for students to learn independently via programmed instructional materials interactively.

Previous research has an impact quite well that the media interactive teaching. Currently each classes in FKIP already available means to support learning based on information and communications technology (Information and Communication Technology / ICT). In the current circumstances, the lesson should be not longer be a tedious thing, as a few decades ago. Thanks to the development of information technology so rapidly, teaching materials can be presented with sounds and images are dynamic, not boring, as well as solid information. Therefore, the development of ICT-based learning is expected to improve the quality of the learning process in the classroom. UNESCO 2002 states that the use of ICT in teaching has three objectives: 1) to build a "knowledge-based society habits" such as problem solving skills (problem solving), communication skills, ability to find / manage information, transform the information into new knowledge and inform others, 2) to developed the ability to use ICT or "ICT literacy", and 3) to improved the effectiveness and efficiency of the learning process.

2. Theoretical Background

a. Interactive learning media

Media can literally be interpreted as an intermediary or introduction. Heinich, (Sanjaya, Wina, 2008: 204) argues, "The media is a channel of Communications. Derived from the Latin word for 'between', the term Refers' toanything that carries information between a source and a receiver. ' "Moreover, Briggs, L.J. (Sanjaya, Wina, 2008: 204) also states the media is "a tool to provide incentives' for learners that learning occurs.Media in the learning process tends to be interpreted as graphics tools, photographic, or electronically to capture, process, and reconstruct the visual or verbal information (Arsyad, Azhar, 2007: 3). With the presence of media in learning, students can learn the material independently and provides an opportunity to discover mathematical concepts and developed their creativity.

Media classified into five groups: (1) human-based media (teachers, instructors, tutors, role playing, group activities, field-trip); (2) print-based media (books, guides, exercise books (workbooks), work tool, and loose pages); (3) visual-based media (books, work tools, charts, graphs, maps, drawings, transparencies, slides); (4) based on audio-visual media (video, film, slide-tape program, television); and (5) computer-based media (computer aided teaching, interactive video, hypertext).

b. Critical and creative thinking skills

Thinking involves two major aspects of critical and creative. Both of think the use of reasoning to build a variety of ideas. According to Fisher (1995) think happens in everyone mental activity that serves to formulated or solved problems, make decisions, or gain understanding. Judging from the dimensions, Marzano et al. (1989: 4) foundthinking includes five dimensions of metacognition, critical and creative thinking, thinking ability of the core, and the relationship between thinking with particular knowledge. In line with these opinions, Fisher (1995: 4) argues, that think critically and creatively involve

aspects of the mind, and both are used in reasoning and build ideas. Additionally thought to be involved in any mental activities that help to formulate or solve a problem, make a decision or to build understanding, and then through thinking can be interpreted something.

Ennis (1981: xvii) defines that critical thinking is a thought process with the aim of making sensible decisions about what is believed to be or do. More over Ennis (1981: 14) said that there are six basic elements of critical thinking Focus, Reasons, Inference, Situation, Clarity, and Overview. According to Baron and Sternberg (1987: 10) there are five keys in critical thinking that is practical, reflective, reasonable, beliefs, and actions. The five keys to be combined into a definition for critical thinking, critical thinking is a reflective mind that is focused on deciding what is believed to be or do. In addition, the notion of critical thinking is something reasonable, reflective thinking that is focused on what is believed to be the decision, done, or done (Marzano et al., 1989: 18).

Ervynk (1991: 47) argues that the mathematical creative is the ability to solve problems and to develop the structures of thought to the nature of deductive logic. The resulting concepts to integrate into the things that are important in mathematics. Silver (1997) suggests that creative has not privileged domain of a few individuals, but rather as an orientation or disposition toward mathematical activity that can be developed extensively in public schools. More over Silver argued mathematical activities such as problem solving and posing problems interwoven with creativity which includes fluency, flexibility, and novelty. Sriraman (2004) defines creativity as a process that results are not unusual, in the solution of the problem given and that regardless of the level of complexity. Sriraman also suggested that creativity can be applied in the classroom. So these issues are not only the motivation and perseverance but also has a very broad level of reflection.

Mathematical creative thinking is the ability to find and resolve problems with components of mathematical proficiency/fluency, flexibility, and originality and elaboration / of detail. Fluency is the ability to put forward similar ideas to solve a mathematical problem. Flexibility is the ability to produce a wide variety of ideas to solve problems outside the usual categories. While the new thing is the ability to provide responses that are unique and unusual.

3. Method

This research is the development of character-based on media interactive learning course on mathematical models capita selekta Research Development. According Ruseffendi, E.T (2005: 32) that research and development (developmental research) is research that aims to assist in making decisions about better things to be carried out from the others, from the standpoint of effectiveness, and others. in takingdecision, the element of subjectivity certainly can not be removed ". Furthermore Ruseffendi, E.T (2005: 32) also said that "research development (developmental research) find patterns and sequences of growth or change, and primarily aims to developer of teaching materials that are beneficial to the school"

This research is a study of development (developmental research) medium term (over 2 years). Research methods and the nature of the study in the first phase initiated theoretical studies mainly carried out in the literature study and consideration of the rational, empirical studies do when guided interactive teaching materials and instruments ability to critical thinking and mathematicalcreatively.

The sample in this study are students who took the mathematics education mathematics capita selecta as much as 3 class numbered 110 people. The data would be collected to measure the ability to critical thinking and mathematicall creatively using written tests in narrative form as much as 6 questions for critical and 4 about to be creative, while learning kemamdirian used to measure Questionnaire with Likert scale.

4. Result and Discussion

The trial results about the ability to think critically and mathematicalcreatively, all matter is valid, as well as the test results questionnaire independence declared valid student learning as much as 40 statement. The results of observations during the learning process, student enthusiasm and the spirit of learning, means an interactive learning media can motivate students to learn. In addition, an interactive learning media can facilitate self-learning students both at school and at home. To enhance the learning motivation of students, lecturers should devise their own interactive learning media in accordance with the condition or characteristics of the students, so that students are able to learn independently. In addition, students must be trained High Other Thinking such as critical and creative thinking skills of students.

Research Year 2 begins with the preparation of pretest and posttest matter of critical thinking skills and creative mathematics. The number of critical thinking skills matter as much as 6 mathematical problems, and creative thinking abilities about mathematics as much as 4 matter. Critical thinking mathematically includes indicators Focus, Reason, Inference, Situation, Clarity and Overview, while creative thinking mathematically includes indicators Fluency, Flexibility, Originality, and Elaboration. Then about students tested in as many as 38 people. The test results obtained, all about are valid. Before the lecture using textbooks and interactive learning media, held pretest critical thinking and creative mathematical skills. The objective is the ability to see the beginning of creative and critical thinking math students. Once completed the entire lecture, held postes the ability to see the end of creative and critical thinking math students. Results obtained pretes and postes compared with an increase in critical thinking skills and creative mathematics student.

Interactive learning media mathematics can present concepts and high-level skills in mathematics, which is connected between one element and the other element is difficult to be taught and learned through books alone. The advantages of

interactive multimedia applications of mathematics in explaining a concept can require students to explore and analyze, try and explore the concepts and principles contained in the material that it faces, so it is relatively faster to build a structure of student understanding. This is caused because the integration of components such as voice, text, animation, pictures / graphics, and video functions to optimize the role of the senses in receiving information into the system memory. Regular learning has been done without the help of interactive media has not given the opportunity students to explore and develop their creativity. Therefore, the development of interactive learning media predicted to be able to facilitate students to independently develop high-level thinking skills.

5. Conclusion dan Remark

Results from this study is a character-based interactive learning media can facilitate self-learning students in the course Capita Selecta Math. The ability to think critically and creatively Students are at a high level qualifications. Students experienced the highest error indicator mathematically focus on critical thinking and originality indicator for creative thinking mathematically.

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SUBTLE LANGUAGE OF PALEMBANG (*BEBASO*): LOCAL LANGUAGE PRESERVATION OF EXTINCTION THROUGH PREPARING DICTIONARY

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Abstract

The activity about the research of Subtle Language of Palembang (*Bebaso*) is done as an effort to preserve local language which is in the middle of extention. The language is already rare in used. Nowadays, the people of Palembang use a local language which is called daily Palembang language that stands out because it is dominated by Malay speech. As it is known that this article is started from withering and concern over the disappearance of the narrative and the use of this *bebaso* Palembang in public daily life communication. Language preservation as one of strategic steps in the preservation of language, should always be encouraged. One which can be done is by preparing subtle Palembang langauge (*bebaso*) which until now is still not arranged well. This step will be used as a basis to pursue the implementation of subtle language of Palembang as one of the local contents in teaching in schools that has a powerful function as a form of exploration of one of the cultural richness of South Sumatra to be proud.

Keywords: retention, Dictionary, Bebaso

1. Introduction

One of the cultural richness of Palembang and as the identity of Community Palembang known as the Malay community-Palembang, is its language Palembang, Baso Pelembang Alus or bebaso are now almost extinct For that according Syarifuddin (2008: 3), the need for preserving and documenting as a manifestation of our concern, including by holding a course or publish a book dictionary, and more importantly,is implementing and developing teaching Baso Alus Palembang as a form of teaching supplements.

Learning local content like this is part of the advocacy for language learning areas that should exist, but are not presented in the curriculum in schools. One of

them, Musi Language Fine or bebaso, which is the original language of Palembang people who are now threatened with extinction in the midst of the use of language that tends to Palembang Market rough as regional languages besides Bahasa Indonesia. The indication of Musi Language learning plans in schools has been submitted and has diupayaakan by many parties, among them is of the Balai Bahasa Palembang (Sriwijaya Post, Sunday, February 8, 2015).

Another important thing which should be wary of is based on a survey of some schools in the city of Palembang, both public and private, none of the existing schools put bebaso as the choice of subjects in mulok capacity. That is why, as a form of encouragement, then the modeling of this study as stated by Sudaryat (2010: 32), development should be managed based on a systematic approach or model life cycle, which has a five-step hierarchy, namely (1) the analysis of needs, (2) designing the model, (3) development of program activities, (4) the implementation of program activities, and (5) evaluation of the process and results or self-test (self-assessment). The five steps are influenced environment and objectives, curriculum, the activities, customizations, and system evaluation.

Associated with curriculum development in language, according to Brown (2007: 42), the development of learning can be done through five stages, namely (1) the analysis of needs, (2) objectives, (3) test, (4) teaching materials, and (5) teaching. The fifth component is in line with the activity of teaching (approach, syllabi, techniques, and exercises).

To view the successful development of learning needs to be as an evolution. As you go through five stages, language learning activities, in particular regional languages should be equipped with dictionary learning as a tool to achieve the optimization of the learning outcomes. Having regard to the degree of importance where the dictionary, so in this study will be conducted dictionary development efforts, especially learning English Dictionary Fine Palembang area. Based on

observations of the distribution of publications Dictionary Palembang Fine, currently only found Dictionary Palembang that do not meet the standards of language teaching Palembang, Palembang particularly delicate language. Cargo lexicon in the mostly English dictionary Palembang Malay (Bahasa Palembang market/ daily), which is not prepared to be taught as local content in formal educational institutions.

2. Theoritical Background

A local language dictionary vocabulary repertoire and a local term that describes the level of civilization of their owners. Because the dictionary function to record the development and progress of civilization and culture of an area, including the development and progress of science. While this vocabulary and terms continue to grow and develop in accordance with the development of civilization and science. This in turn will affect the completeness and the ability of Indonesian as a means of communication in many areas of life and science. In the field of science dictionary learning should take a look at the primary position as recorder of the ideas and views of children of this nation in regional languages that contain long historical value. Bebaso born of a long series of royal history Sriwijaya directly related to the kings of Java. This means that the learning dictionary can describe the extent of a particular field of study as well as a touchstone of local language skills to accommodate the various terms of Indonesian and even foreign languages.

Language or Baso Palembang by Syarifuddin (2008), has two levels, namely Baso Pelembang Alus (Bahasa Palembang Fine) or Bebaso and Baso Pelembang Sari-sari (Palembang everyday language / market / Malay). Baso Pelembang Alus used in conversations with community leaders, older people, or people who are respected, particularly in traditional ceremonies. This language, according to Arif (1981), rooted in the Java language for Palembang kings came from the kingdom of

Majapahit, Demak Kingdom and the Kingdom Pajang. That is why the vocabulary Baso Pelembang Alus much in common with the vocabulary in the Java language.

Meanwhile, Baso everyday use by wong Palembang and rooted in the Malay language. According to Ikram (2004: 5), in practice everyday, people usually mix Palembang and Indonesian language, choice of words based on the conditions and coherence, so that the use of language Palembang become an art in itself. Palembang language has similarities with the language of the province in the vicinity, such as Jambi, Bengkulu even Java, with a different intonation. In Jambi and Bengkulu, the suffix □a□ the Indonesian vocabulary converted into □o□ are found.

Baso Palembang Alus almost like the Java language, so many people assume that the language came from Java Palembang. But basically it is not so, on the contrary, Identity Palembang as the collaboration of two Malay-Javanese culture apart from Palembang history itself. According to sources of local history, the Palembang Sultanate emerged through a long process and is closely related to the kingdoms in Java, such as the kingdom of Majapahit, Demak, Pajang, and Mataram. Sriwijaya Palembang Malay past, the past is the forerunner to the establishment of kingdoms in Java.

According to Dumas (2008: 1-10), Palembang language derived from Old Malay language that blend with the Java language and accent and dialect spoken by people of Palembang. Onwards language that has become the property of Palembang is enriched by the languages of Arabic, Urdhu, Persian, Chinese, Portuguese, English and Dutch. While the script Malay Palembang, using Arabic script, the combined Arab and Malay or Malay Arabic script called Arab Bald or Pegon. Palembang regional language may be said language that is easy, compared to other regional languages. For everyday language or the market, only the style are somewhat different from the Indonesian, and some just different words or terms, most of the letter A at the end is replaced with the letter O. Like What becomes Apo, the name

became namo and so on, therefore the -the arrival in Palembang is easy to learn and use everyday language as a language or communication link to all regions in Sumbagsel. But even so everyday vernacular that there is a unique style that is sometimes evident for everyone to wear it contained irregularities. While bebaso is somewhat more difficult and quite different from the term to everyday language (kromo inggil).

Now, according Syarifuddin (2008: 4-8), there were not many more people who are good "Palembang bebaso", because it is rarely heard. Younger children may say a lot that cannot be, so are the adults. So it seems now bebaso was almost gone. Therefore this bebaso must be familiar in daily life to anyone because inside there are norms, etiquette and manners, so when would be a good habit and likely avoid misunderstanding, hurt, bickering, and so forth. Bebaso also pleasing to the ear and the eye, because delivery is polite and refined, her voice is not high, slow, and with modesty. In order to realize the preservation bebaso, especially among students, teaching materials that have been prepared very need support in the form of a dictionary adequate to be used by the students in understanding the language being taught Fine Palembang. Ownership of the dictionary determines the achievement of learning outcomes adequate regional languages.

Language Learning Palembang fine in formal educational institutions in the city of Palembang is currently being sought be applied at all levels of education. Approaches to the local governments have been intensified. Balai Bahasa Palembang also working to realize the plan. Lesson preparation of materials have been attempted manufacture. In particular for upper secondary school level, ajarpun material has been prepared by the researcher. Yet another problem arise when testing is done in some schools, the charge material Musi Language smooth experience problems in terms of understanding of the basic unit of language, the word is sometimes still unfamiliar to students. So, learn languages Palembang smooth like learning a foreign language for

students. To the researchers are working to develop language learning dictionary Palembang fine is expected to be a learning tool Musi Language smooth.

While it will be done for the future is to prepare a draft drafting language learning dictionary Palembang Fine in order to provide load balancing content of learning resources. The balance in question is an attempt to put the role of the dictionary as a major part in product research that will be published dictionary language learning Palembang Fine adequate and representative in supporting language learning PalembangFine.

Local Language Extinction

A language may be extinct due, the language can not compete with other languages, the prestige competition among varieties in one language, and finally the language is no longer used. Kloss also in Sumarsono and Partana explained that there are three main types of language extinction is the extinction of a language without the ongoing shift in the language or the extinction of a language because language shift, because of a conflict of intrinsic infrastructure of modern culture that is based on technology, the language is not able to compete with other languages and the extinction of languages Face through a process of metamorphosis.

There are several regional languages in Indonesia are already extinct. The use of Indonesian as the national language can actually lead to the extinction of the local language. Examples such as those derived from Palembang membawwa whole family migrated To Jakarta. At first they are still loyal to their local language, but because of its use Indonesian more dominant in Jakarta, so the local language just stop at just one generation and another generation only use Indonesian, without the local language.

Language Preservation

Retention of local language is a language of business in order to remain relevant through the use of teaching, mass media and so on. According Sumarsono, the actual language shift and language preservation is like the same thing. Shifting the language associated with the language displaced by another language. While the language preservation refers to the language that is not displaced other languages invitation. Holmes explained that there are three main factors that can give you success in language preservation. 1) The number of people who recognize a language is their native language, 2) Number of media that supports the language (schools, publications, radio, etc.), 3) The number of people admitted to the total ratio of media support

Language preservation in principle the positive efforts of the public speakers of all languages using the language and have pride in the language and culture in their environment, terutma in minority neighborhoods. The influence of other languages and cultures go into minority neighborhoods that is the problem for the survival of a language and culture. As is the case in the State of Indonesia, the government strongly supports minority languages in the archipelago, because cultures and languages that constitute the cultural wealth of the nation, so that these languages be protected, appreciated and respected.

3. Method

The method used in this research is the development of research methods (Research and Development), which contains three main components: (1) development model, (2) procedure development, (3) the trial product. Research development in this regard is the development of Language Learning Dictionary Palembang Fine.

Data as a candidate entries and sub-entries, diachronic would be gained by examining the manuscripts or documents in museums, such as the museum of the Sultanate of Palembang, as well as in museums Balaputra Dewa Palembang, agencies

or institutions that store documents -dokumen or texts to use or wear Fine Palembang language at that time.

In synchronous acquisition of data starting from the time of independence until now. Data can be obtained from newspapers, magazines, textbooks in formal education, radio broadcasting, television, and the language used in Palembang Smooth limited community harmony Palembang people in everyday communication. Then coupled also with the data Musi Language Fine frequently used in the art, for example in Wayang Palembang. By starting from the initial concept that this research is a research development, then that will be developed is shaped product Palembang Fine dictionary language learning. Research development according Waldopo (2007: 91) is a research-oriented type of product, as a model of development, this research is descriptive procedural. on models This development methodologically, the procedural question is in developing language learning products Palembang Fine dictionary. The steps that must be taken in the development process is judicial review and test the product. Developing more away then performed with field tests, the use of this dictionary directly in the study. To develop products of this dictionary, it should be done through an approach to research that is intended so that the product is suitable to be used as needed.

In the evaluation, the process and the model of development, which is also modified by the researchers will do two test ie for one-one validation (test one-on-one) and field validation group (field trial). At one-one validation (test one-on-one) is a validation that includes payload design and a dictionary entry. Validation will be conducted by two experts, namely material experts and design experts. As for the development of language learning dictionary Palembang this Fine, good design, content and the substance of its feasibility was tested on two experts. On the field group validation (field trial) that validation is not intended for the assessment of product development, ie seek and obtain input from students, but field trials have been more of test validation directly on the effect the product has on language teaching Palembang Fine, especially their understanding and knowledge

about Musi Language Smooth as well as to establish and create understanding of the diversity of the students' ethnicity. Therefore, it is more on a quasi ie will try to test the extent of the effect of these supplements on their understanding of ethnic diversity to create social harmony. Rate this quasi obtained by direct observation and tests of learning outcomes, both pre-test and post-test, and the questioner. Population in development research was all students in high school (SMA) in Palembang. While the samples were taken by using purposive sampling (samples aiming / consideration), namely by taking a sample of students of class X consists of three schools, High School (SMA) the country and High School (SMA) private. In this study, data collection techniques, namely: the first for the data collection instruments in the form of input from experts in exploring data about the truth of the concept, the researchers conducted a discussion and delivery of products made with the evaluation sheet that direviu experts and they were asked to comment on the resulting product , As for the feasibility of digging element sheet products based on the Review of the subject matter experts and media experts. Whereas, in digging element product usability by conducting field trials conducted against the students of these schools in the form of quasi experiments with engineering documentation, observations, and tests.

Data analysis techniques in the development of this product will be used descriptive analysis quantitative analysis of the variables on the quality of the product consists of two aspects, namely the aspects of product quality and quality aspects of the presentation. As for the analysis of field trials on the effect of this supplement to the knowledge and understanding of the students in the form of quasi-F test was used. So in answer to the problems in the research development, especially validation of field trials used a combination of the analytical techniques of observation and testing techniques are analyzed using variance through Frasio. Dictionary developed quality criteria, refer to the criteria stated Nieveen (1999: 22), the validity, praktikabilitas, and effectiveness.

4. Results and Discussion

A. Research Result

In this section we describe the results of the study in accordance with the stages of research and development of Borg And Galls simplified include: Phase surveys (initial research as a basis for planning the product to be developed), Stage Plan (design model), Do (to make the product), validation (validate), test (test product), disemination (distributing or publishing the results). (Borg R., & Galls, S. K., 2007: 204-210). The research method requires Educational Research and Development conducted a preliminary study prior to a learning model was developed.

Preliminary study is important as a first step to get data from sources that have been specified in the study design. In addition, the preliminary study is a conceptual basis derived from the theories and research results relevant past and an assessment of actual field conditions to develop a model. In this study, with the support of the preliminary study obtained dictionaries effective models and can be adapted to the needs of high school students as well as to environmental conditions available. To obtain the actual condition of the field, there are two sources of data used in preliminary studies, namely: high school students and high school teachers who teach in the city of Palembang.

The school is located in the city of Palembang and the past is any guide-shaped observation rating scale coupled with the necessary records, interview, and documentation. Respondents who is the source of the data is in the form of samples was determined by sample techniques aiming (purposive sampling). In addition to the condition of these schools also note the identity of the teacher, it is necessary to know the background of teaching experience.

From observations made can be seen that all teachers educational background of undergraduate and even graduate field of linguistics. But teachers who can speak well Palembang Alus no. This means the teacher is actually considered not feasible to teach formally. Nevertheless with the help of informal labor, which is the master Bebaso, then this bit can be overcome.

In a preliminary study, obtained the condition of language learning in high school Palembang performed through documentation study, classroom observation, and interviews. Documentation and observation of the study data showed that learning English Palembang Alus (bebaso) has not been taught in all schools in the city of Palembang, including in the upper secondary school level. Local governments are not included lessons that explore local culture in this case is bebaso which is now endangered. In this study selected two schools were used as a model for language learning Palembang Alus.

1. The condition of learning in high school studied.

Lesson Plan Objectives and five teachers who were respondents in this study is divided into two groups in view and treat objectives and lesson plans. Three people who prepare lesson plans (77.07%), two others (22.93%) to teach without a written plan or just follow the flow of activities in a resource book with slight modifications to the order according to the needs of students.

The first group considers it necessary to make a special note (lesson plans) which can be used as a guide to provide a learning experience to students through the formulation of basic competencies, objectives, and indicators of achievement of the basic competencies. It was intended that they are not out of the plan of the learning experience that has been set on the consideration tugasdan realistic language training and pedagogical. It is clearly visible from the opinion of teachers is very high willingness to be developed further in order to facilitate and guide the students to learn.

The second group is more dependent on resource book with just a little attention to the suitability of teaching materials and tasks as well as training provided. The group looked at the book as a primary reference source any bebaso learning activities that tend to follow the methods suggested in the order of submission of the author, and how to do the work and training, regardless of the amount of the corresponding time based objectives related competence development. As a result,

learning tends to be rigid and monotonous as dictated by the authors are far from understanding the class condition where it was used. Here are some things that can be put forward from both groups above: Because it does not have a local curriculum syllabus, teachers tend not to formulate basic competencies, objectives, and indicators. The formulation of the basic competencies are generally adapted from Curriculum 2006 or book resources without regard emphasis learning experience into focus. Basic competencies and indicators are generally not in accordance with the duties and exercises provided. The tasks and exercises there are less meaningful and relevant to students' progress, especially with regard to the processing capacity factor (processing capacity) language.

2. Instructional Materials / Methods of Submission

    a. Teaching materials

Most teachers glued to the material, assignments and exercises in the book regardless of the particular source language processing capacity factor of students in completing tasks and exercises. They have not adapted material, assignments and exercises with ability siswa.Variasi material, assignments and exercises more dependent on the teacher reference books. Most teachers just follow the beat writers who poured material, assignments and exercises based on the variability that do not take into account the real needs of specific students. Therefore learning tend to stick to the award-language experience that is less communicative with the dominant pedagogical tasks and exercises with right or wrong answer format. All teachers have been given a new experience for the students, although less attention to the reality of where, when, and to whom an appropriate use of speech. In addition, they also have not been able to distinguish the complexity of the cognitive demands contained by the task and the exercise so that the sequence often do not follow the principle of easy to difficult or from the concrete to the abstract. Teachers still do not understand how to: facilitate students to be able to express themselves through communicative activities, presenting vocabulary and speech-new appropriate level of student progress, engage

students to be able to use spoken language or write meaningful and flow naturally by topic and interpersonal relationships between users language, and presents a significant language in the cultural context of native speakers.

b. Submission methods

Most teachers do not understand the importance of preliminary activities to usher students into the new experience. They opened the lesson by asking questions about what students are learning in advance. If a question is not answered correctly, the teacher explains the material in question. Then gave an explanation of what will be learned then.

For the core activities of teachers has facilitated the reconstruction of a new experience, but limited only to tasks / exercises in textbooks while playing according to the needs of high school students. Before the students do the work / training, teachers must first give an example. Then he gave time to the students to memorize the language either individually or in groups. After the students finished, the teacher then check the answers and explain again the wrong answer. Teacher has helped both classically and individually if students find difficulty. One fundamental thing that has not done is to provide guidance and directs students gradually discover by yourself the facts, knowledge and skills into learning objectives. It turned out that all teachers do not perform feedback through targeted questions.

Students are not given the opportunity to realize a new experience gained in order to compare it with previous knowledge and skills. However, they give positive reinforcement in the form of praise for the students who have successfully answered correctly. It is different is the frequency of praise. There is a compliment too often tends to be interpreted as an expression of ordinary teachers do, that means not giving meaning anything that can motivate learning.

The learning activities did not facilitate the application of facts, knowledge and newly acquired skills in solving problems katau authentic pedagogy. Tasks and exercises provided by the teacher fixated on core activities, in which students are

confronted more stout on solving the problems of the pedagogic resource book. The use of media is not to facilitate students understand the concept of the concept of language because it is not accompanied by a clear context.

Teachers are also not using the environment as a learning resource. For example the use of myself and my surroundings introduce students to new vocabulary and communicative activities such as writing or speaking about a topic. All the teachers have not presenting significant drill (meaningful drill). They present a mechanical drill, students repeat the spoken speech teacher with an emphasis on the sounds of language and intonation are deemed appropriate. The procedure adopted ranging from classical repetition, half the class, and finally individually. Continue until the student is able to pronounce the sounds of language and intonation of sentences are acceptable. Teachers always correcting students' mistakes. However, not all teachers are able to implement error correction students with a more polite manner. For example through paraphrase or repeat the same sentence in the form and correct pronunciation while giving the impression through the eyes or with a certain tone and expression.

3. Process / Learning Interactions

    a. Learning process

The teacher presents the material quite well because it has been studied before class even any of them bring a little note to set the order of presentation with a slight modification of the source book. Modification of the order of presentation is based on a logical sequence that estimated in accordance with the material relevant to a particular topic. However, the timing of activities is often overlooked that the completion of tasks and exercises are often determined by the fast-slow students. It happens because they do not have the knowledge of how time is right for a child to complete tasks and exercises according cognitive demands inherent in the task.

Teacher's explanation on every execution of tasks varies greatly. There are explained after making sure students are ready to accept the explanation. Partly

explain regardless of whether all students are ready or not. Others give an explanation, checking students' understanding through questions or send one back explaining how to do the work and training are only partially monitored learning activities show that students tend to be more active than teachers in completing tasks and exercises.

In this case, the students ask questions when it encounters a problem that can not be solved alone. How teachers to answer student questions varied. No one answered she wrote on the blackboard. Most replied, asking the students to pay attention to the book source then explained at length. The other replied after making sure no other students who can help. In general, teachers provide assistance as needed, which is different caranya- Most around the classroom, watching the students about work and training while giving a brief explanation when it finds students in trouble, others are just waiting for questions from students while watching the action from the front of the class, help is usually given in the form of explanation to all classes.

Teachers have the seriousness present lessons. This was evidenced by a loud sound was quite audible to the whole class, gestures that reveal the seriousness and face beaming, as well as the treatment of a good student. All teachers establish good relationship (rapport) with students who facilitates learning that is not gripping (non-threatening atmosphere). Teachers and students understand the roles and duties of each so there is no miscommunication when performing tasks and roles. In terms of using bebaso, all teachers still require increased smoothness (fluency) and accuracy (acuracy) better, both regarding grammar and diction and pronunciation and accent right (register) to express ideas and concepts. This is understandable considering the teacher in everyday life tend to use Malay Palembang; Language is not a smooth Palembang (bebaso).

Teachers also less creative in organizing the classroom, the learning process tend to be monotonous. They organize students to work individually, in pairs occasionally talking into practice by reading the dialogue from the book source.

Likewise in the activities provide guidance and completing tasks and exercises, as well as determining a learning tool. Most teachers just use tools to exploit the images in the source book, others make themselves according to the needs of learning topics. Initiatives teacher looks of how often and variatifnya encourage the students to study harder when you find students who need help completing tasks and exercises. Not all teachers are able to initiate appropriate to stimulate (motivate) students to complete tasks and exercises properly.

b. Learning interaction.

In general, teachers have not been optimally encourage all students to actively participate in every activity. Students have not fully given the opportunity to take part in completing tasks through discussion groups and draw conclusions. Only a small proportion of students (impress the same people), which dominates and is actively involved in the debriefing. This factor is more prominent because of the interest in the subject bebaso is still lacking.

Students are not getting many opportunities to ask and argue. Teacher limit the time to ask, more than happy to explain while the students listen to the orderly. In general, teachers have not been able to create an atmosphere that encourages language students ask questions and express opinions Not all students attentive and involved in every activity. This situation is quite common when the lesson. They tend to be passive and wait until the teacher stepped in to help. Approximately 25% -35% others tend to pay more attention, more active and initiative to involve themselves in any activity. Classroom atmosphere conducive enough. Students do not feel anxious except learning 'grammar' when students are confronted with right or wrong answers. Bebaso learning for students more appropriately paired with learning foreign language for them. Therefore, teachers should also look towards there.

c. Evaluation

All teachers have not done an evaluation process, let alone use evaluation tools such as check lists, performance assessment, and assessment of students' progress more. Teachers have not done formally formative evaluation for some reason was not enough time. To determine the success of students, teachers check in the classical work by asking the "right" or "wrong" on each item on. Teachers then estimate what percent of students answered correctly and incorrectly. They do not understand that the evaluation process is important to monitor the students' progress so as not to prepare from scratch.

Teacher evaluation of learning outcomes do not prepare well, have not made a grating test. Test items do not represent four language skills and language elements, and even tend to focus on testing the language areas only. Most teachers just picking back issues of the tasks and exercises from the book sources that have been completed before the student. Through the analysis of documents, found approximately 84.34% of the 30 items tested the ability of students to the vocabulary and grammar. The rest 15.66% test reading comprehension.

d. Motivation and attitude of students towards learning multiple languages

To know about the motivations and attitudes of high school students to study Multi language, given the open questions with a question: "How did your experience in learning the language for this? By means of interviews on students (respondents) to approach the children, with the intent to dig deeper much information about the opinion of high school students. However, due to special learning bebaso they have never experienced, the question is limited to the knowledge of their bebaso and possible keberminatan to the lesson.

B. Development of Preliminary Draft Curriculum

The development of preliminary draft curriculum subjects of regional languages in the education system in Indonesia, especially for primary and secondary education adopted the model of communicative competence, and models of language as social

semiotic system. Both of these models have implications on the need for multi-language learning model is appropriate and can accommodate the characteristics of the local language lessons. For example, a model of communicative competence implies mastery of competencies discourse supported by -kompetensi another to someone capable of using language as a tool to express the meaning of an interaction. Similarly, in the model of language as social semiotic system, learning is packaged in three important aspects that can not be separated from the context of meaning, the text and the language system.

Meaningful learning model accommodates both the above model to meet the needs of local language learning for high school students in particular. Model bebaso dictionary is considering the suitability of the characteristics of students as learners regional languages in the education system in Indonesia. It has been mentioned in the introduction to the theory, that the student has a typical (characteristic) of its own in many respects different from language learners. Students have the cognitive experience as an entry behavior, from diverse socio-cultural environment, communicate in several languages before learning the local language and culture within a culture native to the students themselves, as well as linguistic distance between languages.

These things into consideration so that the model considered most suitable means. Models display multi language dictionary meaningful believes that the essence of language learning objectives at the local high school is that the students want and appreciate (appreciate) one of the local wealth, the language. Therefore, it is: (1) material, sources and media adapted to real-world learning and social environment of students. (2) the complexity of the task of training language and the language adjusted to the level of intellectual development of students (concrete operation), (3) assignment / exercise would be meaningful for students when multiple languages are presented in the form of a whole and in the context of the real world, (4) talks about grammar abstract done by a wise, (5) optimizes the senses of students

in the play while learning the language, and (6) help students grow and gain meaningful experience, and (7) take advantage of optimal age in acquiring language.

C. The contents of Model Validation Test Developed

The development goals dictionary bebaso here adapted the efforts of researchers and teachers in the achievement of educational goals develop a regional language is almost extinct, both in the activities of listening, speaking / storytelling / writing, or in writing, as well as various types of knowledge that others such as understanding the culture of Palembang past.

This stage is the stage of validation and multi-language dictionary revision by experts in material and media experts, the analysis of the validation conducted by experts for consideration to revise the local language dictionary that is being developed. If the dictionary bebaso developed already meet the eligibility criteria, then this dictionary is ready to be tested on a small scale implementations. Design validation results displayed include the material aspects and media aspects of the multi language dictionary that is being developed. design validation phase will be outlined as follows.

Assessment Specialist Media Dictionary Bebaso judged by media experts. Results of the first assessment, a media expert advises for asking revised dictionary, aspects of design and text. The following revisions made to see: Feedback from media experts analyzed by researchers to conduct repairs on bebaso dictionary developed. Results of improvements dictionary bebaso given back to the specialist media for the second assessment and validation process. The second assessment is the assessment of the latter, because they get a decent dictionary format according to media experts. Results of the assessment of media experts 78.08%.

Based on the results of the assessment of media experts, Dictionary bebaso developed ready for use in small-scale trials. Based on the criteria established in the research methods. the dictionary bebaso developed included in the criteria for "eligible".

D. Trial Use Multi Language Dictionary (Test Execution Field).

After testing Dictionary bebaso stages 1 and revision of the product, followed by testing the product in the field with the number of students more. Product trials conducted to obtain data on the effectiveness of the product bebaso dictionary developed to support students' learning outcomes. In addition to trials of these products also do data capture student responses to the use of the product bebaso dictionary. The pilot phase of the product using the product dictionary bebaso revised based on suggestions for improvements which were acquired during previous trials bebaso dictionary.

5. Conclusion and Remark

Based on the results obtained the following conclusions: 1) Dictionary bebaso have been developed with a very decent categories based media expert assessment reaches 78.08% and 84.25% of matter expert. 2) Dictionaries bebaso effective development outcomes applied in SMA PHRI 2 Palembang to enhance students' understanding of the phenomenon of language. The positive response guardians of students against the use of dictionaries bebaso result of development reached 79.01%.

To be able to apply the dictionary bebaso teachers should have poured his creativity into the plot before it happened in the dictionary bebaso.

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PREPARING 21ST CENTURY STUDENTS:

WORLD LITERATURE+PROJECT-BASED LEARNING+

ICT USE IN CLASS

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Abstract

The 21st Century Skils are a set of abilities that students need to develop in order to succeed in this information age. Partnership for 21st Century Skills lists three different areas of skills to be developed; learning skills, literacy skills, and life skills. This paper aims at describing how World Literature (WL), Project-Based Learning (PBL), and Information and Communication Technology (ICT) could be integratedly implemented in English Language Teaching (ELT) to help students improve their English mastery in general and ultimately prepare them to become 21st century students. This teaching approach refers to an extensive reading assignment given to students in groups of 3 to 5 within a limited time after their formal reading class. There are at least three major uses of this approach: to increase students' learning skills (critical thinking, creative thinking, collaboration), to enahnce their literacy skills knowledge (exploring the world literature online), and to improve their life skills (productive English language skills). In this appproach the students are required to present a summary of their group work either in writing or in speaking. At the same time they also have to connect any related materials to their story; a song, another similar story from a different country, a film, or else to show their understanding of the materials and how broad their knowledge of the world in relation to the content of the literature.

 Key Words: *21st century skills, world literature, connecting, project-based learning, ict use in ELT*

Introduction

In recent years, the role of literature as a basic component and source of authentic texts of the language curriculum rather than an ultimate aim of English instruction has been gaining momentum. Among language educators, there has been a hot debate as to how, when, where, and why literature should be incorporated in ESL / EFL curriculum. Vigorous discussion of how literature and ESL / EFL instruction can work together and interact for the benefit of students and teachers has lead to the flourishment of interesting ideas, learning, and improved instruction for all. Many teachers consider the use of literature in language teaching as an interesting and worthy concern (Sage 1987:1 in Rosmalina, 2005). In this paper, why a language teacher should use literary texts in the language classroom, what sort of literature language teachers should use with language learners, literature and the teaching of language skills, and benefits of different genres of literature to language teaching will be taken into account. Thus, the place of literature as a tool rather than an end in teaching English as a second or foreign language will be unearthed (Hismanoglu, 2005).

As it is widely known, English in Indonesia is taught as a foreign language. Unlike ESL learners who need to use the target language (TL) in everyday life for surviving in the target culture, EFL learners generally do not have adequate access to the TL outside of the classrooms and practice what they have learned in the classroom. Learners normally return to the real world speaking their mother tongue as soon as they leave the classroom (Campbell, 2004 as cited in Chen, 2005). In classrooms, although teachers now have gradually adopted approaches that focus on meaning and language use, due to the linier mode of face-to-face interaction, the learning outcome is still not efficient enough. EFL teachers now urgently need a solution to increase exposure and use of the target knowledge both inside and outside of the classroom.

On Becoming 21st Century Students

P21's **Framework for 21st Century Learning** (P21, 2007) was developed with input from teachers, education experts, and business leaders to define and illustrate the skills and knowledge students need to succeed in work, life and citizenship, as well as the support systems necessary for 21st century learning outcomes. It has been used by thousands of educators and hundreds of schools in the U.S. and abroad to put 21st century skills at the center of learning.

The P21 Framework represents both 21st century **student outcomes** (as represented by the arches of the rainbow) and **support systems** (as represented by the pools at the bottom).
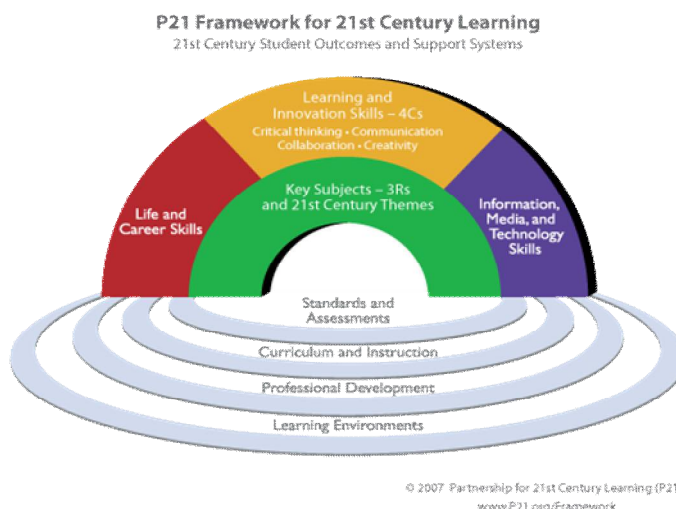
It is stated that to help practitioners integrate skills into the teaching of key academic subjects, the Partnership has developed a unified, collective vision for learning known as the Framework for 21st Century Learning. This Framework describes the skills, knowledge and expertise students must master to succeed in work and life; it is a blend of content knowledge, specific skills, expertise and literacies. Every 21st century skills implementation requires the development of key academic

subject knowledge and understanding among all students. Those who can think critically and communicate effectively must build on a base of key academic subject knowledge.

Within the context of key knowledge instruction, students must also learn the essential skills for success in today's world, such as critical thinking, problem solving, communication and collaboration.

Using Word Literature (Wl): What And Why

Literature and the arts exist in the curriculum as a means for students to learn to express their emotions, their thoughts, and their imaginations as they enter into the experiences of the works they read and transliterate those experiences into film, talk, silence, writing, drama, picture, or the like (Purves, 1990 in Rosmalina, 2005).

Tarigan (1995:16) states that by being skillful in language and literature, students could be skillful in terms of thinking, personalization, and socialization. Additionally, in order to reach optimum skills, the quality of teaching literature at schools should be increased (Damono, 2002in Rosmalina, 2005).

The use of literature as a technique for teaching both basic language skills (i.e. reading, writing, listening and speaking) and language areas (i.e. vocabulary, grammar and pronunciation) is very popular within the field of foreign language learning and teaching nowadays.

Reasons for using literary texts in foreign language classroom and main criteria for selecting suitable literary texts in foreign language classes are stressed so as to make the students familiar with the underlying reasons and criteria for language teachers' using and selecting literary texts. Moreover, world literature and the teaching of language skills, benefits of different genres of literature (i.e. poetry, short fiction, drama and novel) to language teaching and some problems encountered by language teachers within the area of teaching English through literature (i.e. lack of preparation in the area of literature teaching in TESL / TEFL programs, absence of

clear-cut objectives defining the role of literature in ESL / EFL, language teachers' not having the background and trainingin literature, lack of pedagogically-designed appropriate materials that can be used by language teachers in a classroom context) are taken into account.

According to Collie and Slater (1990:3 as cited in Hismanoglu, 2005), there are four main reasons which lead alanguage teacher to use literature in the classroom. These are valuable authentic material, cultural enrichment, language enrichment and personal involvement. In addition to these four main reasons, universality, non-triviality, personal relevance, variety, interest, economy and suggestive power and ambiguity are some other factors requiring the use of literature as a powerful resource in the classroom context.

1. Valuable Authentic Material

Literature is authentic material. Most works of literature are not created for the primary purpose of teaching a language. Many authentic samples of language in real-life contexts (i.e. travel timetables, city plans, forms, pamplets, cartoons, advertisements, newspaper or magazine articles) are included within recently developed course materials. Thus, in a classroom context, learners are exposed to actual language samples of real life /real life like settings. Literature can act as a beneficial complement to such materials, particularly when the first "survival" level has been passed. In reading literary texts, because students have also to cope with language intended for native speakers, they become familiar with many different linguistic forms, communicative functions and meanings.

2. Cultural Enrichment

For many language learners, the ideal way to increase their understanding of verbal / nonverbal aspects of communication in the country within which that language is spoken - a visit or an extended stay - is just not probable. For such learners, literary works, such as novels, plays, short stories,etc. facilitate understanding how communication takes place in that country. Though the world

of a novel, play, or short story is an imaginary one, it presents a full and colorful setting in which characters from many social / regional backgrounds can be described. A reader can discover the way the characters in such literary works see the world outside (i.e. their thoughts, feelings, customs, traditions, possessions; what they buy, believe in, fear, enjoy; how they speak and behave in different settings. This colorful created world can quickly help the foreign learner to feel for the codes and preoccupations that shape a real society through visual literacy of semiotics. Literature is perhaps best regarded as a complement to other materials used to develop the foreign learner's understanding into the country whose language is being learned. Also, literature adds a lot to the cultural grammar of the learners.

3. Language Enrichment

Literature provides learners with a wide range of individual lexical or syntactic items. Students become familiar with many features of the written language, reading a substantial and contextualized body of text. They learn about the syntax and discourse functions of sentences, the variety of possible structures, the different ways of connecting ideas, which develop and enrich their own writing skills. Students also become more productive and adventurous when they begin to perceive the richness and diversity of the language they are trying to learn and begin to make use of some of that potential themselves. Thus, they improve their communicative and cultural competence in the authentic richness, naturalness of the authentic texts.

4. Personal Involvement

Literature can be useful in the language learning process owing to the personal involvement it fosters in the reader.Once the student reads a literary text, he begins to inhabit the text. He is drawn into the text. Understanding the meanings of lexical items or phrases becomes less significant than pursuing the development of the story. The student becomes enthusiastic to find out what happens as events unfold via the climax; he feels close to certain characters and shares their emotional responses. This

can have beneficial effects upon the whole language learning process. At this juncture, the prominence of the selection of a literary text in relation to the needs, expectations, and interests, language level of the students is evident. In this process, he can remove the identity crisis and develop into an extrovert.

When selecting the literary texts to be used in language classes, Collie and Slater (1990:6-7 as cited in Hismanoglu, 2005) suggest that the language teacher should take into account needs, motivation, interests, cultural background and language level of the students. However, one major factor to take into account is whether a particular work is able to reveal the kind of personal involvement by arousing the learners' interest and eliciting strong, positive reactions from them. Reading a literary text is more likely to have a long-term and valuable effect upon the learners' linguistic and extralinguistic knowledge when it is meaningful and amusing. Choosing books relevant to the real-life experiences, emotions, or dreams of the learner is of great importance. Language difficulty has to be considered as well. If the language of the literary work is simple, this may facilitate the comprehensibility of the literary text but is not in itself the most crucial criterion. Interest, appeal, and relevance are also prominent. Enjoyment; a fresh insight into issues felt to be related to the heart of people's concerns; the pleasure of encountering one's own thoughts or situations exemplified clearly in a work of art; the other, equal pleasure of noticing those same thoughts, feelings, emotions, or situations presented by a completely new perspective: all these are motives helping learners to cope with the linguistic obstacles that might be considered too great in less involving material.

Responding to Literature

Teachers who ask their students to read literature independently or listen to them read may benefit from the ideas of Halpern (1986, in Johns and Davis, 1990 as cited in Rosmalina, 2005) and the Alberta Department of Education (1987, in Rosmalina, 2005). Halpern suggests that instead of the typical lesson where students

read and teachers ask questions, students write about the books they have read in a response journal. She suggests that students would learn more about literature if they personally respond to the books in writing. Some of the topics Halpern encourages students to write about include whether the students were attracted or repelled by the main character, an incident that made the student angry or happy, something the student did not understand, and a prediction of what could possibly happen next.

The Alberta Department of Education (1987, cited in Johns and Davis, 1990 cited in Rosmalina, 2005) recommends a similar idea for teachers who read books to their classes. They suggest that students be directed to write in a listening log. The teacher need only stop at a pre-arranged point in the story and the students then write their responses to any number of questions. Among the questions students could respond to are: what they are thinking of, if they have had a similar experience, what they are picturing in their heads, what feelings they have about the characters, and what questions they have about the story.

Success in integrating literature into middle school reading classrooms has been achieved by the systematic study of different genres of literature (e.g., folktales, drama, poetry). Through a variety of activities, students can be engaged in comparisons, contrasts, and other higher-level thinking skills. Response journals in which students react to their reading by writing, provide another avenue to promote reflection about the literature being read. Such journals have the potential to actively involve students in linking their ideas to those posed by the author, teacher, or other students.

On a more general level, to develop student interest in reading literature, teachers might try the following techniques: suggest books that match student interest; read literature aloud to their classes; give students time to read in class; and make a great number of books available to students.

The following are the examples of how to respond to literary works.

Response Strategies Using Writing

Writing helps students reflect on what they have read and make their thinking explicit. Writing helps to clarify their ideas, organize thoughts, and develop insights. Teachers are using a variety of strategies to encourage students to reflect, react, and respond to literature through writing. Some of the writing is informal; for example writing in logs or journals. Some more formal writing activities flow from the past, as in traditional book reports. Some involve having students writing in different genres; for example, writing a new ending for a poem, turning a story into a poem, or writing a letter from one character to another. All require the students to enter into the world of the book and frame their own unique responses.

Responding to literature through writing can take different forms. This section provides strategies on three common forms of writing:

- Response Logs and Journals
- Beyond Book Reports
- Genre-to-Genre Writing

Response Strategies Using Arts & Crafts

Response Strategies Using Multimedia

- Media surrounds today's adolescents.
- Presentation Tools
- Student-Constructed Web Pages
- WebQuests

Response Strategies Using Discussion

- Literature Circles
- Online Book Clubs
- Whole-Class Discussions

    There are four key types of questions:

- "Right there" questions (text explicit). These are literal questions where the answer is in the text itself.

- "Think and search" questions (text implicit). The answer is implicit in the text but the student must synthesize, infer, or summarize to find the answer. Think and search questions tend to be more open-ended without set answers.

- "Reader and author" questions (text implicit or experience-based). The answer needs the reader to combine his or her own experiences with what the text states, i.e., the knowledge presented by the author.

- "On my own" questions (text implicit or experience-based). The reader needs to generate the answer from his or her prior knowledge. The reader may not need to read the text to answer, but the answer would certainly be shaped differently after reading the text.

Responding to Literature Using Drama

Working in drama can foster students' creativity, originality, and sensitivity. Through drama, young adolescents can explore moral issues while developing communication skills and an appreciation of literature. They can try out different roles or ways of seeing themselves in the safety of the classroom, and learn what it means to be empathetic.

Project Based-Learning (PBLl) and 21st Century Competencies

PBL is not really a new way of teaching. Educators have long been using it in their teaching and learning activities. The application of PBL in class is considered beneficial to students in that it can improve their learning outcomes, prepare for the

real world, promote critical thinking, memory, and creativity. Besides, it is also good for teachers

In this paper, collaborative is referred as the sharing of duties among the group members in order to prepare and present their group work as assigned by the lecturer on a certain topic.

PBL is an instructional strategy in which students work cooperatively over time to create a product, presentation or performance. Two essential components are (1) an engaging and motivating question and (2) a product that meaningfully addresses that question. In this paper, PBL refers to an activity in which 2 or 3 students presnt their group task as assigned by the lecturer. The are assigned to read a world literary text and respond to it by making connections to it then reporting and preparing a powerpoint presentation and run a question and answer sessions as the following activity.

Project Based Learning has been shown to yield a number of benefits for students, ranging from per learning of academic content to stronger motivation to learn. Looking specifically at how PBL supports 21st century learning goals, Buck Institute for Education (2013) state several promising areas, including:

Academic achievement:

Goals for 21st century learning emphasize mastery of significant academic content, which also is the foundation of any well-designed project.

Comparisons of learning outcomes in PBL versus more traditional, textbook-and-lecture driven instruction show that:

- Students learning through PBL retain content longer and have a deeper understanding of what they are learning. (Penuel & Means, 2000; Stepien, Gallagher & Workman, 1993)
- In specific content areas, PBL has been shown to be more effective than traditional methods for teaching math, economics, language, science, and

other disciplines. (Beckett & Miller, 2006; Boaler, 2002; Finkelstein et al., 2010; Greier et al., 2008; Mergendoller, Maxwell, & Bellisimo, 2006)

- On high-stakes tests, PBL students perform as well or better than traditionally taught students. (Parker et al., 2011)

21st century competencies:

PBL helps students master the key competencies identified as essential for college and

career readiness. Research has shown:

- Students demonstrate better problem-solving skills in PBL than in more traditional classes and are able to apply what they learn to real-life situations. (Finkelstein et al., 2010)

- When teachers are trained in PBL methods, they devote more class time to teaching 21st century skills; their students perform at least as well on standardized tests as students engaged in traditional instruction. (Hixson, Ravitz, & Whisman, 2012)

- PBL students also show improved critical thinking. (Beckett & Miller, 2006; Horan, Lavaroni, & Beldon, 1996; Mergendoller, Maxwell, & Bellisimo, 2006; Tretten & Zachariou, 1995)

- Through PBL experiences, students improve their ability to work collaboratively and resolve conflicts. (Beckett & Miller; ChanLin, 2008)

- Opportunities for collaborative learning provide benefits to students across grade levels, academic subjects, and achievement levels. (Johnson & Johnson, 2009; Slavin, 1996)

Equity:
- PBL shows promise as a strategy for closing the achievement gap by engaging lower-achieving students. (Boaler, 2002; Penuel & Means, 2000)

- PBL can work in different types of schools, serving diverse learners. (Hixson, Ravitz, & Whisman, 2012)

- PBL also can provide an effective model for whole-school reform. (National Clearinghouse for Comprehensive School Reform, 2004; Newmann & Wehlage, 1995; Ravitz, 2008)

Motivation:

In PBL classrooms, students demonstrate improved attitudes toward learning. They exhibit more engagement, are more self-reliant, and have better attendance than in more traditional settings. (Thomas, 2000; Walker & Leary, 2009)

Teacher satisfaction:

Teachers may need time and professional development to become familiar with PBL methods, but those who make this shift in classroom practice report increased job satisfaction. (Hixson, Ravitz, & Whisman, 2012; Strobel & van Barneveld, 2009)

Collaborative Learning

Collaborative learning (CL) is a personal philosophy, not just a classroom technique. In all situations where people come together in groups, it suggests a way of dealing with people which respects and highlights individual group members' abilities and contributions. There is a sharing of authority and acceptance of responsibility among group members for the group actions. The underlying premise of collaborative learning is based upon consensus building through cooperation by group members, in contrast to competition in which individuals best other group members. CL practitioners apply this philosophy in the classroom, at committee

meetings, with community groups, within their families and generally as a way of living with and dealing with other people.

Collaborative ties into the social constructivist movement, asserting that both knowledge and authority of knowledge have changed dramatically in the last century. "The result has been a transition from "foundational (cognitive) understanding of knowledge", to a non foundational ground where "we understand knowledge to be a social construct and learning a social process" (Brufee, 1993 as cited in Panitz, 1996). Rockwood (in Panitz, 1996 in Rosmalina, 2005) states:

> "In the ideal collaborative environment, the authority for testing and determining the appropriateness of the group product rests with, first, the small group, second, the plenary group (the whole class) and finally (but always understood to be subject to challenge and revision) the requisite knowledge community (i.e. the discipline: geography, history, biology etc.) The concept of non- foundational knowledge challenges not only the product acquired, but also the process employed in the acquisition of foundational knowledge."

Collaborative learning is one which activates students to carry out an assignment together in a group or team (Johnson & Smith, 1998 in Rosmalina, 2005). In collaborative learning, all the members are responsible for both their own learning and other's learning. Therefore, the success of a certain student helps others to succeed too. Additionally, Gerlach (1994, in Rosmalina, 2005) pinpointed that collaborative learning is based upon the belief that learning is natural social process by which students exchange points of views, and through exchanging views the learning occurs.

Using ICT in the Classroom

People in the 21st century live in a technology and media-driven environment, marked by various characteristics, including: 1) access to an abundance of information, 2) rapid changes in technology tools, and 3) the ability to collaborate and make individual contributions on an unprecedented scale. Effective citizens and workers of the 21st century must be able to exhibit a range of functional and critical thinking skills related to information, media and technology.

Significant benefits of using the computer in the classroom were highlighted in a study of eight thousand educators (Becker, 1987 as cited in King and Vockell, 1991:11). According to the teachers and principals surveyed, the benefits of using the computer for instruction were:

- Student motivation
- Student cooperation and independence
- Opportunities for high ability students to engage in programming activities and in other higher-order thinking skills
- Opportunities for low-ability students to master mathematics and language arts skills.

The Application of Wl+PBL+ICT in ELT Class

In this paper, the writer proposes that the students are engaged to group task presenting their certain assigned topics using computer and an lcd to report a story based on the reading text they are assigned. This activity is referred to as collaborative digital PBL since digital tools are used and the students are to present their story in small groups of 2 to 3 students.

As an illustration, the class is divided into several small groups containing 2-3 students. Each group is assigned to read a world literature together, make connections to any stories, films, songs, legends, or anything related or have similar message (moral lessons) conveyed through the story. Then they discuss things together in the group and if time is limeted they can continue preparing their work outside the classroom. During the process of completing the task, the students in the groups have to go through many stages: finding and selecting any other works closely related to the topic, dividing the tasks among members, drafting the monologue or dialogue for the report, preparing answers for questions from the floor if any, preparing the slides for the presentation, selecting and providing the background sound when the presentation is run.

By applying this technique of teaching, the students will have equal share of work in the group to prepare their presentation. They will also have the chance to do it on their own in that they will pour out their speaking ability especially and the other three language skills in general, and creativity to deliver their presentation as they like. Something done as one likes it is surely something pleasant to do, thus, encourages the presenter to do the best they can. It is believed that this mode of teaching and learning process will advocate the students ability and self confidence as well as motivation in listening, reading, speaking, and writing. Hopefully, as the result, collaborative digital storytelling could really improve the students' language skills, thus foster their willingness to do things together with their peers, be more self-confident, be responsible, be more tolerant, and build their leadership. By visiting historical places or interesting places to see, the students have the opportunity to see the greatness of God which ultimately will lead them to love nature and finally God. In short, the elements of character formation could be built more effectively and logically.

Conclusions

There is a lot to do in order to develop quality teaching especially in integrating the language arts and ICT to helping students becoming 21st Century students. One of the ways is by reading and connecting to world literature in teaching and learning. By responding to literary works through various ways as discussed in the previous part of this paper, the writer believes that students could express their ability to the optimal level, developing and acquiring higher level of thinking, experimenting things unseen and evaluate the moral messages in the literary works in order to adapt them in their real world. Finally, becoming 21st Century students with specific skills as learning skills (critical thinking, creative thinking, collaboration), enhanced ICT literacy skills knowledge (exploring the world literature online, preparing the presentation), and improved life skills (productive English language skills) could be achieved.

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USING DRAW LABEL CAPTION (DLC) STRATEGY TO IMPROVE NARRATIVE WRITING ACHIEVEMENT OF THE ELEVENTH GRADE STUDENTS OF MAN SAKATIGA INDRALAYA

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Abstract

The objectives of this study were (1) to find out whether or not there was a significant difference in students' writing achievement before and after they were taught by using Draw Label Caption (DLC) strategy and (2) to find out whether or not there was a significant difference in writing achievement between the students who were taught by using Draw Label Caption (DLC) strategy and those who were not. This study was experimental research design and used quasi experimental research method that applied pre-test and post-test control group design. The population was taken from the eleventh grade students of MAN SakatigaIndralaya in academic year 2015-2016 and the number of sample was 80 students. In taking the sample, purposive sampling technique was used. The experimental group was taught by using Draw Label Caption (DLC) strategy while the control group did not receive any treatment. The data of this research were obtained by means of writing test. The writing tests in this study consisted of the pre-test and the post-test. The results of test were analyzed by using t-test: paired sample t-test and independent sample t-test. By using SPSS v.22 for Windows program, the result showed that (1) there was a significant difference in students' writing achievement before and after they were taught by using Draw Label Caption (DLC) strategy (mean diff=16.88, and ρ.value=.000) and (2) there was a significant difference in writing achievement between the students who were taught by using Draw Label Caption (DLC) strategy and those who were not(mean diff=8.19, and ρ .value=.000). Therefore, it can be concluded that Draw Label Caption (DLC) strategy was effective to improve students' writing achievement.

Keywords: Draw Label Caption (DLC), Writing Achievement

1.   Introduction

Writing plays the important roles in learning English. Brown (2007, p. 396) states that in many academic contexts, writing is essential for the display of a student's knowledge. Therefore, in schools, writing is one of the ways to express the idea or comprehension. Writing also brings a lot of benefits for students. Huy (2015, p.53), in her study on Problems Affecting Learning Writing Skill of Grade 11 at Thong Linh High School says, "Good at writing will bring many benefits for students". Firstly, writing is a good way to help develop their ability of using vocabulary and grammar and increasing the ability of language. Secondly, writing is an essential tool to support other skills. Thirdly, writing is a way to approach modern information technology as well as the human knowledge.

Although writing is an essential skill, many students at high school are not interested in it. According to Caroll (1990), many students are never required to learn proper spelling or grammar. Besides, Huy (2015, p.54) in her study says, "These poor students come to think that "English" and "writing" are nothing but spelling and grammar". This condition makes some students' give up easily on writing. Those facts happen to most students in the world. When the students start their writing, sometimes they face some difficulties in doing it. They want to write something, but in the middle of their writing, they face some problems and perhaps they get stuck for a while. So, when teacher asks them to write in English, they get confused because it is hard for them to create the theme and put down their idea in a blank paper.

Some kinds of text can be used in teaching English writing in Senior High School level; such as recount, narrative, procedure, descriptive, news item, report, analytical exposition, hortatory exposition, spoof, explanation, discussion, and review (Permendiknas, 2006, No.23). Among those kinds of texts, the writer focused on narrative text. Narrative text is chosen as the topic of this study because it was stated in *School Based Curriculum (KTSP)* 2006 as the text that has to be taught in eleventh grade of senior high school, one of the standard competencies at senior high schools

in writing is expressing the meaning in short functional text and simple essay in the form of *narrative, descriptive, and news item* in daily life context. It means that after learning English writing, students are expected to be able to write short functional text and simple essay in the form of narrative, descriptive, and news item in daily life context.

However, to meet the objectives of teaching writing that are required by the curriculum was not easy to achieve. The previous study done by English Education Study Program Student of Sriwijaya University, Arsita (2015) showed that the student's writing achievement was not very great. In her study, none of the students was in excellent category, one student (3.84%) who got scores between 71-85 were in "good" category, fifteen students (57.69%) who got scores between 56-70 were in "average" category, seven students (26.92%) who got scores 41-55 were in "low" category, three students (11.53%) who got scores 0-40 were in "poor" category. Another previous related study done by Aryani (2013) showed that, in the pretest, there was no one in both excellent and good category level, 12.5% were in average category level, 45% were in low category level, and 42.5% were in poor category level.

Problem in English writing was also faced by the students of MAN Sakatiga Indralaya. Based on the interview to the English teacher of MAN Sakatiga Indralaya, the teacher said that her students rarely used their dictionary to find out the new words and various words to develop their stories and ideas. They feel bored with the materials of the writing text that provided the same directions to write and then do the exercise. Students were just copying sentences when they did writing in the class. In addition, before doing the research, the writer came to the class while the English teacher taught narrative writing in order to observe the student's activity in learning writing. Based on observation, the writer found that the student's skill in writing was still low. When the teacher asked them to write, they did not use their own words to write sentences, they could not develop their ideas and they had limited vocabulary. Furthermore, the teacher said that the students' average scores for writing are still

around 65 whereas the expected score based on Minimal Completeness Criteria (KriteriaKetuntasan Minimal or KKM) MAN SakatigaIndralaya is 75.

In this study, the writer focused on using Draw Label Caption (DLC) strategy to improve the students' writing achievement. Bumgardner (2003) defines that draw label caption strategy is simple strategy that consist of draw, label and caption. It can be seen that after picking a topic, the students are asked to make a sketch, give the name or label everything in the picture, and give caption for their sketch, one sentence that tells what is happening. In addition, William (2011, p. 1) states that DLC is a process that helps the writer figure out what his/her ideas are. It means that draw label caption strategy will help the students in learning writing and the students will learn another way to take a prewriting idea and begin to develop it into a text.

Therefore, the writer interested in doing a research entitled "Using Draw Label Caption (DLC) Strategy to Improve Narrative Writing Achievement of the Eleventh Grade Students of MAN SakatigaIndralaya. □ Thus, the problems of this study were formulated in the following questions: 1) Was there any significant difference in students' writing achievement before and after they were taught by using Draw Label Caption (DLC) strategy? and 2) Was there any significant difference in writing achievement between the students who were taught by using Draw Label Caption (DLC) strategy and those who were not?.

2. Theoretical Background

According to Oshima and Hogue (2006, p. 265), writing as a process of creating ideas, organizing them, writing a rough draft, and finally polishing the rough draft through editing and revisions. According to those statements, the students can expressed their feeling, ideas, and their wants in writing. Besides putting down the ideas to create coherence and continuity in the text, writing skill is also focus on the aspects of writing itself. Harmer (2004, p. 12) also notes that mechanic is an important component of writing that includes spelling, grammar, and punctuation. When the students write sentences to express their feeling or wants to be understood,

they must write it in correct language structures. They must attend the aspects that influence sentences which can be understood such as content, grammatical function, vocabulary and lexical items, the mechanics like punctuation and capitalization, and organization.

Narrative text is one of the texts that should be learned by the students based on curriculum 2006. According to Pardiyono (2007, p. 67), narrative text is a kind of text which has function to amuse, entertain and to deal with actual or vicarious experience in different ways. He adds that narrative is a kind of text that is appropriate to recount past events or incidents that highlight the problematic experience and a resolution for the purpose of entertaining (to amuse), and often intended to give moral lessons to the reader. In this research, the writer chooses fiction stories to teach narrative in writing skill because fiction stories can be developed by students. They can imagine while they are in the process of writing, it will make them more creative. Besides, narrative text gives the opportunity to the students to learn language more fun and imaginative

Draw label caption strategy is strategy that can be applied in teaching writing whereas this strategy can develop student's ability in writing their narrative text. William (2011, p.1) states that draw label caption is a process that helps the writer figure out what his/her idea are. It means that draw label caption strategy will help the students in learning of writing and the students will learn another way to take a prewriting idea and begin to develop it into a text. Moreover, this strategy will lead the students to convey their ideas easily because this strategy has some steps to help the students to create a good narrative text.

To apply this strategy, Burns (2011) mentions the procedure of draw label caption strategy includes into five steps:

a. *Draw*: have a student's draw a picture.
b. *Label*: have students label everything in the picture. They are allowed to label everything that is considered as important thing for them.

c. *Caption*: have the students to write a sentence caption for their picture. They can make the sentence under their picture to tell about their writing.

d. *Description*: have the students write description of everything in the picture and push them to be as detailed as possible.

e. *Complete story:* now students have more enough material to write a complete scene or story.

During DLC, the students are divided into small group consists of 4-5 students each group, and perform a different role. In this technique, role is an important aspect of DLC strategy because cooperative learning seems to work best when all group members have been assigned in a meaningful task. Thus, students are assigned roles in DLC strategy lesson that they must fulfill together.

The teachers also need to use various media that could motivate the students to be more active in the teaching and learning process. Inderawati (2011) explains that by making use of the sophisticated media, the learners will be more interested in writing since it is obvious that almost 60% of a day, most learners spend the time in front of the computer. In relation to teaching media, the writer chose Home Made book as teaching media during the treatment because Home Made book can increase the students' interest in writing class. Home-Made Books are divided into two types, teacher made materials, and students made books. In this case, the writer used both of them in teaching writing. Ramet (2007, p. 156) states, "Picture books present a whole new set of challenges. The pictures may perform a variety of functions, depending on the type of book." It means that every book has its own function based on the type of the books. Moreover writing activity by using pictures and made books was done by the students in the class. In this case, the students write the Home Made Books of narrative stories. Home-Made Books has a similarity with picture dictionary. Both of them use pictures to describe and tell an object. The students could make their own home made books using their own ideas. They can make it with their friends, so when they face problems in making homemade books they could help each other. Each

group has been given a story and tried to draw some pictures of the story and write a narrative text. It was a fun and easy activity for the students.

3. Method

This study was experimental research design and used quasi experimental research method that applied pre-test and post-test control group design. There were two groups, the experimental group and the control group. Both the experimental group and the control group received pre-test and post-test in this study. Before having the post-test, the experimental group was given the treatment by using Draw Label Caption (DLC) strategy for sixteen meetings, while the control group was not given. The population of this study was 242 students from all the eleventh grade of MAN SakatigaIndralaya in academic year of 2015/2016. The writer used purposive sampling technique becausethe samples of this study are selected based on the following criteria; the students getting lowest scores in the semester test, and the students were taught by the same English teacher. The two classes which in the average got lowest scores were taken as the samples. In order to know the scores of English subject of each class, the writer asked to the English teacher. Then, to decide which class that would be the experimental and control group, the writer chose them randomly by flipping a coin. The experimental group was 40 students from XI IPA 2, while the control group was 40 students from XI IPA 3.

To collect the data, both experimental and control groups were assigned a writing test in the form of pretest and posttest. To check the validity of the test, content validity was used in this study. According to Gipps (2003, p. 58), "Validity refers to the extent to which a test measures what was designed to measure." It was very important for the writer to have valid test in order to obtain information based on her purposes. The test was constructed by the writer based on the syllabus which was used by the school and the test was checked by two expert judgments. To check the reliability of the test, the writer used inter-rater reliability. Creswell (2008, p. 164)

states, "Inter rater reliability is a procedure used when making observations of behavior that made by two or more individuals of an individual's or several individuals' behavior." The results of student's writing test were checked by two raters. The first rater was a lecturer of Sriwijaya University and the second rater was a language instructor of Sriwijaya University Language Institute (SULI). Furthermore, the data were analyzed by using Cohen's Kappa as a statistical measure of inter-rater reliability. Based on the calculation, the result of reliability of the experimental group pretest was 0.254 and the experimental group posttest was 0.258. Meanwhile, the result of reliability of the control group pretest was 0.310 and the control group posttest was 0.347. Based on the kappa scores obtained, it could be concluded that all of the reliability coefficients in pretest and posttest of both groups belong to "Fair agreement". It could be stated that the results were reliable.

In analyzing the data, the writer used a standard formula *t*-test to compare the result of test between the two groups. The writer examined the data by using paired sample *t*-test to find out whether there was a significant difference in pre-test and post-test scores in the experimental group. Then, the writer used independent sample *t*-test to see the significance in the post-test scores between the experimental group and the control group. Before analyzing the data by using independent sample t-test and paired sample t-test, the writer checked the homogeneity and the normality firstly. The writer used SPSS 22 windows version to analyze the data.

4. Result And Discussion

Result

The Distribution of the Writing Achievement Score

The data were obtained from the result of pre-test and post-test done by experimental group and control group. The result of the tests wasc ategorized in five categories: Excellent, Good, Average, Poor, and Failed (see Table 8).

Table 8

TheScoreDistribution intheExperimental Group andControl Group (N=40)

Score Interval	Category	ExperimentalGroup				ControlGroup			
		Pretest		Posttest		Pretest		Posttest	
		N	%	N	%	N	%	N	%
86 -100	Excellent	0	0	4	10	0	0	0	0
71 -85	Good	5	12.5	22	55	4	10	11	27.5
56 -70	Average	15	37.5	12	30	24	60	23	57.5
41 -55	Poor	20	50	2	5	12	30	6	15
0-40	Failed	0	0	0	0	0	0	0	0
Total		40	100	40	100	40	100	40	100

As shown in Table 8, based on the result of pre-test experimental group, none of the students (0%) were in the excellent category, five students (12.5%) were in the good category, fifteen students (37.5%) were in the average category, twenty students (50%) were in the poor category, and none of the student (0%) was in the failed category. Meanwhile, in the post-test, four students (10%) were in the excellent category, twenty two students (55%) were in the good category, twelve students

(30%) were in the average category, two students (5%) were in the poor category, and none of the students (0%) was in the failed category. Furthermore, the mean score significantly increased from 57.37 to 74.25. Therefore, it can be concluded that there was a progress occurred in experimental group.

While in the control group, the result of pre-test showed that,none of the students (0%) was in the excellent category, four students (10%) were in the good category, twenty four students (60%) were in the average category, twelve students (30%) were in the poor category, and none of the student (0%) was in the failed category. Then, in the post-test, none of the students (0%) was in the excellent category, eleven students (27.5%) were in the good category, twenty three students (57.5%) were in the average category, six students (15%) were in the poor category, and none of the students (0%) was in the failed category. There was also improvement in the control group's mean score. It was 61.37 to 66.06. It could happen because at the same time the English teacher taught English to the students in control group. In other words, the students in control group also got input from their teacher.

The Results of the Statistical Analyses

Normality test was conducted to determine whether the data were normally distributed or not. In determining the normality of the data, one sample of Kolmogorov-Smirnov Z testin SPSS version 22 was used. In one sample of Kolmogorov-Smirnov Z test, if the significance (2-tailed)$\geq$0.05, the distribution of the sample in the population is normal. The result of normality test of the data in this study was presented in the following table.

Table 9

The Result of Normality Test

Group	Pretest				Posttest			
	Mean	Std. dev	Sig.	KSZ	Mean	Std. dev	Sig.	KSZ
Exp Group	57.37	8.71	**.157**	.119	74.25	8.99	**.200**	.109
Control Group	61.37	7.72	**.059**	.136	66.06	8.63	**.064**	.135

In one sample Kolmogorov-Smirnov Z test, if the significance (2-tailed) >0.05, the distribution of the sample in the population is normal.The significance (2-tailed) of pretest and posttest of the experimental group were 0.157 and 0.200, while the significance (2-tailed) of pretest and posttest of the control group were 0.059 and 0.064. Since all of the significance values was higher than 0.05, it was concluded that the data were normally distributed.

Homogeneity tests were done to know whether the sample groups from the population had similar variances. The writer used Levene's test to know the homogeneity in groups (experimental and control groups). The data were homogeneous if significance > 0.05, the results of the significance of the pre-test and post-test in the experimental group was (.992>0.05) and the results of the significance of the pre-test and post-test in the control group was (.232 >0.05), the results of the significance of the pre-test and pre-test in the experimental and control groups was (.684>0.05), and the results of the significance of the post-test and post-test in the experimental and control groups was (.539>0.05). Therefore, it could be stated that data in experimental and control groups were homogeneous.

Paired sample *t*-test wasused to check whether or not there was a significant differencein students' writing achievement before and after they were taught by using Draw Label Caption Strategy. The result of the test could be seen in the following table:

Table 10
The Result of Paired Sample t-test for Students'Narrative Writing
Achievement in Experimental and Control Groups (N=40)

Groups	Test	Mean	Mean Difference	Std. Deviation	Std. Error Mean	T	df	Sig. (2-tailed)
Experimental Group	Pretest	57.37	16.88	7.819	1.236	13.650	39	**.000**
	Posttest	74.25						
Control Group	Pretest	61.37	4.69	8.645	1.366	1.922	39	**.001**
	Posttest	66.06						

Based on the result of paired sample t-test in the experimental group, the mean score of the posttest (74.25) was higher than the meanscore of the pretest (57.37) with the mean difference16.88. Since the significance (2-tailed) was lower than 0.05, the null hypothesis (H_01) was rejected, and the alternative hypothesis (H_11) was accepted. Therefore, it could be stated that there was a significant difference in students' writing achievement before and after they were taught by using Draw Label Caption (DLC) strategy.

Meanwhile, the result of paired sample t-test in the control group showed that the mean score of the posttest (66.06) was higher than the mean score of the pretest(61.37)withthemeandifferencewas4.69.Since the significance (2-tailed) was lower than 0.05, it could be stated that there was a significant difference int he mean score of pretest and posttest of the control group.

Independent sample *t*-test was used to check whether or not there was a significant differencein writing achievement between the students who were taught by using Draw Label Caption (DLC) strategy and those who were not. The result of the test could be seen in the following table:

Table 11
The Result of Independent Sample t-test

Group	N	Mean	Mean Diff.	t	Df	Sig. (2-tailed)
Experimental	40	74.25	8.19	4.153	78	.000
Control	40	66.06		4.153	77.877	.000

The result of independent sample *t*-test showed that the mean difference of the post-test scores of the control group and the experimental group (8.19) was significantly different since the significance (2-tailed) was less than 0.05 (0.000<0.05). It could be concluded that the null hypothesis (*H$_0$2)* was rejected and the alternative hypothesis *(H$_1$2)* was confirmed. In other words, there was a significant difference in writing achievement between the students who were taught by using Draw Label Caption (DLC) strategy and those who were not.

Discussion

Based on the findings of this study, some discussions were drawn. The findings showed that (1) there was a significant difference innarrative writing achievement of experimental group before and after they are taught by using Draw Label Caption Strategy, and (2) there was a significant difference in students' narrative writing achievement between experimental and control group.

The first finding showed that there was significant difference in narrative writing achievement of experimental group before and after they were given the treatment. It canbe seen from the mean difference of student's narrative writing test in pretest and posttest. The significant difference of the mean score also increased 16.88, from 57.37 to 74.25 at the significance level of (p<0.05). It could happen because

during the treatment the students were very interested with the strategy that the writer used. Every student involved in the learning process and enjoyed the activity because they are divided into several groups, so they are able to study in interactive way. In addition, the use of Home-Made book as the media during the treatment gave a great impact to the students, the writer found out the students were more enthusiastic when they were taught by making home made book because they were never taught by using those media before. They were motivated because they directly could make the book by themselves while they were writing the narrative text. As Wright (1989, p. 2) states that the pictures are the teaching aids which are not just an aspect of method but through their representation of places, objects, and people they are essential part of the overall experiences the teachers must help the students to cope with. When students write stories by using picture sequences, the line of their writing was clear and well directed. It means that pictures can attract students' interest and translate abstract ideas into more realistic form.

It was supported by previous related study that was done by Dhesi (2010). The title of her study is "The Effectiveness of Home-Made Books to Improve Students Mastery of Vocabulary the Case of the 4th Grade Students of MI Roudlotul Huda Semarang in the Academic Year of 2010/2011." The writer applied Home-Made Books as the media to improve student's vocabulary achievement. The result of the study showed that there was a significant improvement in students' vocabulary before and after get the treatment using homemade books, in which the scores gained by the students in the posttest was higher than in the pretest. Besides that, the students enjoyed the learning process because the media that the writer used was very colorful and contains a lot of attractive pictures.

Meanwhile, there was also improvement in control group although it was not really significant. The mean of the post-test (66.06) was also higher than the mean of the pre-test (61.37) with the mean difference 4.69. Therefore, it could be stated that the control group also got a significant improvement, but it was not as high as the improvement obtained by the experimental group. It could happen because at the

same time the English teacher taught the control group while the writer taught the experimental group. However, the experimental group showed much better improvement than the control group. Thus, it can be stated that the use of DLC strategy in the experimental group gave significance contributionin improving students' narrative writing achievement.

The second findingconfirmedthattherewassignificantdifference in narrative writing achievement betweenexperimentaland control groups. The post-test results of both groups were compared to know whether the groups performed significantly different on writing achievement or not. The mean difference of the post-test of the groups was 8.19. Then the statistical analysis showed that the *t*-obtained was 4.153 in two-tailed testing and degree of freedom (df) was 78. Since the significant value was lower than 0.05, there was a significant difference in writing achievement in the post-test between the experimental group and the control group. It could be happen because before the posttest, the experimental group received a treatment by using Draw label Caption (DLC) strategy. It could be assumed that Draw Label Caption (DLC) can be an alternative strategy to improve writing achievement of the students at MAN Sakatiga Indralaya because Draw Label Caption (DLC) helped the students to improve their writing achievement especially in narrative writing. As William (2011, p.1) states that draw label caption is a process that helps the writer figure out what his/her idea are. It means that draw label caption strategy could help the students in improving their writing and the students could learn another way to take a prewriting idea and begin to develop it into an essay.

It was supported by previous related study that was done by Salam (2013) entitled The Effect of Draw-Label-Caption Strategy Toward Student's Ability in Narrative Writing for Eleventh Grade Students of SMAN 14 Padang. In the study, the writer found that there was a significant improvement in students' writing achievement by using Draw-Label-Caption as the strategy. In the beginning, students' scores were low, but after applying the strategy, their scores increased and students'

motivation in studying became higher. Thus, it could be assumed that there was a significant difference in students' writing achievement before and after they were taught by using Draw Label Caption (DLC) strategy.The improvement itself could happen because after the experimental group was assigned pretest, the writer gave them the treatment by using DLC strategy for more than one month.

The improvement could also be seen from the score distribution of the pre-test and the post-test. Before the treatment, in the experimental group, there were three categories: good, average and poor. After the treatment, their writing achievement was in excellent, good, average, and also poor categories. In the post-test, there were still two students who got the poor categories, but both of the students' score were significantly increased. Besides that, the total number of the students who got the poor category in the post-test was totally decreased from the pre-test. It was from twenty students to two students. While in the pre-test of the control group, the students' performances were in good, average, and poor categories. Then, in the post-test of the control group, the students were also in good, average, and poor categories. It means that even there were some students in experimental group which were in poor categories, but they could improve their score in post-test result after they were taught through DLC strategy. Meanwhile, in the control group there was no significant improvement in each category. It meant there was a significant difference between the students who were taught by using DLC strategy and those who were not.

Based on the result of the study, the writer also found some weaknesses in conducting this study. Firstly, there was still poor category in the posttest of the experimental group. It happened because the student's ability in writing narrative text was very low and they did not focus on following the teaching and learning process. Secondly, based on the result from the rater, the students still have a low score in structure and convention. It means that they still developed a structure that was confusing, the organization of detail and chronology was unclear, provided a limited sense of closure, dialogue was punctuated incorrectly, and point of view and verb

tense are inconsistent. Thirdly, the process of making a Home-Made book needed a lot of time. To overcome this, the writer divided them into some groups and each group should make one book.

In conclusion, the use of strategy and media in this study could help the students to improve their writing achievement.

5.   Conclusion and Remark

From the analysis of the data, it can be concluded that using Draw Label Caption strategy in teaching writing narrative text could improve the students' writing achievement. Most of the students in the experimental group showed better improvement in writing. The result of the study showed that there was significant difference between the students in experimental group who were taught by using draw label caption and those in the control group who were not. The result also showed that there was significant improvement in narrative writing achievement of the students in the experimental group after they were taught by using draw label caption strategy. The statistical analysis in paired sample t-test showed that there was significant difference in mean score between students' pretest and posttest both in the experimental and control groups. However, the experimental group showed much better improvement than the control group. It was proved by the independent sample t-test that there was a significant difference between posttest experimental and control group. The mean score of the posttest in the experimental group was higher than the mean score of the posttest in the control group. It means that draw label caption strategy was helpful to improve students' narrative writing achievement.

Based on the conclusion above, there are some suggestions that the writer would like to address to the teacher and students. Firstly, In teaching writing especially narrative text, English teacher should more focus on the structure and convention because the students were still confused about how to develop a good structure and make a consistent point of view and verb tense. Second, when the

English teacher decided to asked the students to produce a Home Made book, she/he had to mind the time because it took a lot of time to make it. To overcome this, the writer suggests to divide them into some groups and each group should make one book. Third, the students also have to be active and creative in the classroom. The writer suggests that the students should practice their writing skill frequently because the effective way to improve writing skill is by keep practicing. In addition, the students should learn more about structure and enrich their vocabulary.

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USING RPG VIDEO GAMES TO IMPROVE ENGLISH VOCABULARY ACHIEVEMENT OF THE 8th GRADERS OF SMP LTI IGM PALEMBANG

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Abstract

The objectives of this study were to find out: (1) whether or not there was any significant improvement in students' English vocabulary achievement after they were taught by using Role-Playing Game (RPG) Video Games and (2) the students' perceptions on using RPG video games in learning English vocabulary. This study involved 20 eighth grade students. However, only 14 students were taken as the sample for the vocabulary tests and 19 students as the sample for the preference questionnaire due to the students' absence during the vocabulary test and questionnaire administration. To collect the data, the students were given 4 vocabulary tests consisting of a pre-test, two progress tests, and a post-test, as well as a preference questionnaire which were analyzed by using paired sample t-test and percentage procedure. The findings showed that: (1) there was a significant improvement in the students' vocabulary achievement between the pre-test and the post-test ($p=0.000 < \alpha=0.05$) and (2) 95% of the students preferred using RPG video game to study English vocabulary. In conclusion, RPG video game was effective and preferable to be used in teaching vocabulary for the eighth grade students of SMP LTI IGM Palembang.

Keywords: teaching vocabulary, vocabulary achievement, games, video games, RPG video games

1. Introduction

Video games are electronic, interactive games known for their vibrant colors, sound effects, and complex graphics (Encyclopedia of Children's Health, 2015). There are various genres of video games, such as action, puzzle, and Role-Playing Game (RPG). RPG is the video game in which the players are actively interacting in it. Such kind of games could become one of the sources to acquire language skills. Cruz (2007) states that video games can be used to improve language instruction.

Every language has vocabulary. Linse (2005) defines vocabulary as the collection of words that an individual knows. In order to communicate well in a language, someone must have vast amount of vocabulary in order to maintain good communication and avoid misinterpretation. The amount of vocabulary of each language in this planet is for sure uncountable. Global Language Monitor (2015) estimated that English possesses 1,030,475.3 words and new word is created every 98 minutes. This shows that any language has an incredible amount of vocabulary and someone who wants to master a certain language must know a large amount of the vocabulary, if not all.

Acquiring vocabulary is not an easy task for anyone. Hiebert and Kamil (2005) explain that words represent complex and often have multiple meaning that must be understood in the context in sentences and paragraphs. They further explain that learners are expected to understand words in texts and acquire new words from the texts. However, there are some difficulties which commonly occur during acquisition process. Deciding what words should be taught and estimating the amount of vocabulary that can be acquired are some of the reasons (Hiebert and Kamil, 2005). Moreover, vocabulary learning is often perceived as boring by learners, especially for those who grew up in the digital age (Meihami, Meihami, and Varmaghani, 2013). Channeling the digital era technology to create effective media to use in vocabulary learning is a must and RPG video game contains dialogues that serve as the interaction media, making the video game one of the possible sources to acquire new vocabulary.

Cruz (2007) states that in ESL classroom, RPG video games are the most suitable video game genre as the instrument. RPG video games expose the player to the language skills and integrate them in an interesting way that could ensure the students to immerse them in the story. Due to vocabulary being a crucial part in the language skills, playing RPG video games that integrate the language skills also expose the player to vocabulary. This study analyzes how effective RPG video game can

improve the vocabulary achievement of students by experimenting and implementing the video game to the English language study.

The objectives of this study were to find out: (1) Whether or not there was any significant improvement in English vocabulary achievement of the 8[th] graders of SMP LTI IGM Palembang after they were taught by using RPG Video Games and (2) The students' perceptions on using RPG video games in learning English vocabulary.

2. Theoretical Background

Video games are electronic, interactive games known for their vibrant colors, sound effects, and complex graphics (Encyclopedia of Children's Health, 2015). There are various genres of video games, such as action, puzzle, and Role-Playing Game (RPG). RPG is the video game in which the players are actively interacting in it. Such kind of games could become one of the sources to acquire language skills. Cruz (2007) states that video games can be used to improve language instruction.

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3. Method

This study used single-subject time-series experimental method. This study had experimental group as the subject. The purpose of the study was to find out the improvement after the treatment given to the experimental group and the progress the group made during the treatment. In doing this method, this study was done in 18 meetings, including 4 meetings of vocabulary test, which consisted of a pre-test, two progress tests, and a post-test.

The population of this study was the eighth grade students of SMP LTI IGM Palembang year 2015/2016 with total amount of students was 91. The sample of this study was Class 8B as experimental group which consisted of 20 students. However, only 14 students were taken as the sample for the vocabulary tests and 19 students as the sample for the preference questionnaire due to the students' absence during the vocabulary test and questionnaire administration. The sample was chosen based on the judgment that SMP LTI IGM divided the class according to the students' academic level, with 8B being a class with higher average academic level. Another judgment used in choosing the sample was the small amount of students in the class. The judgments are based on Cornillie, Jacques, De Wannemacker, Paulussen, and Desmet's (2011) explanation that using video game as a teaching media will work on more advanced students and that a small scale experiment will result in a more satisfying and accurate result.

The data were collected by using two instruments. The instruments were vocabulary test and preference questionnaire. The first instrument used in this study was vocabulary test. This study had four vocabulary tests consisting of a pre-test, two progress tests, and a post-test. The pre-test was given before the treatment, the two progress tests were given during the treatment, and the post-test was given after the treatment. Both pre-test and post-test consisted of 40 items with 10 items sentence completion, 10 items matching synonym, 10 items letter rearrangement, and 10 items sentence making, while the progress tests consisted of 20 items with 5 items sentence completion, 5 items matching synonym, 5 items letter rearrangement, and 5 items sentence making. The tests were given to check whether there was any significant improvement between each test or not.

The second instrument used in this study was preference questionnaire. this study used the questionnaire instrument in multiple choices of agreement and disagreement. The questionnaire was by the writer on the preferences and interests of the students during the treatment. The questionnaire consisted of 21 items and uses closed ended scaled questions adopted from Likert scale with the responses strongly agree rated 5,

agree rated 4, partially agree rated 3, disagree rated 2 and strongly disagree rated 1. The questionnaire was tested to 24 non-sample students to check the validity and reliability. The preference questionnaire's reliability coefficient was 0.900, which means that the questionnaire was reliable and valid. The questionnaire was given to check the students' preference of the method used in the treatment, which was RPG video game, to study English vocabulary.

After the data were collected, the data were analyzed by using SPSS 22 for Windows. The writer statistically analyzed the scores of the vocabulary tests to know the difference. The statistical analysis of the paired sample t-test means was applied to find out the significant difference of students' vocabulary achievement between each vocabulary test. The average scores were compared and analyzed to figure out whether there was a significant improvement between the vocabulary tests. The data from the questionnaire were processed by using percentage procedure to know the preference of students regarding the method used during research. The scores of the questionnaire ranged from 21 as the minimum score and 105 as the maximum score. The data were also calculated using regression analysis to know in which vocabulary aspect RPG video games contributed the most to the students' vocabulary achievement.

4. Result and Discussion

The Results of Students' Vocabulary Tests

This part shows the tests results of the students' vocabulary achievement.

Table 1. The Distribution of Students' Vocabulary Test Scores

Score Interval	Category	Pre-test		Progress Test 1		Progress Test 2		Post-test	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
86-100	Excellent	1	7.10%	13	92.90%	8	57.20%	9	64.30%
71-85	Good	3	21.40%	1	7.10%	5	35.70%	4	28.60%
56-70	Average	6	42.90%	-	0%	0	0%	0	0%
41-55	Poor	2	14.30%	-	0%	1	7.10%	1	7.10%
<40	Fail	2	14.30%	-	0%	0	0%	0	0%
Total		**14**	**100%**	**14**	**100%**	**14**	**100%**	**14**	**100%**

The pre-test data showed that there were 2 students (14.3%) in fail category, 2 students (14.3%) in poor category, 6 students (42.9%) in average category, 3 students (21.4%) in good category, and 1 student (7.1%) in excellent category.

Progress test 1 data showed that there were no students in fail, poor, and average category, 1 student (7.1%) in good category, and 13 students (92.9%) in excellent category.

Progress test 2 data showed that there were no student in fail category, 1 student (7.1%) in poor category, no students in average category, 5 students (35.7%) in good category, and 8 students (57.1%) in excellent category.

The post-test data showed that there were no student in fail category, 1 student (7.1%) in poor category, no students in average category, 4 students (28.6%) in good category, and 9 students (64.3%) in excellent category.

From the data acquired from the pre-test of the experimental group, the lowest score was 20 while the highest score was 92.5. The mean of pre-test was 62.86. In progress test 1, the lowest score was 80 and the highest score was 100, which was

better compared to the pre-test. In progress test 2, the lowest score was 55 and the highest one was 100, which was better compared to the pre-test but worse than progress test 1 where the lowest score was 80.

Compared to the pre-test, the scores of the post-test of the students increased. The lowest score was 53 while the highest was 100 and the mean was 82.86.

The Results of Paired Sample T-test

The scores of vocabulary tests were calculated by using Paired Sample T-test. Paired sample t-test was used to analyze the scores of vocabulary tests of students' achievement to find out whether or not there was any significant improvement in students' vocabulary achievement after being taught using RPG video game.

Table 2. Descriptive Statistics of Vocabulary Tests

Tests	Mean	N	Std. Deviation	Std. Error Mean
Pre-test	62.86	14	19.46	5.20
Progress test 1	95.36	14	5.71	1.52
Progress test 2	86.79	14	10.49	2.80
Post-test	86.86	14	11.93	3.19

Based on Table 2, the mean of pre-test was 62.86, the standard deviation was 19.46, and the standard error was 5.20. As for progress test 1, the mean was 95.36, the standard deviation was 5.71, and the standard error was 1.52. Progress test 2's mean was 86.79, the standard deviation was 10.49, and the standard error was 2.80. Meanwhile the mean of post-test was 86.86, standard deviation was 11.93, and standard error was 3.19.

Table 3. The Summary of Statistical Analysis on the Vocabulary Tests Using Paired
Sample T-Test

| | Paired Differences | | | | | t | Df | Sig. (1-tailed) |
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
				Lower	Upper			
Post_test - Pre_test	24	12.3	3.29	16.9	31.10	7.301	13	.000
Progress_1 - Pre_test	32.5	16.35	4.37	23.06	41.94	7.438	13	.000
Progress_2 - Progress_1	-8.57	7.7	2.06	-13.02	-4.12	-4.163	13	.000
Post_test - Progress_2	.071	7.96	2.13	-4.52	4.67	.034	13	.487

Table 3 shows the results of paired sample difference in mean between vocabulary tests. Between the pre-test and progress test 1, the mean difference was 32.5 with standard deviation 16.35 and standard error 4.37. The t-obtained 7.438 was greater than t-table 1.771 in one-tailed testing and p-value 0.000 was smaller than the significance value α 0.05. This means that there was a significant improvement in the students' vocabulary after the first treatment period. Between the progress test 1 and progress test 2, the mean difference was 8.57 with standard deviation 7.96 and standard error 2.13. The t-obtained 4.163 was greater than t-table 1.771 in one-tailed testing and p-value 0.000 was smaller than the significance value α 0.05. However, the calculation result was in negative point. This means that there was a reduction in the students' vocabulary achievement between the first and second treatment period. Between the progress test 2 and post-test, the mean difference was 0.071 with standard deviation 7.96 and standard error 2.13. The t-obtained 0.034 was lower than t-table 1.771 in one-tailed testing and p-value 0.487 was greater than the significance value α 0.05. This means that there was no significant improvement in the students' vocabulary achievement between the second and third treatment period.

Finally, between the pre-test and post-test, the mean difference was 24 with standard deviation 12.3 and standard error 3.29. The t-obtained 7.301 was greater than t-table 1.771 in one-tailed testing and the p-value 0.000 was smaller than the significance value α 0.05, so the null hypothesis (H_o) was rejected and the research hypothesis (H_a) was accepted. It means that there was a significant improvement in the students' vocabulary achievement between the pre-test and the post-test.

Results of Questionnaire

The questionnaire consists of 21 questions. The questionnaire was based on Likert scale with five responses. The maximum score in the questionnaire is 105 and the minimum score in the questionnaire is 21. The data collected was calculated using the percentage procedure. The following table and chart shows the result of percentage procedure calculation and the distribution of students' preference questionnaire scores respectively.

Students' Preference Questionnaire Answers Percentage

- 1 Strongly Agree : 35%
- 2 Agree : 35%
- 3 Partially Agree : 25%
- 4 Disagree : 2%
- 5 Stongly Disagree : 3%
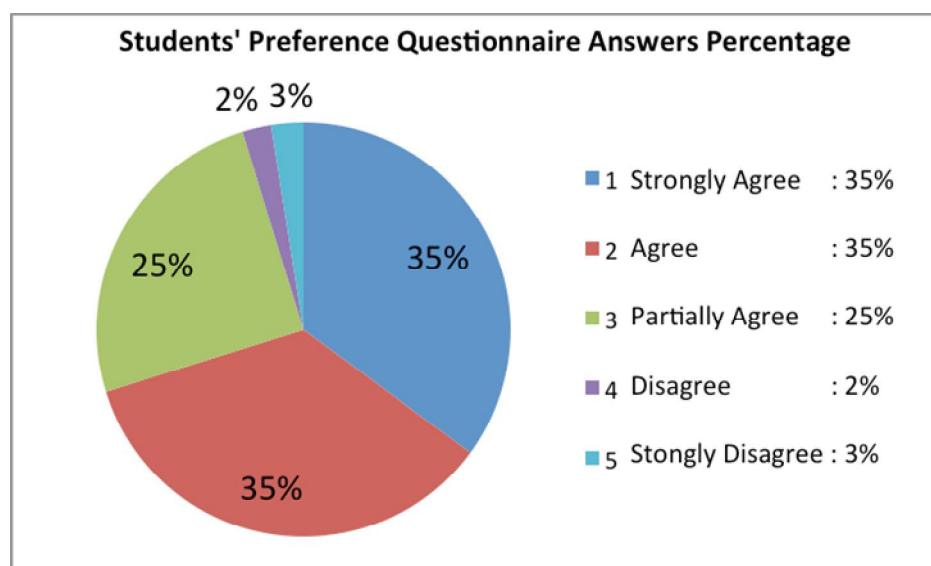
Figure 1: Chart of percentage procedure summary

The results of the percentage procedure calculation showed that 35% of the students strongly agreed with the method, 35% of the students agreed with the method, 25% of the students partially agreed with the method, 2% of the students disagreed with the method, and 3% of the students strongly disagreed with the method. According to the chart, the result showed that 95% of the students preferred using the method during treatment, which is using RPG video game to study English vocabulary.

Table 4. The Distribution of Students' Preference Questionnaire Scores

Score Interval	Category	Frequency	Percentage
84-105	Highly Preferable	10	52.6%
63-83	Preferable	9	47.4%
42-62	Not Preferable	0	0%
21-41	Highly Not Preferable	0	0%
Total		**19**	**100%**

The distribution table showed that 10 (52.4%) of the students highly preferred studying English vocabulary using RPG video game, 9 (47.6%) of the students preferred studying English vocabulary using RPG video game, and no students thought that studying English vocabulary using RPG video game was not preferable and highly not preferable.

Result of Regression Analysis

Regression analysis was done to find out in which vocabulary aspect RPG video game contribute the most to the students' vocabulary achievement. There are three aspects that form a vocabulary, namely form, meaning, and use.

Table 5

Result of Regression Analysis

Model Summary of Form

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.277[a]	.077	.000	11.507

a. Predictors: (Constant), RPG

Model Summary of Meaning

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.584[a]	.341	.286	23.803

a. Predictors: (Constant), RPG

Model Summary of Use

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.093[a]	.009	-.074	7.730

a. Predictors: (Constant), RPG

Table 5 shows the result of regression analysis. The R^2 for each aspect were 0.077 for form aspect, 0.341 for meaning aspect, and 0.009 for use aspect. This means that RPG video games contribute 7.7% of form aspect, 34.1% of meaning aspect, and 0.9% of use aspect. It can be concluded that from the three aspects, RPG video games contributed the most to the meaning aspect of vocabulary.

Discussion

There are several methods to teach English vocabulary. However, what matter the most is that the students are willing to study and gain new vocabulary. As stated by Meihami, Meihami, and Varmaghani (2013), vocabulary learning is considered boring by learners who grew up in digital age. In order to ensure that the students

keep gaining new vocabulary as well as to ensure that they are not bored, using digital media is a must. One of the digital media that can be used to increase vocabulary is video games, specifically RPG video games. The writer found out that the method used in this study, which was using RPG video game to increase the students' vocabulary achievement, was effective for Class B eighth grade students in SMP LTI IGM Palembang. There is a reason why RPG video games can improve the students' vocabulary achievement. Kerka (2000) stated that incidental learning is unintentional or unplanned learning which involves no deliberate intention to learn or to analyze language, an explanation which might include implicit learning in the psychological sense. Video games are for entertainment, so psychologically the player feels fun doing it and not realizing that he/she is actually learning when playing a video game. RPG video games are one of video game genres that use words as the crucial part in order for the game to be played. This means that the player, which was motivated to finish the RPG video game, would acquire new words unconsciously while enjoying and trying to finish the video game. This was proven by the result of the vocabulary tests and the result of questionnaire. The comparison between the pre-test and post-test showed a significant improvement in the scores while the preference questionnaire showed that the students liked the method used during the treatment. However, the writer also found out that the students needed help from both the teacher and dictionary in order to understand the new vocabulary from the game. Moreover, the tendencies of clicking persisted and thus the students missed several words which are supposed to be discussed in the following meeting. The genre of the RPG video game must also be taken into consideration, since the students preferred the game with active action where the player actively involved in fast gameplay rather than turn-based action where the player and the computer take turn for action.

Based on the findings of the study, some interpretations were drawn. The findings show that (1) there was a significant improvement in English vocabulary achievement of the 8th graders of SMP LTI IGM Palembang after they were taught by using RPG

Video Games and (2) the students' perceptions on using RPG video games in learning English vocabulary were positive.

The first finding showed the results of Paired Sample T-Test between the four vocabulary tests. The result showed that there was significant improvement in students' English vocabulary achievement after they were taught using RPG video game. The result was as expected by the writer since according to Cruz (2007) video games can be used to improve language instruction. Another reason as to why the result was satisfactory is because Cornillie, Jacques, De Wannemacker, Paulussen, and Desmet's (2011) explains that using video game as a teaching media will produce more satisfying and accurate result in a small scale experiment. The results of each test serve as the proof that the students improved their vocabulary achievement. Before the treatment, the result of the pre-test showed that there was only one student fall into the excellent category. This signifies that the students still lack in English vocabulary. After the first treatment, the students gained better scores in the progress test 1 where this become the proof that the students understood and absorbed the vocabulary given through the video game. The results of the progress test 2 and post-test also showed that the students gained the vocabulary introduced in the video game and understood the use of the words in sentences where the students achieved good scores. However, compared to the scores in both progress tests, the students' scores lowered in the post-test. This might be due to the progress tests having less test items as well as having more preparation since the vocabulary they acquired was still fresh in their memory compared to the post-test where the students' must recall all the vocabulary from the beginning of the treatment until the end of the treatment.

The second finding showed the results of percentage procedure of preference questionnaire. The result showed that 95% of the students preferred using RPG video game to study English vocabulary. It means that the students considered that studying English vocabulary using RPG video games was preferable. This result was expected since during the treatment, the students enjoyed playing the game while at the same time they managed to take notes on the new words encountered while playing to be

discussed later. On the other hand, some students forgot to take notes on the new words encountered due to enjoying the video game too much. This resulted in less vocabulary acquired by some students compared to other students who took notes while playing. Aside from that, RPG video games contributed to the students mostly only on the meaning aspect. This can be seen in the result of the students' post-test where the students scored higher in the questions regarding the meaning of the word. This is due to that during the treatment; the discussion focused more on the meaning of the word rather than the use in a sentence and the form of the word.

5. Conclusion and Remark

The conclusion was constructed on the basis of the research findings. The writer found out that the method used in this study, which was using RPG video game to increase the students' vocabulary achievement, was effective for Class B 8th grade students in SMP LTI IGM Palembang. The comparison between the pre-test and post-test showed a significant improvement in the   scores while the preference questionnaire showed that the students liked the method used during the treatment. However, the writer also found out that the students needed help from both the teacher and dictionary in order to understand the new vocabulary from the game. Moreover, the tendencies of clicking persisted and thus the students missed several words which are supposed to be discussed in the following meeting. The genre of the RPG video game must also be taken into consideration, since the students preferred the game with active action where the player actively involved in fast gameplay rather than turn-based action where the player and the computer take turn for action.

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AEROBIC ENDURANCE (VO2MAX) LEVEL OF PHYSICAL EDUCATION COED IN SRIWIJAYA UNIVERSITY

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Abstract

This research aims to know aerobic endurance (vo2max) level of physical education coed in sriwijaya university. This research is descriptive quantitative research. The method is engineering test and data measurement aerobic endurance test with bleep to know the level of coed vo2max. The sample is 42 physical education coed of Sriwijaya University. The result shows 14 coed (33%) are exellent, 19 coed (45%) are good, 4 coed (9.6%) are fair, and 5 coed (12%) are poor. Based on presentase, the coed of physical education in Sriwijaya University have a good aerobic endurance (Vo2max) level, only 4 coed have poor aerobic endurance (Vo2max) level. Sugessted to physical education program study to increase coed aerobic endurance level thought coaching sport branch at least 2 times a week.

Key Words: Aerobic endurance (VO2 max) level, coed, physical education.

1. Introduction

Aerobic endurance (VO2max) level is one of the main modals for a person to do physical activity, the better aerobic endurance (Vo2max) level a person so in practice learning sport will be better too. Every human being has the aerobic endurance (Vo2max) level different based one their daily activity and their own profession. Human activity need physical support, therefore physical support is a basic factors to every human activity. To run daily tasks, at least someone having a minimum of physical ability that always support their activity and it can be better if they have an ability backup.

According to Fox (2000) the aerobic endurance level is the ability of someone to fulfill their duties without excessive feeling tired, and than still having power residual or backup to enjoy their free time and to daily needs. Based on Soekarman

opinion (2000), the aerobic endurance (Vo2max) level is willingness and ability to do work or activity, the hightens power work without experienced exhaustion that means or excessive or the body ability to adjust organs function with physicology limitless through environtmental conditions or physical work efficiently without excessive tired. Pate opinion (1990) the level of aerobic endurance (Vo2max) is physical aspect from completely freshness that give ability to a person for running a productive life and can adjust on each load or worthy physical stress.

From some opinion about the level of aerobic endurance (Vo2max) above can be concluded aerobic endurance (Vo2max) level as an ability to discharge their duty properly although in difficult situation, where people who less the physical freshness, will not be able to do. In other words, someone who has good aerobic endurance (Vo2max) level can be interpreted enough have the ability to do their job efficiently without cause significant exhaustion, so that they have the left of their power to fill their free time and the other unexpected tasks. It could be said that the good aerobic endurance (Vo2max) level give someone an ability to running a productive life and could adjust theirself to many loads (Harsono, 1993).

2. Theoritical Background

Aerobic Endurance (Vo2 Max)

Each cells in human body needs oxygen to change food into ATP (adenosine triphosphate) that ready used by each cells to work, the cell that comsume less oxygen is muscle in rest mode. Muscle cells that contracting needs 8 ATP. Consequently the muscle that used for exercise need more oxygen and produce CO_2. Based on Fox (2000) opinion, the meaning of VO2 Max is the maximum oxygen volume that can be use in one minutes, besides that Soekarman opinion (2000) VO2 max is perception of maximum aerobic that draws the maximum oxygen consumed per unit of time by a person during exercise or test, with exercise more and more severe until exhaustion, the measurement called VO 2 Max Volume. That is a level of our body ability that revealed in litres per minute or milliliter/minutes/kg of weight.

Fox (2000) explains VO2 max is amount of maximum oxygen in mililite, can use in 1 minutes per kilogram of weight. VO2 max included one of cardiorespiratory endurance indicator   or heart lung endurance. It means the bigger of VO2 max value than cardiorespiratory will be better too. The good cardiorespiratory endurance will impact on good health. There are two method to measure VO2 max value of someone, that are use method and measurement test through laboratory and field test. Field test usually use a simple tools and easy to do. One of VO2 max test that can do on field is multistage fitness or bleep test. Since long, Bleep test already very popular among sports coaching, especially in sporting achievement consider this test very easy to do and can be done by many participants at once depending on the execution place of the test therefore saving test time.

The Function Of Aerobic Endurance (Vo2 Max)

The level of aerobic endurance (VO2 max) is the success key of someone life especially on running their life for example coed activity in learning the practice of sports in the field. There are three important things in the level of aerobic endurance (VO2max), namely: a) the level of aerobic endurance (VO2max), in terms of muscle, bone, and fat parts, b) the level of aerobic endurance (VO2max) in terms of organ function with the efficiency of the cardiovascular system, blood vessels, and respiratory, c) the level of aerobic endurance (VO2max) muscle response, in terms of flexibility, strength, speed, and endurance.

The level of aerobic endurance (VO2max) that needed for earch person are different, depending on the nature of the physical challanges it faces, a physical education students needs good aerobic endurance (VO2max) level for receive the lessons that related to physical activity in college.

The level of aerobic endurance (VO2max) that they have and they need very different. Highly dependent on the jobs and professions that are owned. Physical work or exercise in the short term, for example less than 5 minutes is not absolutely need to continue burning through the combustion of oxygen. Organs such as the

heart, circulatory, and pulmonary (respiratory) have to work harder to deliver oxygen to the body parts that are actively working. With enough time to practice encourage the work of heart, circulation, and lungs which can lead to changes for the better on the state of the immune system, especially the heart. Below according to Cox (2000) as a result of the exercise if someone exercising will affect the level of aerobic endurance (VO2 max) as follows:

a) Heart work stronger and efficient to pumb more oxygenated blood in each pulsation.

b) Blood circulation become smoothly so food nutrition elements can be easily supplied to all body tissues.

c) Muscle tension throughout the body, which is becoming stronger.

d) Respiratory muscles become stronger so as to allow rapid air flow into and out of the lungs.

Aerobic Endurance Components (Vo2 Max)

The level of aerobic endurance (VO2max) for students especially Program Study Physical Education is an absolute because their physical activity on college takes good physical condition, the most subject of Physical Education are sports practice field that requires physical aspect. Here are some of the components required in the level of aerobic endurance (VO2 max):

1) Endurance

Characteristics of muscle endurance by Soekarman (2000), anaerobic endurance or muscle endurance as the ability to perform the maintenance of strong muscle contractions with the provision of energy through anaerobic mechanisms. Durability can also be interpreted muscle contractions in the long term with little power to moderate.

2) Explosive Power

Explosive power is the combination of strength and speed, is the ability to apply force in a short time. While Pate (1990) defines explosive power as the ability of an athlete to overcome a detainee with a high-speed contraction.

3) Speed

According to Cox (2000) speed is the ability to move from one place to another in the shortest time as possible. In terms of mechanics, speed is the speed through the ratio between the place and the time, terms of speed incorporated into three sections: the reaction time, the frequency of moving units per minute, and the speed of moving by the given distance. The relationship between these three factors help to predict performance for each exercise that requires speed.

4) Agility

According Bompa (2009) agility is the ability to change the direction and position of the body quickly and accurately without losing balance. Agility can also be defined as the ability to quickly change directions without losing speed, balance or body control.

5) Flexibility

Flexibility is the ability to perform movements with large amplitude (Bompa, 2009). Flexibility exercises are intended to increase the likelihood of movement in the joints, the wider space movement of the joints more flexible. Besides that, flexibility exercises are stretching and stretching. Stretched and extended are the connective tissue of joints and muscles that relate with the possibility of motion in the joints concerned.

In connection with this definition, the aerobic capacity is a common characteristic of muscular endurance. Individual physiological ability is the adaptability of the body's organs a case of muscles, heart and lungs to an activity within a certain time.

Of the five physical components above the level of aerobic endurance (VO2 max) will determine the success rate of students in the lecture, especially in teaching practice that requires excellent physical activity.

3.   Method

This type of research used in this research is descriptive quantitative research with survey research methods to see the level of aerobic endurance (VO2 max) with data collection technique using test Bleep. According Sugiono (2009) descriptive quantitative research is a form of research that aimed to describe the phenomena that exist and to obtain information about the status or symptoms. While, survey method according to Arikunto (2006) is to obtain the facts of existing symptoms and seeks the factual information both about social institutions, economic, political, and so forth. Then Arikunto (2006) also adds quantitative research is a research approach that required to strengthen the numbers, ranging from data collection, interpretation of the data, as well as the appearance of the results. In this study will be obtained level of aerobic endurance reference in the preparation of students as coaching sports achievements in Program Study Physical Endurance of Sriwijaya University.

Time and Research Place

This research was conducted at the Physical Education campus of the University Sriwijaya at Indralaya and Palembang with research period October - November, 2015.

Research Sample

The sample in this research are 42 coed of Physical Education students in Sriwijaya University.

Data Collection Technique

According Arikunto (2006), data collection techniques are the ways that used by researchers to obtain the required data. In the use of data collection techniques,

researchers need an instrument that aids data collection in order to progress becomes easier. Data collection techniques are used in this research is a form of field test aerobic endurance (VO2 max) with a bleep test. Bleep tests conducted by running a distance of 20 meters back and forth, which began with a jog gradually higher and faster until the athlete is not able to follow the rhythm of run time, meaning maximum capacity at the level of the back and forth.

Data Analysis Technique

The collected data were analyzed statistically using the percentage was then calculated by a category the level of aerobic endurance (VO2 max).

4.   Result and Discussion

The test results in this study are described in the form of a frequency distribution data as shown in table 1 below.

Tabel 1
The frequency distribution of test results aerobic endurance (VO2max) level

	VO2 Max	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	26.8	3	7.1	7.1	7.1
	27.6	3	7.1	7.1	14.3
	28.3	6	14.3	14.3	28.6
	29.5	2	4.8	4.8	33.3
	30.2	7	16.7	16.7	50.0
	31	5	11.9	11.9	61.9
	31.8	1	2.4	2.4	64.3
	33.6	2	4.8	4.8	69.0
	34.3	4	9.5	9.5	78.6
	36.4	2	4.8	4.8	83.3

	38.5	2	4.8	4.8	88.1
	43.3	2	4.8	4.8	92.9
	43.9	2	4.8	4.8	97.6
	44.5	1	2.4	2.4	100.0
	Total	42	100.0	100.0	

Form table 1 above the results of aerobis endurance (VO2max) level test interval 25-30 amounted to 14 people approximately 33.3 persent with excellent category. Interval 30-35 amounted to 19 people approximately 45.3 persent with good category, while the interval 35-40 amounted to 4 people approximately 9.6 persent with fair category and interval 40-45 amounted to 5 approximately 12 percent with poor category. From the data frequency distribution table 1 above can be described into the histogram below:

Histogram
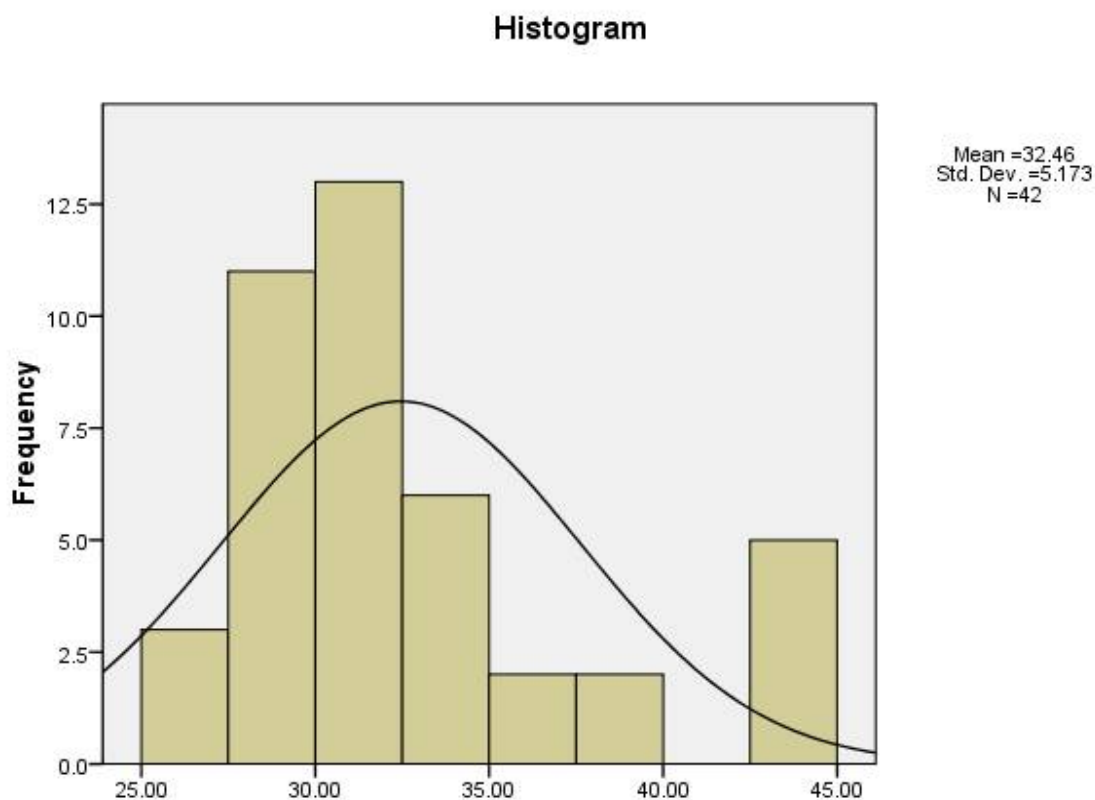
The results of aerobic endurance (VO2 max) level

From the test results of aerobic endurance (VO2 max) level above can be concluded that coed aerobic endurance (VO2 max) level with excellent category amounted to 14 people, while with good category amounted to 19 people, with fair category amounted to 5 people and with poor category amounted to 4 people, therefore the drawn conclusion the coed of Physical Education Sriwijaya University has a good aerobic endurance (VO2 max) level category.

Based on the results of aerobic endurance (VO2 max) level test to 42 Physical Education female students of Sriwijaya University included on good category.

According to Bompa (2009) the main of maintaining aerobic endurance (VO2 max) level is with repeatedly do physical exercise and to improve the defense in order to increase strength, speed, flexibility and muscle endurance, physical exercise is also aimed to achieve the biological adjustment in order to activity can be displayed optimally. Then the results Iyakrus (2013) that the the level of aerobic endurance (VO2 max) exercise is a major component in preparing the body to face the activities of daily activities.

The results of this study are consistent with the opinion of Brown, T. (2009) that the energy metabolism system as aerobic sourced from carbohydrates, fats and also from the breakdown of proteins that produce energy, which are used when making exercise that endurance need fairly long duration. Therefore, the athletes that participate in the events needs endurance should has a good ability to supply oxygen to the body so that the process of energy metabolism as aerobic can run perfectly.

5.   Conclusion and Remark

Aerobic endurance (VO2 max) is the maximum amount of oxygen in milliliters, which can be used in one minute per kilogram of body weight. Aerobic endurance (VO2 max) is one indicator of cardiorespiratory endurance or heart lung endurance. There are two methods to measure someone aerobic endurance (VO2 max) value, there are using method and measurements test through laboratory and than through field test. Loboratory tests have the high accuracy value but to perform this test need high cost and not everyone has the test tools if compered with field test. One of aerobic endurance (VO2 max) test that can be use in the field is a multistage fitness test or bleep test.

From the data analysis of the research test to 42 female students can be concluded that the level of aerobic endurance (VO2 max) coed Physical Education Sriwijaya University as follows : 14 coed are exellent, 19 coed are good, 5 coed are fair, and 4 coed are poor. Accordingly it can be suggested :

1. Keep the improvement of aerobic endurance (VO2 max) Physical Education students through increased volume and intensity during sports performance coaching.

2. Spread the course of practice in sports studies program, need to be analyzed and adapted to the needs and increased levels of aerobic endurance (VO2 max) students, as well as an increase in extra-curricular sports activities or sports coaching achievements.

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ENHANCING THE TENTH GRADERS' READING COMPREHENSION ACHIEVEMENT THROUGH K-W-L STRATEGY WITH TWIN-TEXTS AT SENIOR HIGH SCHOOL IN PALEMBANG

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Abstract

The objectives of this study are to find out: (1) whether or not there is any significant difference in students' reading comprehension achievement after they are taught through K-W-L strategy with twin-texts and (2) whether or not there is any significant difference in students' reading comprehension achievement between the students who are taught through K-W-L strategy with twin-texts and those who are not. The sample of this research was 64 tenth graders of one high school in Palembang, which were divided into control group and experimental group; each group consisted of 32 students. The technique of selecting the sample was purposive sampling. The data were obtained through reading comprehension test and were analyzed by using paired sample t-test and independent sample t-test. The result of this study showed that (1) the mean difference in posttest and pretest of experimental group was 12.29 and p value <0.05. It means that there was a significant difference in reading comprehension achievement after the students were taught through K-W-L strategy with twin-texts, (2) the mean difference between posttest of both experimental group and control group was 11.688 and p value <0.05. It means that there was a significant difference in reading comprehension achievement between the students who were taught through K-W-L with twin-texts and those who were not. In conclusion, teaching reading comprehension through K-W-L strategy with twin-texts was effective to enhance students' reading comprehension achievement.

Key Words: Reading comprehension, K-W-L, Twin-Texts.

1. Introduction

In Indonesia, English as foreign language has been learnt in all levels of education starting from a primary school to college. In the primary level, English is learnt two hours in a week as a local content for classes IV, V, and VI (*Badan Standar Nasional*

Pendidikan, 2006). In contrast, Indonesian government has categorized English as a compulsory subject for lower secondary education to a university level (*Depdiknas*, 1989).

In learning English, students need to learn both language skills and language aspects in order to master it. One of language skills that needs to be learnt in the early stage is reading. Burkhour (1999, p. 5) states that the importance of reading ability is very crucial in order to be successful in school life. Moreover, Ward (as cited in Dewi, 2007, p. 3) says, "reading is one of the fruitful skills to teach, the majority of the students may never speak much in English but most of them will have to read English in order to complete their studies". Reading is not only the ability to speak out word by word but also the ability to understand the text being read. Grabe and Stoller (2002, p. 9) state that reading is the ability to draw meaning from the printed page and interpret this information appropriately. From the explanation above, it can be understood that being able to read means being able to comprehend and process the information provided in the text. In short, reading and comprehension cannot be separated. It is supported by Duran 2013 (as cited in Tuzahra, 2015, p. 5), "reading and comprehension are linked to each other like cause and effect relation".

Kennedy (as cited in Dewi, 2007, p. 17) explains, "reading comprehension is a thinking process by which pupil selects facts information, or ideas from printed materials, decides how they relate to previous knowledge he has required, and judges their appropriateness worth for meeting his own needs and objectives".

However, to be able to comprehend the text is not easy. Sudirman (as cited in Mutmainnah, 2012) states that most of the students who learn English as a foreign language will find it difficult both in comprehending the text in reading and answering the questions asked by teachers. "The difficulties also arise from lack of linguistic knowledge as vocabulary, language use and deficient knowledge of syntactic and semantic processes" (Calixto, n.d).

The difficulties in comprehending the text lead to a bad reading comprehension of Indonesian students. Based on the data from *Kompas* (as cited in Sukyadi and

Hasanah, 2010) around 37.6% of 15-year-old students were merely able to read the texts without understanding the meaning of the text. And only 24.8% out of them were able to correlate the texts with their prior knowledge. More, based on a study done by Hamra and Syatriana in 2010, they found out that Indonesian students' ability in comprehending English text was very low.

The same problem was also faced by the tenth grade students of SMA Negeri 6 Palembang. Based on the writer's experience during teaching practice program at SMA Negeri 6 Palembang starting from August to September 2015, the tenth graders showed bad performance in reading comprehension. During reading class, they could not understand the text very well and misinterpreted the text.

To solve the problem above, according to Duke, Pearson, Strachan, and Billman (2011) there are ten essential elements of effective reading comprehension instruction that are suggested to every teacher in teaching reading comprehension. Some of them are (1) let the students get exposed to the large amount and various range of texts, (2) develop students' vocabulary knowledge, and (3) facilitate the students with the texts that motivate and provide content for reading.

Considering that text has crucial role for the success of reading comprehension, twin-texts can be the alternative to be used as the teaching media. Twin-texts are a set of text that contain fiction and nonfiction discussing the same or related topic. "Teaching units of study that contain fictional and information books on the same topic can build knowledge, develop text-related vocabulary, and increase motivation to explore the topic under discussion" (Soalt, 2005, p. 680). By applying twin-texts in the learning process, it means that three out of ten essential elements for teaching reading comprehension can be accomplished.

In addition, a teaching strategy is also needed in order to accomodate the use of twin-texts as the teaching media. Camp (2000, p. 402) suggests K-W-L as one of strategies that can be done successfully with twin-texts to enhance students' reading comprehension. It is a method of graphically organizing information based on what readers *Know* about a topic, what they *Want* to know, and what was *Learned* after

reading (Camp, 2000, p. 403). K-W-L is chosen as the teaching strategy because it offers various activities compare to other strategies. The most important thing, by doing K-W-L, the students are able to monitor their own reading comprehension in the end of the lesson as they do the L (Learned) step.

Based on the explanation above, the writer was interested in conducting a research entitled "Enhancing the Tenth Graders' Reading Comprehension Achievement through K-W-L Strategy with Twin-Texts at Senior High School in Palembang". The problems of this study were formulated as follows: (1) was there any significant difference in students' reading comprehension achievement after they were taught through K-W-L with twin-texts?, (2) was there any significant difference in students' reading comprehension achievement between the students who were taught through K-W-L with twin-texts and those who were not?.

2. Theoritical Background

According to (Hornby, 2010, p. 1219) read means to look at and understand the meaning of written or printed words or symbols. Furthermore, "reading is not merely the process of reading words by words of a printed material but it is also a collaboration of a thinking process, a recollection of the past experience and the capacity of acquired language faculty to interpret the writer's intention" (Dewi, 2007, p. 14).

The ability to read with understanding is a crucial skill in modern society (Calixto, n.d). "Comprehension is the only reason for reading and without it reading will be a frustrating activity and pointless exercise in word calling" (Griffin, 2009). Therefore, reading and comprehension cannot be separated. According to Heilman (as cited in Dewi, 2007, p. 17), "reading comprehension is the process of thinking sense of written ideas through meaningful interpretation and interaction as a multifaceted process affected by several thinking and language abilities". According to Lapp & Flood (as cited in Hamra & Syatriana, 2012) there are three levels of

comprehension in reading; literal comprehension, inferential comprehension, and critical comprehension.

Camp (2006) states that twin-texts can be a beneficial teaching media to improve students' reading comprehension. Twin texts are two books, a fiction and nonfiction text on the same or related topic (Camp, 2000). "The disjunction between informational and fictional texts on the same topic and the gaps between truth and artifice (as well as synchronicity) provide rich ground for developing students' higher order comprehension abilities" (Soalt, 2005, p. 682). Furthermore, Camp (2006, p. 8) argues that by pairing fiction and nonfiction at the same time keep students fascinated, focused on the topic, and eager to use new vocabulary to discuss what they've learned. As a result, comprehension, the main purpose of reading, improves. Moreover, by using twin-texts as the teaching media in teaching activity, the teacher is assured to motivate the students on the joys of reading while expanding on the students' interests on facts (Furtado & Johnson, 2010, p. 272)

Camp (2000, p. 402) offers several interactive strategies that can be used to facilitate the use of twin-texts. One of them is K-W-L (Know-Want-Learned) strategy. It is a method of graphically organizing information based on what readers Know about a topic, what they Want to know, and what was Learned after reading (Camp, 2000, p. 403). According to Riswanto, Risnawati & Lismayanti (2014, p. 226), "... Its aims are more diverse. It helps readers elicit prior knowledge of the topic of the text; set a purpose for reading; monitor their comprehension; asses their comprehension of the text; and expand ideas beyond the text". There are three stages of K-W-L procedure according to Bos and Vaughn (2010). It can be seen below.

A. "Know" Step:
1. Initiate discussion with the students about what they already know about the topic of the text.

2. Start by using a brainstorm procedure. Ask the students to provide information about where and how they learned the information.

3. Help them organize the brainstormed ideas into general categories.

B. "Want to Learn" Step:

1. Discuss with the students what they want to learn from reading an article.

2. Ask them to write down the specific questions in which they are more interested.

C. "What I Learned" Step:

1. Ask the students to write down what they learned from the reading.

2. Ask them to check the questions they had generated in the "Want to Learn" Step.

3. Method

This study used quasi experimental design. This design consisted of two groups which were control group and experimental group. The population of this study were 326 tenth grade students of one senior high school in Palembang, and the sample of this study was 64 tenth grade students. Each group had 32 students.

The technique of selecting the sample was purposive sampling, in which the writer did not randomly choose the sample. X.1 as the control group and X.2 as the experimental group were selected due to some criteria. First, they were taught by the same English teacher. Second, both classes had the same total number of students. Last, they had the same English level. This information was obtained by having discussion with the English teacher at that senior high school.

In this study, only the experimental group was given the treatment while the control group was not given any treatment. During the treatment, the experimental group was taught by using K-W-L strategy with twin-texts.

To collect the data, both control group and experimental group were assigned a reading comprehension test. The test was constructed based on content validity that was consulted to two experts. The two experts were the lecturer of English Education

study program at Sriwijaya University and the English teacher at LBPP LIA English Course. To check the reliability of the test, the data was analysed by using Cronbach's Alpha. Based on the calculation, the reliability coefficient was 0.880. As the result, the test was considered reliable since the reliability coefficient was higher than 0.7.

In analyzing the data, paired sample t-test and independent sample t-test were used. Paired sample t-test was used to analyze the data obtained from pretest and posttest of experimental group. Meanwhile, independent sample t-test was used to compare the data between the experimental and control groups.

After running the paired sample t-test and independent sample t-test analyses, the significance level (in two-tailed test) was found.

4. Result and Discussion

The result of students' reading comprehension was distributed based on five categories: Excellent, Good, Average, Poor and Failed. The score interval was between 0-100. Table 1 presents the results of pretest and posttest of experimental group.

Table 1
Result of the pretest and posttest of the experimental group (N=32)

Score Interval	Category	Pretest		Posttest	
		Freq	**Percentage**	**Freq**	**Percentage**
87-100	Excellent	3	9.37%	19	59.37%
80-86	Good	6	19%	11	34.37%
75-79	Average	10	31.25%	1	3.12%
56-74	Poor	13	41%	1	3.12%
0-55	Failed	-	-	-	-

As shown in Table 1, based on the result of pretest most of the students were categorized in average and poor level. There were ten students (31.25%) in average level and thirteen students (41%) or nearly the half of the students were in poor level. Meanwhile, the rest of the students were in the excellent and good level. There were three students (9.37%) in the excellent level and six students (31.25%) were in the good level. After they got exposed to the treatment, more than half of the students (59.37%) or ninteen students were in the excellent level, eleven students (34.37%) were in the good level, and only one student (3.12%) was in each average and poor level. By comparing the means pretest and posttest, it can be said that there was significant improvement in their reading comprehension achievement.

The results of pretest and posttest of control group can be seen in the Table 2.

Table 2
Result of the pretest and posttest of the control group (N=32)

Score Interval	Category	Pretest		Posttest	
		Freq	Percentage	Freq	Percentage
87-100	Excellent	1	3.12%	2	6.25%
80-86	Good	3	9.37%	6	19%
75-79	Average	15	47%	11	34.37%
56-74	Poor	13	41%	13	41%
0-55	Failed	-		-	

From Table 2, it can be seen that most of the students were in the average and poor level. There were fifteen students (47%) in the average level, thirteen students (41%) were in the poor level, three students (9.37) were in the good level, and only one student (3.12%) was in the excellent level. In contrast with the experimental group students, the students in the control group were not exposed to the treatment. After doing the posttest, there were two students (6.25%) in the excellent level, six

students (19%) were in the good level, eleven students (34.37) were in the average level, and thirteen students (41%) were in the poor level.

The data were also analyzed by using paired sample t-test and independent sample t-test. Before doing the t-test, the normality of the data was checked by using One-Sample Kolmogorov-Smirnov test. Based on the results, the significance value in two tailed testing from pretest and posttest of experimental group were 0.200 and 0.154. Meanwhile, the significance value from pretest and posttest of control group were 0.073 and 0.075. It can be concluded that the data had normal distribution because all the significance values were higher that 0.05.

Then, the writer also checked the homogeneity of the test. The result of homogeneity test showed that the significance value of posttest both in experimental and control groups was 0.645. It means that the data were homogeneous.

After checking the normality and homogeneity of the data, t-test can be applied. In this study, the writer used paired sample t-test and independent sample t-test. The result of paired sample t-test can be seen in the following Table 3.

Table 3
Paired sample t-test of experimental group

Group	Test	Mean	Mean Diff	Std. Dev	Std. Error Mean	t	Df	Sig. (2-tailed)
Exp Group	Pretest	75,38	12,219	7,365	1,302	8,213	31	,000
	Posttest	87,59		7,246	1,281			

As it can be seen in Table 3, the mean difference of pretest and posttest of experimental group was 12.219. The p value was .000. According to Field (2009, p. 330) the data is significantly correlated if p < .05. Because p value (.000) was lower than 0.05 the null hypothesis (H01) was rejected. Then, the H11 was accepted. It means that there was a significant improvement in students' reading comprehension achievement for experimental group

Then, to see the difference between pretest and posttest score of both experimental and control groups, independent sample t-test was done. The result of independent sample t-test of posttest from both groups is presented in Table 4 below.

Table 4
Independent Sample T-Test of Experimental and Control Groups

Pretest		Mean Diff	Std. Dev	Sig	Posttest		Mean Diff	Std. Dev	Sig
Exp	Con	1,094	7,365	,501	Exp	Con	11,688	7,246	,000
75,38	74,28		5,413		87,59	75,91		6,039	

Based on Table 4 above, the mean difference of pretest between the experimental group and control group was 1.094 and the p value was .501. According to Field (2009, p. 342) if the Sig value is less than .05 then the means of the two groups are significantly different. It can be stated that there was no significant difference in the pretest of both groups. Whereas, in the posttest, it can be seen that the mean difference between the experimental group and control group was 11.688 and the p value was .000. It can be concluded that null hypothesis (H02) was rejected and the alternative hypothesis (H12) was accepted. It means that there was a significant difference in students' reading comprehension achievement between the students who were taught through K-W-L with twin-texts and those who were not.

5. Conclusion and Remark

Based on the findings and statistical analyses, it can be concluded that K-W-L strategy with twin-texts was effective to enhance students' reading comprehension in class X.1 (experimental group). Most of the students in the experimental group showed better improvement in reading comprehension achievement that can be seen from the result of their posttest. The result of the study showed that there was significant difference in students' reading comprehension achievement between the

students who were taught through K-W-L strategy with twin-texts and those who were not. The statistical analysis of paired sample t-test showed that there was significant difference in the mean score between students' pretest and posttest both in the experimental and control group; however the experimental group showed better improvement than the control group. It was also proved by the result of independent sample t-test that showed significant difference between the mean score of posttest in the experimental group was higher than the mean score of the posttest in the control group. In short, teaching reading comprehension through K-W-L with twin-texts was effective to enhance students' reading comprehension achievement.

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DEVELOPMENT OF STUDENT WORKSHEETS (LKS) BASED LEARNING CYCLE 5E ON MAIN MATERIAL ELASTICITY AND HOOKE'S LAW CLASS X HIGH SCHOOL

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Abstract

Has successfully developed the student worksheets (LKS) 5E learning cycle based on the subject matter and Hooke's law of elasticity class X SMA valid and practical. The process of developing student worksheet (LKS) through the steps of research development model based product development Rowntree, include: (1) the planning stage of the needs analysis worksheets, requirements analysis learning cycle 5E, analysis of material needs elasticity and Hooke's law (2) stage the development of the formulation of learning objectives, development topics, the drafting, production prototypes, and (3) the evaluation stage. At this stage of the evaluation, researchers used a model formative evaluation Tessmer and tailored to the needs of researchers, namely: (1) self-evaluation; (2) The expert review; (3) one-to-one; and (4) small group. Data collection techniques used in the form walkthrough (validation expert lecturer and teacher of physics), the questionnaire responses of students, and student activity observation. The results of the research development of student worksheet (LKS) showed that the results of the validation stage of expert reviews, the average ratings of 88.20 validator (category very valid), meaning the student worksheet (LKS) product developed by the researchers included in the category of very valid. The results of the questionnaire responses of students at the stage of one-to-one shows the average percentage of 82.37% (practical categories), and at the stage of a small group showed that average percentage of 90.88% (the category of very practical), means the student worksheet (LKS)product had a very practical according to student responses. The average percentage of student activity by 90% (the excellent category), meaning the student worksheet (LKS)product is excellent when used in learning physics. Based on the results of the study concluded that the student work product sheet (LKS) 5E learning cycle based on the subject matter and Hooke's law of elasticity class X SMA developed was valid and practical.

Key Words : research development, student activity sheet, 5E learning cycle, elasticity and Hooke's law

1. Introduction

Physics is one branch of science, and a science that was born and developed through the steps of observation, problem formulation, formulation of hypotheses, testing hypotheses through experimentation, drawing conclusions, as well as the discovery of the theory and concepts (Trianto, 2010: 137). Understanding of the concept of physics is not enough just to provision of material or information from the teacher, but the students are also expected to construct their own understanding of the concept. According to the theory of constructivism learning, teachers cannot just provide knowledge to students. Students had to build their own knowledge in his mind. Teachers can provide convenience to this process, by giving students the opportunity to find and implement their own ideas for learning (Dahar, 2006: 165). To help students construct understanding, it is necessary teaching materials appropriate for the learning process is running as desired.

Instructional materials are divided into four kinds, including printed teaching materials, teaching materials hear, hear viewpoint of teaching materials, and interactive teaching materials (Prastowo, 2011: 40).Teaching materials are often used in the learning process is printed teaching materials include student worksheets (LKS). The advantage of using worksheets in the learning process is easier for teachers in implementing the learning, and for the students can be used independently to understand and execute a task (Majid, 2009: 177).

Curriculum implementation in 2013 in the lesson can be done with a variety of approaches. Such approaches include constructivist approach (constructivism teaching and learning). Constructivism learning approach emphasizes the process of building (to construct) the student's knowledge. One model of learning with a constructivist approach is the learning cycle phase 5 or 5E learning cycle.

The learning model, most have seen a strategic role in the effort to boost the success of the learning process. Since he moved to see the condition of the needs of students, so the teacher is expected to deliver material accurately without causing students experience boredom. The learning model learning cycle developed by J.

Myron Atkin, Robert Karplus and SCIs Group (Science Curriculum Improvement Study), at the University of California, Berkeley, United States since 1967 (Zolman, 1998).

Basic competencies that must be achieved in learning physics class X the second half of which is KD 3.6 Analyze the elasticity properties of materials in everyday life, KD 4.6 Process and analyze the results of experiments on the properties of elasticity of a material. To be able to understand the material elasticity and Hooke's law, is necessary to understand the concept of previous material relating, so that knowledge can be awakened early students. In addition, the material elasticity and Hooke's law there are many applications of everyday life. This is in line with the learning cycle model of learning where learning with this model emphasizes the process of building the student's knowledge. Knowledge is built within the students independently through interaction with the environment that will be processed through learning experiences to acquire new knowledge (Ngalimun, 2016: 174). With the LKS based 5E learning cycle is expected that students can explore their ideas to gain new knowledge by itself, as well as familiarize students to think independently and critically. It is expected that students can easily construct their understanding of the material and the success of the implementation of the curriculum in 2013 can be realized.

Based on the background described above, then the researchers intend to conduct research with the title "Development of Student Worksheet (LKS) Based 5E Learning Cycle on Main Material Elasticity and Hooke's Law Class X High School". The aim is to develop the student worksheet (LKS) 5E learning cycle based on the subject matter Hooke's law of elasticity and class X SMA valid and practical.

2. Method

The method used in this research is the development of research. In this development study, researchers used a model of development Rowntree. Rowntree development model is a model-oriented products, in particular for producing an instructional materials. Subjects in this study were students of class X SMAN 2 Palembang. The study was conducted in March and April in SMA N 2 Palembang in the second semester of the 2015/2016 academic year.

Procedure development research was conducted in three stages, namely the planning stage, the stage of development, and evaluation phase. The planning stage includes needs analysis, the BLM needs analysis, requirements analysis 5E learning cycle and analysis of material needs and Hooke's law of elasticity. Stages of development, including the formulation of learning objectives, development topics, the drafting, prototyping and production. Formulation of learning objectives aims to determine the necessary competence possessed by the student after a learning program, formulated learning objectives of core competence and basic competence in the syllabus which refers to the curriculum of 2013. Development of the topic conducted to determine the subject of the subject matter and Hooke's law of elasticity that will explained to students through the student worksheet (LKS). The drafting of the student worksheets (LKS) was conducted to determine the sequence of learning which will follow the phases of learning activities in the learning model 5E learning cycle. Production of the prototype is done by completing and editing the draft that has been prepared. At this stage of the evaluation, researchers used a model formative evaluation Tessmer and tailored to the needs of research, namely: (1) self-evaluation; (2) The expert review; (3) one-to-one; (4) small group.

Data collected by using sheets of validation given to experts, a questionnaire used to determine the opinion of learners against the practicality of the use of student worksheet (LKS), as well as the observation sheet to retrieve the data by looking at the activity of students during learning using student worksheet (LKS).

3. Result and Discussion

Research result

The result of the development of generating student worksheet (LKS) 5E learning cycle based on the subject matter Hooke's law of elasticity and class X SMA. Student worksheet (LKS) is divided into three sessions, namely: first meeting with the material elasticity of the material; 2 meeting with the subject matter of the meeting 3 Hooke's law with the subject matter of a spring arrangement. At each meeting developed by following the phases of learning model 5E learning cycle. The descriotion of several phases in the learning model 5E learning cycle in the student worksheet (LKS) is as follows:

Table 1. Description of Phase - Phase Learning Cycle 5E in LKS

Phases of Learning Cycle 5E	Information
Engagement Phase	In this phase there are illustrations of everyday life problems related material and Hooke's law of elasticity. Expected by the illustrations beginning students to gain knowledge and their ideas, interests and curiosity about the topics that will be taught. Then proceed with the questions related to the events that had just observed.
Exploration Phase	Students experiment with the prior knowledge that has been owned by the students. At this stage the teacher acts as a facilitator and motivator.
ExplanationPhase	Students try to explain a concept with a sentence or his own thinking. Later plus a discussion of activities to strengthen students' understanding.
Elaboration Phase	Students apply the concepts and skills they have learned in new situations and different contexts.
Evaluation Phase	Students perform a self-evaluation, understand the shortcomings and advantages.

The elements in the student worksheet (LKS) based learning cycle 5E developed by researchers is part of the front page (cover), preface, table of contents, concept maps, learning objectives, basic competence, indicators of learning, lesson

plans, learning materials, to summarize, the journal study and answer keys, learning material presented in three meetings and each meeting is presented phases correspond to the phases of the learning model 5E learning cycle and independent journal.

The results of the evaluation of the student worksheets (LKS) is based on the validation sheet and questionnaire responses of students is as follows:

Table 2. Results of Validation Student Worksheet (LKS)

No.	aspects Rating	Average Every Aspect	Category
1	Contents	87%	Very Valid
2	Language	93.33%	Very Valid
3	Design	84.28%	Valid
Average Rate Validator		**88.20%**	**Very Valid**

Table 3. Summary of Assessment Score Questionnaire One-to-one

Statement	scores of Respondents		
	MGS	**MIM**	**BO**
point 1	5	5	4
point 2	5	4	4
point 3	4	4	4
point 4	4	4	4
point 5	4	4	5
point 6	5	4	4
point 7	4	4	4
point 8	4	3	3
point 9	5	4	3
point 10	4	5	3
point 11	4	4	4
point 12	4	4	4
point 13	4	4	4
point 14	5	5	4
total score	61	58	54
Practicalities Value (%)	87.14	82.85	77.14
Category	Very Practical	Practical	Practical

Table 4. Summary of Assessment Questionnaire Score Small Group

Statement	Scores of Respondents								
	DS	DG	TC	TA	SMC	GAP	AY	AFS	MR
point 1	5	5	4	4	5	5	5	5	4
point 2	5	4	4	5	5	5	5	5	4
point 3	4	4	4	5	4	4	5	4	4
point 4	5	4	5	5	4	4	5	5	5
point 5	5	4	4	4	5	5	5	5	3
point 6	4	4	3	5	5	4	5	5	3
point 7	5	3	3	4	4	5	5	5	4
point 8	5	4	4	5	5	5	3	5	4
point 9	5	4	4	5	5	5	4	5	4
point 10	5	5	3	5	5	5	5	5	5
point 11	5	5	4	5	5	5	5	5	5
point 12	5	5	4	4	5	5	5	5	5
point 13	5	4	4	5	5	5	5	5	4
point 14	5	4	4	4	5	4	5	5	4
Total Score	68	59	54	65	67	66	67	69	58
Practicalities Value (%)	97.14	84.28	77.14	92.85	95.17	94.28	95.71	98.57	82.85
Criteria	very Practical	Practical	Practical	very Practical	very Practical	very Practical	very Practical	very Practical	Practical

At the stage of a small group, each student studying student worksheet (LKS). During the learning takes place, the observer observing the activity of students using observation sheet that has been provided. Based on observations obtained by the average percentage of student activity by 90% and is in excellent condition.

Discussion

The curriculum developed by the government at the moment is the curriculum of 2013. The process of learning to the curriculum in 2013 for all levels implemented using a variety of approaches, including constructivism approach. Constructivist approach emphasizes the process of building (to construct) the student's knowledge. One model of learning with a constructivist approach is the learning cycle 5fase or 5E

learning cycle. To cultivate learning by using phases contained in the learning model 5E learning cycle in accordance with the demands of the curriculum in 2013 can be done by developing teaching materials namely student worksheet (LKS). Development of student worksheet (LKS) aims to help students to learn continuously, directed, and more systematic. Student worksheet (LKS) is required as a companion book or supplement supporting student handbook that allows students to learn actively and independently.

Student worksheet (LKS) is divided in three meetings with the subject matter of the material elasticity, Hooke's law, and the arrangement of the spring. At each meeting the student worksheet (LKS) developed by following the phases contained in the learning model 5E learning cycle the engagement phase, the phase of exploration, explanation phase, the phase of elaboration and evaluation phase. Student worksheet (LKS) developed covering the front page (cover), preface, and table of contents, concept maps, learning objectives, basic competencies, and indicators of learning, learning plans, learning materials, summaries, learning journal and an answer key.

Evaluation of student worksheet (LKS) first performed by the researchers themselves, in consultation with the thesis supervisor. After that the student activity sheet (LKS) validated by 2 people physics professor, one lecturer Indonesian and three subject teachers of physics. Validator provide comments and suggestions to the student worksheet (LKS) lies on the cover, grammar, spelling writing, tables and graphs as well as in the example problems to be reproduced again. Then the researchers improve student worksheet (LKS) is based on the advice of some experts, researchers also added quick info or additional information in accordance with the material elasticity and Hooke's law so that students know the real application of the material elasticity and Hooke's law, researchers add more example problems where examples of questions on the student worksheet (LKS) is equal to "come on sharpening your ability!" added the elaboration phase. The tests showed that the student worksheet (LKS) is otherwise very valid after being repaired.

At the stage of one-to-one, student worksheet (LKS) tested to 3 students. Based on the observations of researchers for ongoing trials activities, students' difficulties in answering sample questions with a reduction formula, while in answering questions related to the daily life they are very enthusiastic. According to all three students at the stage of one-to-one, student worksheet (LKS) researchers have developed an interesting but an explanation would be a decrease in the formula is still deemed less. The results of the questionnaire responses of students to the student worksheet (LKS) on the stage of one-to-one, indicating that the student worksheet (LKS) otherwise practical with some improvements. Based on the observations of investigators during the course of one-to-one and the comments of students, researchers improve student worksheet (LKS) by adding the sample questions along with a decrease in the formula and fix the distance between the posts. In addition, researchers also improve the sentences in student worksheets (LKS), especially in sub material Hooke's law with clear and concise sentences and adding images so that students can better understand the questions in the student worksheet (LKS) and answer them.

At the stage of a small group, student worksheet (LKS) tested to 9 students. During the learning process, student activities were observed and assessed using observation sheet by an observer. Results of student activity observation and questionnaire responses of students to the student worksheet (LKS) on the stage of a small group, indicating that the student worksheet (LKS) which has been developed by researchers stated very practical with some revisions. The revision of the researchers improve the layout of the image and add a caption on an image, enlarge the size of the formula contained in the student worksheets (LKS) and correct the spelling of writing.

4. Conclusion and Remark

Based on the results, it can be summed up as follows:

1. Student worksheet (LKS) 5E learning cycle based on the subject matter and Hooke's law of elasticity class X SMA developed by researchers declared invalid based on the results of validation with experts. It can be seen from the average assessment of the results of expert validation of 88.20% with a very valid category.

2. Student worksheet (LKS) 5E learning cycle based on the subject matter and Hooke's law of elasticity class X SMA developed by researchers stated practical. It can be known based on the observation of student activity at the stage of a small group with a mean percentage of student activity by 90% with very good categories and the results of the questionnaire responses of students to the student worksheet (LKS) with an average percentage of 90.88% with a very practical category. Thus the student worksheet (LKS) based 5E learning cycle developed has been tested practicality.

Remark

Based on the research that has been done, researchers gave some suggestions as follows:

1. Products LKS results of this research can be used by teachers and students in learning physics at school

2. Limitations of this study is based LKS 5E learning cycle only tested up to small groups. It is therefore suggested the next researcher to conduct similar studies to conduct field trials or actual class test.

3. LKS need to be developed based on 5E learning cycle for other fine materials physics in junior high or high school.

4. LKS subject Hooke's law of elasticity and can be developed with a base or model of learning.

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CODE SWITCHING USED IN THE ENGLISH TEACHING AND LEARNING PROCESS IN THE FACULTY OF TEACHER TRAINING AND EDUCATION AT SRIWIJAYA UNIVERSITY

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Abstract

This study investigated the act of code switching which refers to the use of two languages, English and Indonesian, as a medium of instruction used by the teachers in the context of teaching and learning English as one of the courses in the Faculty of Teacher Training and Education at Sriwijaya University. The subjects - the teachers and students who were dealing directly with the use of code switching in the process of teaching and learning – were observed, interviewed, and given a set of questionnaire. This study yields three important results. First, the teachers use code switching in order to have a better communication with their students during the teaching and learning process, especially to transfer the material or topic of discussion in class so that the students can understand the material or topic better. Second, three language aspects – pronunciation, vocabulary, and grammar – were involved in this code switching phenomenon. Finally, students had a positive perception on their teachers' use of code switching during the teaching and learning process.

Key Words: code switching, medium of instruction, EFL

1.   Introduction

Teachers and students are continually in the process of sending and receiving messages (Seevers, et al, 1997:125). Successful teachers possess effective communication skills. They express themselves verbally and nonverbally in a manner that is clear, concise, and interesting to their students. Therefore, teachers should pay more attention on the choice of languages they use in the classroom context.

Code switching has long existed as an outcome of language contact observed vastly especially in multicultural and multilingual communities (Liu, 2010). Code-

switching may be considered as a useful strategy in classroom interaction, especially if the aim is to make meanings clear and to transfer the knowledge to students in an efficient way (Gabusi, 2007).

Code switching during instruction affects the learning environment by increasing students understanding, comprehension, and application of the material. With regards to students-teacher relationship as part of a positive learning environment, it helps foster a better relationship with the students (Moghadam, Samad, & Shahraki, 2012).

In this study code switching refers to the use of two languages, namely English and Indonesian in the context of teaching and learning English as one of the compulsary subjects that students have to take during their study in The Faculty of Teacher Training and Education at Sriwijaya University (FKIP Unsri). This study only focuses on the phenomenon of code switching done by the teachers in the teaching and learning process. It focuses on finding out the reasons and the causes of code switching happened in the teaching and learning process at FKIP Unsri.

Therefore, this study proposes to identify and evaluate (1) the factors that make the English teacher use code switching during the teaching and learning process; (2) the language aspects involved in the code switching used by the teacher; and (3) the students' perception towards the code switching used by the teacher.

2.   **Theoritical Background**

Code switching is a conversational strategy. Code switching occurs when bilingual speakers switch from one language to another in the same discourse, sometimes within the same utterances (Myer-Scotton, 1997; cited in Silberstein, 2001:103). It involves the alternate use of two languages or linguistic varieties within the same utterance or during the same conversation (Hoffmann, 1991:110). Holmes (1992:51) says, "People who are rapidly code switching tend to switch completely between two linguistic systems – sound, grammar, and vocabulary".

The medium of instruction is the language used by the teacher in teaching. Bilingual education involves the use of two or more languages as media of instruction to varying degrees (Hamers and Blanc, 2000:321). In bilingual education two languages are used as [mediums] of instruction to teach subject matter content rather than just the language itself (Cummins 2003:3) cited in Tan (2005:49).

The choice of language as medium of instruction plays an important role in the teaching and learning process. Bilingual education programs and mother-tongue teaching have been shown to benefit minority children and improve their academic achievement (Hamers and Blanc, 2000:353).

Furthermore, the arguments given for mother tongue as medium of instruction in schools were more linked to the child and its needs, the individual and the local context, factors such as concept formation, cultural identity, closer relation between school and home and practical use after primary school (Cantoni, 2007:8). Therefore, the use of two languages – foreign and first languages - as a medium of instruction can be one of the useful conversational strategies in the classroom context.

Therefore, Lin (2007) in her study defines classroom code switching as the alternating use of more than two linguistic codes in the classroom by any of the classroom participants, such as teachers and students.

Several researchers have studied and investigated the functions, factors, characters and effects of code switching in wide ranges of linguistics domain. For example, Kim (2006) indicates the positive factors code switching for language education by discussing societal factors related to the reasons and motivations for these phenomena. Ahmad & Jusoff (2009) investigated the learners' perceptions of the teacher' code switching in English Language classroom and found that teachers' code switching is strongly believed as an effective teaching strategy when dealing with low English proficient students. Various positive functions of code switching, such as explaining new vocabulary, grammar, and new concepts, and relaxing learners, would improve the learners' comprehensible input during the learning process.

Usually teachers' beliefs and attitudes influence code switching. The functions of teacher code switching are recognized as topic switch, affective functions, and repetitive functions. In topic switching, the teacher alters his or her language considering the topic being taught. This usually occurs in teaching grammar, while students focus on the new knowledge. Affective functions are important in the declaration of emotions, and forming a relationship between the teacher and the student. In repetitive functions, code switching is used to clarify the meaning of a word, while stressing on the content for better comprehension (Sert, 2005).

This study focuses on the five factors of code switching which are closely related to the teachers' use of code switching in the context of teaching and learning process, proposed by Liu (2003). They are:

(1)   Owing to teacher's linguistic competence and insecurity.

(2)   For ease of expression, i.e. when an English word or expression finds its equivalent in several Indonesian terms or when its Indonesian equivalent is not easy to retrieve

(3)   For translation of new and unfamiliar words and expressions

(4)   Repetitive functions, i.e. when teachers convey the same message in both languages for clarity.

(5)   Socializing functions, i.e. when teachers turn to the students' first language to signal friendship and solidarity, including for joking. This contributes to the ability of the teacher to create a supportive language envirenment in language learning classrooms.

3.   Method

The case study was used to investigate the use of code switching by the teachers within the context of learning English as one of the compulsary subjects that the students were taking during the one semester of their study in The Faculty of Teacher Training and Education at Sriwijaya University (FKIP Unsri).

There are two kinds of participants in this study, namely the 42 students of Guidance and Counseling Study Program in Faculty of Teacher Training and education at Sriwijaya University (FKIP Unsri) and their English teacher who has 6 years of teaching experience.

The data were collected through class observation, interview, and questionnaire. The observation was carried out in that one sample class which the English teacher was teaching. The teacher who taught in the class was being observed and recorded for approximately 200 minutes within the schedule of two times 100 minutes teaching hours.

Following the transcriptions and analysis of recordings, a semi structured interview was held with the teacher. There are twelve aspects which were asked to the teacher in the interview, namely: (1) her teaching experience, (2) her relationship with the students, (3) her perception on her students' competence in English, (4) her perception of her own English competence, (5) the use of English as the medium of instruction in her class, (6) the language she uses in the class, (7) the reasons why she uses the language, (8) the switching of English and Indonesian in her class, (9) the factors of her code switching in teaching, and (10) her students' performance related to her use of code switching.

Additional data about students' perception in relation to their teacher' use of code switching during the teaching and learning process were obtained from a set of questionnaire. The questionnaire consists of 13 questions about students' motivation in English, the medium of instruction that the teacher uses in the class, and the use of code switching by teacher during the teaching and learning process.

4.   Result and Discussion

Observation

The results of the transcripts showed that the teacher frequently switched between English and Indonesian (even Palembangnese, the L1 of most students) in the classroom. In the process of code-switching, the teacher used complete English utterances, but she also inserted some Indonesian words into her English sentences. In certain cases, she used mostly Indonesian utterances, but she also inserted some English words into her Indonesian sentences.

Factors of Code Switching Done by Teacher

The results of the transcripts showed that there were several main factors in terms of purpose for teachers to use code switching during the teaching and learning process, namely:

(1)   Repetitive functions

The repetitive function was the mostly used function found during the observation. In order to clarify the meaning of the instructions, the teacher code switches from the target language to the native language. Here, he/she stresses the importance of the foreign language content for efficient comprehension. The teacher repeats what has been said, usually in the form of translation or approximate translation.

Extract 1

T: Which one is true? Which one is true*? Yang mana yang bener*? Second one or the first one...

The English teacher (T) was asking the same questions for second times. However, the students kept remaining silent. She wanted to make sure everybody understood the material, so she repeated her sentence in Indonesian for emphasizing. She switched from English to Indonesian; here a code switching from English to Indonesian occurred.

Extract 2

T: Okay, *ini dalam bentuk positif ya, ini juga dalam bentuk positif.* It means that it is negative, it is also in negative.

A code switching from Indonesian to English occurred here in which the teacher (T) repeated the clause for clarifying and emphasizing on the important point she wanted to focus on, although she did not directly translate the words in English with the same words in Indonesian.

(2)   For translation of new and unfamiliar words and expressions

Teachers' concern for unfamiliar vocabulary or expression often prompts them to code switch. When the teacher is not sure whether the students know the meaning of the target language word or expression, it is common for him/her to offer the Indonesian translation for clarification.

Extract 3

T: What verb do we use in present? What verb*? Kata kerja keberapa? Kata kerja? Di* present *kata kerja keberapa? Pertama. Iyakan*?

A code switching of English and Indonesian is shown in this extract. Here, the teacher (T) asked about the 'verb', she then switched to the phrase '*Kata kerja keberapa*", which leads the students to think of the forms of 'verb one, two, or three' which are commonly used by Indonesian students to recall the form of 'basic, past, and past participle verbs'.

(3)   For ease of expression

The teachers may switch between Indonesian and English for ease of expression. It is when an English word or expression finds its equivalent in several Indonesian terms or when its Indonesian equivalent is not easy to retrieve.

Extract 4

T: Nah disini kan bukan kata kerja, disini kita kan been. *Di sini kenapa ada kata* been*? Karena di sini adalah* a princess, *ya kan. Jadi* noun. Okay. *Jadi disni kita perlu adanya* to be.

Extract 5

T: Kenapa tidak *doesn't*? Karena *doesn't* adalah *auxiliary* dalam bentuk *present*. Iya kan? Ini kan turunnya menjadi *past ten*se, *not pre*sent

Instead of using the Indonesian equivalent, the teacher (T) inserted the English terms to her Indonesian utterance. The English terms 'noun', 'to be', 'auxiliary', 'present', and 'past tense' are popular terms related to English structure. She inserted those terms in her utterances merely for convinient purpose because she assumed that the students were more familiar with those English terms rather than their Indonesian equivalent.

(4)   Socializing functions

Although the most important task of the teachers is to impart knowledge to the students, it is still inevitable that teachers should perform sometimes even as actors to use any kind of devices to attract the students' attention. It is impossible to communicate with one who does not even listen to you. In the course of instruction, teacher may switch between English and Indonesian for interpersonal purposes, such as to develop or maintain solidarity or friendship between teacher and students, to show understanding of problems, to joke or to warn their students.

Extract 6

S8: S1: *Jadi* quote *yang* [pointing at her book] *yang ini*, miss?

T: "Where do you come from?" That's it. Without this one. You should do like this. Okay? *Nah kan sudah terlanjur, nah yang ini salin yang ini bae.*

Here the teacher (T) was walking around the class monitoring the students doing the exercise. A student (S8) was asking her a question related to the exercise which she then answered directly in English. When the teacher (T) found out that the student had made mistakes in the writing format, she switched from English to Indonesian (CS) for showing understanding of students' problems.

Extract 7

S10   : Destia is writing a letter in her room.

T   : Destia is writing a letter in her room. *Masih zaman ye nulis surat*?

Ss   : [laughing]

A code switching from English to Indonesian occurred in this utterance. The student (S10) mentioned her sentence, "Destia is writing a letter in her room'. The teacher (T) repeated the sentence, and asked "*Masih zaman ye nulis surat?*" which means "Is it still common to write letter nowadays?", which then followed by a laugh from the student and her other friends in the class. This switching was made in order to joke and to make the students laugh.

(5)   To follow the usage that is found in one's culture

The language used by someone is closely related to his/her culture. Sometimes the switching occurs since the speaker is following the common usage of the word in his/her culture, which can be slightly different from the culture in the target language.

Extract 8

T: Miss *lupa, pelajaran SMA ya*. But, *konteksnya, konteksnya, lihat dulu konteksnya*.

The extract shows that the teacher inserted the English word "miss" in her mostly Indonesian expression. The insertion of the word "miss" showed the culture of Indonesian which is not common to use the word "I" to call him/herself as a teacher while talking to the students.

(6)   Students' response

The data from the observation showed another important factor that made the teacher code switched, namely the students' response. Students' response here refers to the students' direct reaction especially when asking questions using Indonesian during the teaching and learning process.

Extract 9

S5 : Miss, *tau* "Descendant of the Sun" *dak*?

T : Korean drama? Yes, I know it.

S5 : *Apo artinyo*, miss?

T : *Keturunan. Keturunan matahari*. Descendant is *keturunan*

As shown in Extract 9, while the teacher (T) was walking around the class to monitor the students doing their exercises, one of the students asked her about a Korean film. She still answered in English, while the students gave response in Indonesian. The student even directly asked her the meaning, so she had to answer in Indonesian. This showed that the students' direct response and needs were also the factors that made the teacher code switch.

The data of the frequency and the comparative occurrence of the factors that made the teacher code switched between English and Indonesian in the teaching and learning process is shown in Figure 1.
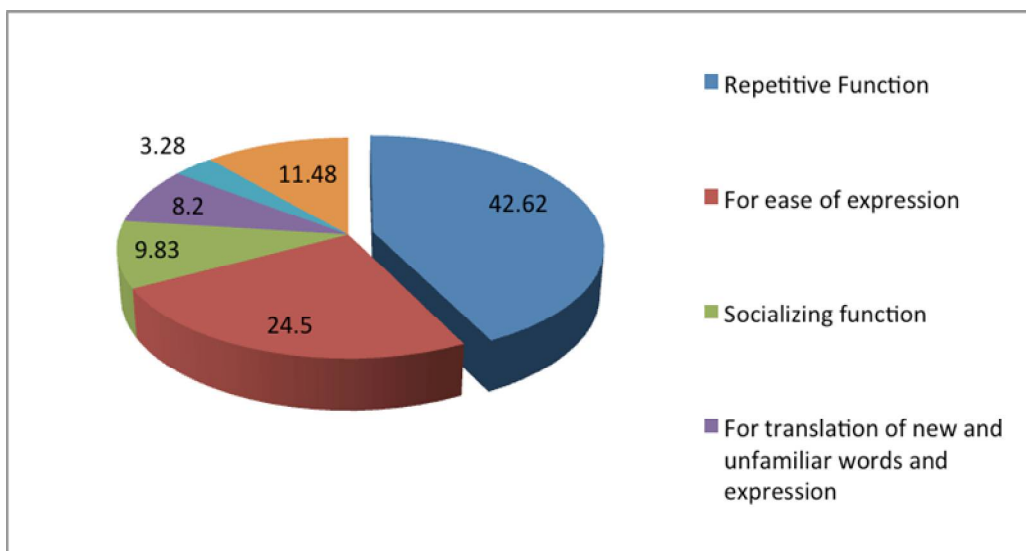
Figure 1

The Factors of Code Switching Done by The English Teacher (Observation)

The data showed that the teacher code switched between English and Indonesian 42.62% for repetitive function and 8.20% for translation of new and unfamiliar words and expressions. These two functions had a very similar function namely to clarifying and emphasizing the utterances and the explanation of the teachers. Meanwhile, the teacher code switched 24.50% for ease of expression (by inserting the common English terms, such as 'verb', 'past tense', 'present tense', 'conditional', and other terms). Furthermore, students switched from English to Indonesian 9.83% for socialing function. Only 3.28% code switching conducted by the teacher is for following the usage that is found in one's culture. Finally, 11.48% code switching conducted by the teacher during the teaching and learning process is because of the students' responses, in which usually the students kept asking questions to the teacher in Indonesian.

The Language Aspects Involved in Code Switching Done by The Teacher

The transcripts also showed that there were some language aspects involved in the phenomenon of FKIP Unsri lecturer's use of code switching during the teaching and learning process. The language aspects were in terms of oral language since the focus of this study was on the lecturer's oral language. There were three aspects involved, namely pronunciation, vocabulary, and grammar.

(1)   Pronunciation

The aspect of pronunciation involved within the use of code switching related to the way the teacher pronounced each utterances based on its real pronunciation, namely if the words or sentences are in Indonesian, then it is pronounced in Indonesian accent and/or pronunciation.

Extract 10

S8: [asking about the verb 'read']

T : read... *bentuk ke… bentuk ke satu, dua, tiga dari* read *sama tulisannya.* read *itu cuma tulisan ee.. bacaannya yang beda* read /red/ verb two and three *bacanya. Tulisannya sama.*

Here the teacher (T) tried to explain to the students the material related to the pronunciation. The teacher inserted the English term 'verb' and mentioned the word 'read' in her explanation, and she consistently pronounce the English terms in English pronuciation and the Indonesian expressions in Indonesian pronunciation.

(2)   Vocabulary

This study showed that the lecturer involved the rules of word formation within the utterances of code switching she conducted.

Extract 11

L: Any question? If no question, we will do exercise. Okay? *Kita latihan kalo gak ada yang ditanya*.

This extract showed the occurrence of code switching (CS) from English to Indonesian in the utterances. The teacher (T) was trying to clarify her explanation by translating her English sentence "If no question, we will do exercise" into Indonesian. The sentence in English was in Active, and then she translated it into Indonesian (but it was in Passive) by following the Indonesian rule of word formation.

Extract 12

T4: *Jadi dari* past perfect *kita turunkan* fact*nya menjadi* past tense. *Kalo* negative*nya itu menggunakan* didn't. Okay*?*

The utterances showed the use of code switching of English and Indonesian. The use of the vocabulary showed the combination of the use of English and Indonesian vocabulary. Especially the insertion of the suffix '*nya*,' in 'fact*nya*' and 'negative*nya*' is used to replaced the article 'the' in English.

(3)   Grammar

Grammar here refers to the rule of the language structure. The use of code switching in this study involved the combination of two grammatical rules, English and Indonesian rules.

Extract 13

> T: *Okay, jadi kalau ketemu soal seperti itu, lihat* subject*nya. Apakah dia* she, he, it? *terus tambahinlah "s".*

The word 'subject*nya*' functions as an object in Indonesia context, the teacher (T) inserted the word in the position of an object in her Indonesian sentence. The insertion of the word 'subject*nya*' indicated the occurrence of code switching of English and Indonesian in the utterance.

Extract 14

> T*: Dikumpul kapan? Dikumpulnya* before we have final exam.

The teacher (T) combined or mixed the grammatical rules of English and Indonesian languages. The clause 'before we have final exam' was put as an adverb of time to modify the Indonesian verb '*dikumpulnya*' which means 'should be submitted'. So, the utterance should mean "The assignment should be submitted before the final exam'.

Interview

According to the collected data from the interview, the teacher often switched between English and Indonesian during the teaching and learning process. The first and most important factor or reason of her code switching is the repetitive function, in which she switched English and Indonesian in the classroom for clarifying the explanation by translating her English utterances into Indonesian.

Furthermore, the teacher said that she sometimes switched English and Indonesian in the classroom for socializing function, namely for joking. She also declared that she sometimes forgot certain English terms, so she would mention the terms in Indonesian.

The results of the interview also show the students' reaction and/or perception based on their teachers' observation. According to the teacher, in relation to her use of code switching during the teaching and learning process, she believed that (1) the students had better comprehension in understanding her explanation and (2) the students were happier and more enthusiastic during the teaching and learning process.

Finally, the teacher claimed that when she used full English, her students would be confused and feel under pressured. However, when she switched between English and Indonesia, most of her students would understand her utterances, especially the utterances related to the material or topic of the lesson in class.

Questionnaire

The questionnaire consists of 13 questions. The results of the questionnaire are shown in Table 1.

Table 1

The Analysis of the Questionnaire Results

Item No.	Statements	Responses	Percentage of Responses
1.	English is very important.	Strongly Disagree	0
		Disagree	0
		Agree	25.58
		Strongly Agree	74.42
2.	Studying English is easy.	Strongly Disagree	13.95
		Disagree	48.84
		Agree	30.23
		Strongly Agree	6.98
3.	The students and the teacher can communicate well.	Strongly Disagree	0
		Disagree	4.65
		Agree	74.42

		Strongly Agree	20.93
4.	Students have problem in understanding the lesson because of the language used by the teacher in the classroom.	Strongly Disagree	13.95
		Disagree	53.49
		Agree	27.91
		Strongly Agree	4.65
5.	The use of English as the medium of instruction during the English teaching and learning process.	Strongly Disagree	9.31
		Disagree	18.60
		Agree	55.81
		Strongly Agree	16.28
6.	The English teacher uses English as a medium of instruction.	Strongly Disagree	2.33
		Disagree	30.23
		Agree	46.51
		Strongly Agree	20.93
7.	Students face problems in comprehending the lessons if the teacher keeps using English during the class.	Strongly Disagree	2.33
		Disagree	18.60
		Agree	32.56
		Strongly Agree	46.51
8.	The English teacher uses Indonesian as a medium of instruction.	Strongly Disagree	2.33
		Disagree	34.88
		Agree	48.84
		Strongly Agree	13.95
9.	The English teacher switches between English and Indonesian in explaining the materials during the teaching and learning process.	Strongly Disagree	0
		Disagree	0
		Agree	39.53
		Strongly Agree	60.47
10.	The English teacher switches between English and Indonesian in teaching in order to make it easier for the students to	Strongly Disagree	2.33
		Disagree	0
		Agree	20.93

	comprehend the lessons during the teaching and learning process.	Strongly Agree	76.74
11.	The English teacher translates certain terms/vocabulary in English to Indonesian (switches between English and Indonesian) in order to make it easier for students to comprehend the terms, vocabulary, or definition.	Strongly Disagree	2.33
		Disagree	0
		Agree	20.93
		Strongly Agree	76.74
12.	The English teacher switches between English and Indonesian while telling joke in the classroom.	Strongly Disagree	4.65
		Disagree	4.65
		Agree	53.49
		Strongly Agree	37.21
13.	Switching between English and Indonesian in teaching is one of the effective learning strategies.	Strongly Disagree	2.33
		Disagree	4.65
		Agree	25.58
		Strongly Agree	67.44

Students' Perceptions

Most students had a positive perception towards their teacher's use of code switching during the process of teaching and learning. The results of the questionnaire showed that 25.58% students agreed and 67.44% students strongly agreed with the statement "Switching between English and Indonesian in teaching is one of the effective learning strategies", while only 4.66% students disagreed and 2.33% students strongly disagreed with that statement.

Meanwhile, 2.33% students strongly disagreed, 76.74% students strongly agreed and 20.93% students agreed with their lecturer's use of code switching during the teaching and learing process for making them easier to understand the material/lesson, the vocabulary, the terms, and/or the definition of the topic.

Discussion

The results of the observation and the interview show that basically the factors that make the English teacher in FKIP Unsri use code switching in the teaching and learning process are as follows: (1) repetitive function, in which for clarifying and emphasizing their utterances, because they believed the students would face problem if they only used English instruction, (2) translation of new and unfamiliar words and expressions, both from English to Indonesian and Indonesian to English, which was also for clarifying certain terms, (3) expressing equivalent term found in both languages including specific terms in the lesson, such as the word 'verb', 'past', 'present', 'auxiliary', 'conditional sentence', and some others, (4) socializing function, in which the teacher would switch to make the students laugh, and (5) students' response and needs, in which the student would prefer the teacher to switch between English and Indonesian in order to make them comprehend the lessons more, and (6) following the usage that is found in one's culture, in which the teacher would call herself 'miss' although when she was talking in Indonesia since it is not common to use the word "I" to call herself as a teacher while talking to the students

The teacher uses code switching in order to maintain her teaching and learning process to run smoothly. The main factor why the teacher code switched is because she wanted to have a better communication with her students so that the students would understand her teaching better. The teacher also believed that the students would have better comprehension on the lesson as well as higher enthusiasm and motivation because of their teacher's use of code switching during the teaching and learning process.

The phenomena of the teacher's use of code switching involve the combination of two different linguistic systems, namely English and Indonesian within one context. The code switching conducted by the teacher involves the aspects of pronunciation, vocabulary, and grammar of English and Indonesian.

The results of the questionnaire show that in general the students have positive attitude toward English, including having English as a medium of instruction

during the teaching and learning process. However, they find it more helpful if the teacher switches between English and Indonesian in the class.

5.   Conclusion and Remark

The finding indicates that code switching is still a useful strategy teachers can try to use to help learners, including in learning a language, especially if the teachers are mostly focused on the content of the lesson. In addition, the teachers' use of code switching during the teaching and learning process also represents one of the strategies that the teachers often use to accommodate the students' level of foreign language proficiency.

Furthermore, most students have positive attitude to the teacher's use of code switching in their EFL classroom since switching between English and Indonesian also contributes to the smooth flow of classroom interaction and communication among the teacher and the students.

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SHOULD ENGLISH-ONLY METHOD BE APPLIED IN EFL CLASSES

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Abstract

The challenge that many English learners in Indonesia cannot speak English fluently has been an issue for years. Numerous studies have been conducted to answer the question and they blamed the methods applied by English teachers. Also, researchers have proposed many methods to boost English learners' communicative skill especially speaking skill. However, most methods used in English classes do not become habits as teachers may change them to avoid boredom in the class. Being able to speak English is about how to make speaking English as habit, so students will automatically switch their language as they enter their English classes. Some teachers across the globe force students to speak English and make it as a habit in their classes. The English-only method is believed as an effective way to build learners' confidence and fluency in speaking. How is this method applied in an EFL classroom? How does it affect learners' confidence and fluency in speaking? This paper aims to provide alternative way with its controversy to increase English learners' speaking ability.

Key words: *English-only method, speaking skill, English learners, EFL classroom*

1. Introduction

Have you ever experience a real English atmosphere in your EFL classroom? Or are you dreaming of having learners in your class speak English willingly? If you are a language teacher, the goal of your teaching activity must be having your students able to communicate in the language you are teaching. However, have you thought about how to create such condition? Trying numerous methods to have your students fluently or at least confidently speak English proves that maybe some of your methods do not work out. The main goal of a foreign language classroom is to enable language learners listen, speak, read and write or simply, communicate using the

language they are learning. However, due to teachers' lack of knowledge and experience, the goal of language learning turns to be able to grammatically understand language without being aware if learners can use it or not. Therefore, learning English turns to be a nightmare that many students avoid as they think the language they are learning is somewhat complicated.

If you want your students able to listen and read for gist and details, then teach them by providing them conversation and text and verify their comprehension by asking them questions. If you want your students able to write, then show them good models of text and guide them how to start writing. Finally, if you want students speak English confidently and fluently, then ask them to speak English as their habit.

Various methods for speaking class have been proposed and some are very effective for language classes. However, teachers cannot apply the same method over and over as students might feel bored with the same methods. However, just like many people said that practice makes perfect. Being familiar with a situation is the way to involve in that situation. Creating an English atmosphere is not a bad idea to ground English in students' daily conversation. Therefore, some experts in English language teaching recommend teachers to apply English-only method in their classroom where students are encouraged to speak using English only. However, there are some points that proposed by the opponent of English-only classroom.

This paper examines the arguments for and against the use of English-only method in English classes. This paper presents the theory of second language acquisition, some pros and cons of using English-only method and some suggestions for teachers.

2. Theoritical Background

Second Language Acquisition Theory

Language cannot be learned within a short period of time. It is believed that learning language takes quite long time as it deals with many aspects. Learners need to encouragement to communicate using the language they are learning as they might

encounter difficulties in using the language dealing with anxiety. This is the challenge that every English teacher needs to solve. It is not as easy as pie to have learners communicate fluently in the classroom as there is a set of complex problem involved in it such as insufficient vocabulary,

Second language acquisition theories put a trust on the use of 'English-only' method as when learners have opportunities to the language exposure in term of oral communication, their L2 proficiency can be well-enhanced (Ellis, 2005). Second language theorists believe that language is acquired by children, but it is learned by adults (Krashen, 1982: p. 10). However, it is debatable as adults can also acquire a language while they are communicating in their daily conversation. For example, a non-native English speaker who is studying in an English-speaking country can acquire language even though one does not attend a language class. The acquisition process happens when people communicate each other. In learning a language, learners absolutely need more exposure to the language as it can give them experience on how to use the language. Having the rules explained in the classroom, sometimes learners only learn it but not acquire it (Krashen 1982: p. 51). This is where the distinction between learning and acquisition appear.

Learning involves awareness on the language structure while acquisition involves confidence and fluency in communication. It turns to be tragic when learners master the structure of language, but is unable to apply their knowledge to communicate using the language they have learned. It is, therefore, necessary for learners need to be coerced to communicate using the language they are learning. It is the job of teacher to entice their learners in order to boost their learners' confidence. Teachers are responsible to give their learners more exposure to the language as they might not get it outside their classroom especially when people around them do not speak English.

3. Method

Arguments for the Use of English-only Approach

It is a tragedy when language teachers teach their students a language, but students cannot communicate using the language they learn. Unfortunately, this tragedy happens in many language classes especially English. As a teacher, have you ever made flashback to see what was wrong in your class that made you failed achieving your goal?

It is the goal of English teacher to have learners able to communicate English without being anxious. However, the path is not always easy which means it needs big effort both from teachers and students. Some theorists believe that to make students communicate using the language they are learning; cat-o'-nine-tails might be needed. The cat-o'-nine-tails here refers to rules set by teachers in the classroom.

One study conducted by Hubner (2013) found that 70% of the participants agree that full immersion is considered the best way to study English. However, it might not be easy for learners as it costs much money even though there are many language schools provides a language program where learners learn the English in the English-speaking country. If one way does not work, another way might help. Teacher cannot assign students to learn English through full immersion due to the limitation. However, it does not mean that it is impossible to give learners more opportunity and exposure to English. Through English-only approach, teachers can create English atmosphere in the classroom. It is the English-only method, a structured immersion method, where both teachers and students communicate using English without interference of their L1. There have been arguments between those who are for and against the English-only approach across the globe.

Some teachers insist that using L1 while giving instructions to students works well. Surprisingly, Hubner (2013) found that even native speakers of English agree that learning learners' L1 does not help them in teaching. In his study, the proportion of those who agree that students should only allow to speak English in the classroom is bigger than those who disagree.

Another argument for the application of structured immersion is that the use of English by teachers enables learners to be more exposed to the language (Mahira, 2012). Logically, when there is more input, learners can gain more knowledge and it will automatically impact on their vocabulary and comprehension skill. That teachers commit to use only English during their teaching time exposes learners to English supports this view arguing that greater exposure to second language leads learners to greater potential the target language learning (Ellis, 2005). However, Lee (2013) suggests that structured-immersion class needs to correspond and represent the real-world atmosphere so that it contains real communication and authenticity of the target language (Lee, 2013). Teachers, therefore, are suggested to have sufficient resources and experience in order to provide engaging teaching materials so that learners have more L2 input that they do not gain outside their classroom.

Provided real experience and a lot of opportunities to interact, learners' confidence can increase as they take risk in comprehending the target language without being well-prepared (Lee, 2013). Learners will learn how to handle a situation when they encounter difficulties in communication without being hesitate. Having accustomed with the situation without assistance, learners will be more independent and confident. As the English-only classroom's goal is to maximize the use of target language, teacher must be able to maintain this situation. The teachers' role is to guide students by providing them with the best learning environment that can benefit them in order to achieve optimal learning outcomes.

In the Anglophone environment, it is not likely that learners get real experience in speaking English as they might be hesitant and reluctant to speak to other people outside their English classroom. Tragically, there are numerous English classes where even teachers do not use English which aggravate the situation of English learning. It is the reasonable for teachers to be autonomous and creative in encouraging learners. English learners need to be immersed into an English-speaking environment to provide opportunities for them to practice their knowledge so that they can be confident, fluent and independent in communicating using their target language.

Arguments Against the Use of English-only Approach

There has been debate on the effectiveness of English only approach in English language teaching. Some linguists believe that neglecting learners' L1 is not wise as they can take advantage from their mother tongue. Those who are against the English only classroom argue that using L1 or bilingual class is effective and necessary especially for adult learners whose L1 literacy is limited. Moreover, learners can benefit from their linguistic knowledge at any level of ESL (Auerbach, 1993). Learners feel more free to express their ideas without having difficulties related to language and by using their L1, teachers can supply more input to their learners.

Hsu (2007) argue that maintaining the use of L1 in English classes can also maintain the ethnic languages and culture. Talking about learners' L2 use, Hsu (2007) states that learners' characteristics such as attitude and motivation affect learners' success in second or foreign language learning. Learners who have positive attitude and self-motivation since the beginning of their class are more likely to achieve better that those who are not. So, it is not structured immersion that benefits them, but their own characteristics.

In the study of examining the application of English-only, Espinoza-Herold (2013) found that the method has frustrated teachers. Teachers feel under pressure as they must be able to restrict their students of speaking using their L1. In details, she also found that this kind of rule impact on the balance of students and teachers' interaction in the classroom. Students take longer time to think what they want to express and how they send their message correctly while teachers have to work extra on understanding what their learners say.

Reexamining the use of English only, Hoang (2010) revealed that the English only approach did not guarantee that students would have deeper understanding of their lessons. Moreover, the majority of students are found reluctant to communicate in their target language. This is because students are afraid of making mistakes in the classroom.

4. Result and Discussion

Suggestions for Teachers

Qualified teacher is the key of successful English classroom while student is the central focus. It is, therefore, teachers are expected to be able to achieve their teaching goals. It is demanding for teachers to be creative and consistent to improve their teaching performance. Here are some suggestions for teachers on how to apply the English-only method in their English classes:

a. Make an agreement with students that they must speak English in the classroom. For new class or lower level class, the duration of English-only can be justified.

b. Always begin every class with some small talk in English. Teachers can ask students and have them asking each other using English. Then, teachers give feedback by correcting some mistakes when needed. This brainstorming activity can be done for 5 until 15 minutes.

c. Provide students with feedback to correct their mistakes during the class.

Students need encouragement to use their knowledge and it is the teachers' role to encourage them and provide real environment in order to boost their performance.

4. Conclusion and Remark

The use of English-only is reasonable based on pedagogical grounds and considered "a natural and common sense practice" (Auerbach, 1993, p. 1). Students who get more exposure to English get more real experience that can lead them to great learning progress. Provided real experience, learners can shape their vocabulary and comprehension skill. Moreover, with the structured immersion, learners will be more confident and independent in using the L2. However, there has been possibility that interaction among students and teachers get distracted and students feel reluctant to communicate even with their classmates. Despite of its weaknesses, there are still

some advantages of using English-only method which need to be considered by teachers.

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TEACHERS' DEMOTIVATION IN ENGLISH LANGUAGE TEACHING: CAUSES AND SOLUTIONS

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Abstract

Teaching and learning process is the core of education that determines the quality of education. Therefore, if there is a quality decrease of education, the first thing that should be evaluated is its teaching and learning process quality. EF-EPI (English First- English Proficiency Index) in 2014 released that Indonesian score was 52.74 which was far from the highest score. In addition, EFA global monitoring report of UNESCO (2014) also points out that Indonesia belongs to ten countries which account 72% of the global population of illiterate adults. Those results show that quality of education in Indonesia still dissatisfied. The quality of teaching and learning process depends on three aspects; (1) the students' participation level on learning activities, (2) teachers' roles in teaching and learning process, (3) learning environment. The second aspect is considered as crucial thing focussed by the experts since teacher is the manager and leader of learning process. Recently, not only students' motivation but also teachers' motivation affects students' academic achivement. It is assumed that dissatified results of Indonesian education quality is caused by demotivation of teachers. This paper is aimed at discussing the causes and solutions of teachers' demotivation in ELT.

Key Words: *teacher, demotivation, ELT, causes, solution*

1. Introduction

Human beings in general feel enthusiastic performing tasks or complete tasks successfully when they are motivated. In reference to teachers, their motivation is imperative since students' motivation appears to be directly correlated with teachers' motivation. One may wonder the origin of teachers' motivation. It may be a result of intrinsic or extrinsic factors, or both. What is amazing is that most teachers are intrinsically motivated when they become teachers, but along the years they may lose motivation and some may become so demotivated that they may even change profession. Expectancy theory suggests a relationship between effort and

performance, performance and reward, and reward and personal aim (Shah & Shah, 2008).

Jesus and Lens (2005) believed that teachers' motivation is an important concern for educational leaders and managers because teachers' motivation has an important effect on students' motivation. It is also important for the improvement of educational reforms. First, motivated teachers are more likely to work for educational reform and progressive legislation. Second, it is the motivated teacher who guarantees the implementation of reforms originating at the policy-making level. Teachers' motivation is important for the satisfaction and fulfillment of teachers themselves (p. 120). A higher level of teacher motivation is one of the important features for more effective education. In the field of education, there has been evidence that teacher-related factors influence learners (Kim & Zhang, 2013). English teachers play an important role in students' learning process and motivation, especially when the language is taught as an international language (McKay, 2002). For the ultimate goal of global communication with the target language, English teachers prepare diverse techniques and activities in order to facilitate practice of the target language and seek effective teaching practices to help L2 learners feel and stay motivated to learn it. In the process, the teachers' passion and eagerness into teaching might increase or decrease because of either internal or external reasons.

Ofoegbu (2004) considered "Teachers' motivation" one of the important factors that would lead to classroom effectiveness and school improvement. It has to do with the teachers' desire to participate in the educational process and also to the teachers' attitude to work within the school environment. He also declared that teachers' motivation is anything done to make teachers happy, satisfied, dedicated and committed in such a way that they bring out their best in their places of work so that students, parents and society will greatly benefit from their services.

2. Theoretical Background

Harmer (2001, p.51) defines motivation as "some kind of internal drive which pushes someone to do something". Dornyei (2001) states that motivation is thought to be responsible for "why people decide to do something, how long they are willing to sustain the activity and how hard they are going to pursue it". Ryan and Deci (2000, p.54) state that to be motivated means to be moved to do something." Suslu (2006) says that unlike unmotivated people who have lost impetus and inspiration to act, motivated people are energized and activated to the end of the task.

Motivation theorists have tried to discover why human beings are motivated to perform tasks without being told to do so. Theorists understand how hard it is for anybody to motivate people due to people's complexities and differences, and for anyone to motivate himself/herself. Expectancy theory suggests a relationship between effort and performance, performance and reward, and reward and personal aim (Shah & Shah, 2008). Nadler and Lawler (as cited in Mowday & Nam, 1997) show in a figure the sequence of motivation and behavior found in expectancy theory: "Motivation _ Effort [a person's ability begins to take effect] _ Performance _ [hopefully] Outcomes (rewards)" (p. 69). Namely, when a person is motivated to do something, he/she puts some effort into performing the task. The person's ability to perform the task combines with his/her effort. Then, the person performs the task, and hopefully, he/she obtains positive outcomes. However, as the authors indicate, the outcomes which derive from the environment (extrinsic) or the individual himself/herself (intrinsic) may be negative.

There are two main sources of motivation. Latham (1998, p.82) says that tangible benefits such as salary, fringe benefits and job security are known as extrinsic motivation. Ryan and Deci (2000, p.71) state that intrinsic motivation is concerned with the performance of an activity to succeed in getting a separable outcomes which contrasts with extrinsic motivation. The second is intrinsic motivation. Ellis (1984) defines intrinsic motivation as self respect of accomplishment and personal growth. Intrinsic motivation is likely to be increased by

a sense of relatedness. Raffini (1996, p.8) defines relatedness as the degree of emotional security that teachers feel. Czubaj (1996, p.372) states that the teachers with an internal locus of control are under less stress and more successful in teaching. Therefore, the students of these teachers feel less stress and take higher scores in their assessment.

According to Dornyei (2001) intrinsic rewards are the most prominent and satisfying aspect of teaching. These motives concern the educational process, experiencing students' development as a result of the teacher's help or increasing both the teacher's and the students' level of competence and knowledge.

3. Result and Discussion

TEACHERS' DEMOTIVATION FACTORS IN ELT

Dornyei (2005, p.143) defines demotivation as a "specific external forces that reduce or diminish the motivational basis of a behavioral intention or an ongoing action". Deci and Ryan (1985) use a similar term (amotivation), which means, "the relative absence of motivation that is not caused by a lack of initial interest but rather by the individuals experiencing feelings of incompetence and helplessness when faced with the activity". Yan (2009) differentiates between the two terms in the sense that amotivation is related to general outcomes and expectations that are unrealistic for some reason, whereas demotivation concerns specific external causes. The followings are the demotivating factors of teachers:

Teachers expressed their dissatisfaction with the number of students in their sections. Overcrowded classrooms make it very difficult for teachers to implement any new methods or techniques in teaching. They do not give the teachers any space to maneuver or move chairs around to try new techniques and activities or role playing in the classroom. Moreover, crowded classrooms are very difficult to control. the bad behavior of some students puts extra strain on the teachers and makes it more difficult to manage the classroom and consequently, reflects badly on the students' results in their exams and their performance and comprehension of the lesson and the

overall academic atmosphere. Willos (2011) states that overcrowded classrooms have more negative effects than any positive. They cause disturbance for students, embarrassment for some to participate and in general the students' development, confidence and understanding. In addition to that it is a source of stress for the teacher. Geitenbeek (2011) argues that overcrowded classroom can negatively affect both teachers and students. They can increase the teacher's burn-out rate, stress and exhaustion and can put strain, both physically and mentally on the teacher. Lynch (2008) lists three critical problems in English language learning and teaching. They are lack of learner motivation, insufficient time, resources and materials and finally overcrowded classrooms. Menyhart (2008) says that stress can be the most demotivating factor that can sometimes prevent teachers from adequate teaching.

Financial problem is also the teachers' demotivativation. The teachers expressed a high degree of dissatisfaction with their financial condition. One important factor that contributes to job satisfaction is that a teacher should be paid adequately. Financial difficulties cause a lot of stress and anxiety and thus, lead to a low level of concentration and achievement. Johnson (1990) states that low salaries are a major source of dissatisfaction for many teachers. Teachers feel that their efforts and achievements are not usually appreciated or rewarded by the administration. Rewarding achievers is one important way of enhancing the teachers' motivation and consolidating their efforts. Appreciating the teachers' achievements is a very effective kind of incentive and the teachers' response to such incentive is always positive and can generate more commitment to the institution and more dedication to the job they do. the teachers indicated that they have no privacy and feel uncomfortable in their offices. Providing the teachers with facilities and means of comfort in their offices is the least the administration can do for them.

In addition, Hettiarachchi (2013) investigated the aspects of motivation and demotivation among English language teacher in Sri Lankan public schools and found that the most frequent demotivators related to teaching included limited facilities for teaching and learning in schools, inefficiency of school administration

and zonal education offices, difficulties in obtaining teacher transfers, the discrepancy between the English curriculum and students' English proficiency, and the poor relationship between colleagues.

It is also amazed that students become other factor that cause teachers' demotivation. Sugino (2010) explored teacher demotivation among English teachers. The findings showed that students' attitudes demotivate the teachers the most. The top demotivating items were: students using cell-phones in classes, students sleeping in class, students taking rebellious attitudes, long meeting hours, much paperwork.

POSSIBLE SOLUTIONS FOR ENHANCHING TEACHERS' MOTIVATION

Teachers' motivation will develop and improve the achievement of students and then positively will affect the process of education. This is because any human's behavior is controlled by the pleasure/pain principle where people seek to maximize the pleasure linked to success and minimizes the pain generated by failure. So it is very important to find out the solutions for keeping and ehanching the teachers' motivation. After all explanation above about the factors that causes the teacers' demotivation of EFL teaching.

Azad and Ketabi (2013) offered three solutions for enhanching teachers' motivation; (1) teachers need to work under better working conditions, it becomes mandatory to solve or at least moderate their economic problems, (2) strong and close cooperation among teachers must be fostered to give professional solutions to the problems regarding teaching English in EFL context, (3) the authorities responsible for the educational and economic policies should appreciate the work of teachers and respect their autonomy.

It is undoubtedly very difficult for a teacher to deal with large classes. Anything done to remedy the problem would be fruitless unless students are really motivated to learn. Rhalmi (2013) recommended some solutions to handle big size classes in order to reduce the teachers' stress; (1) it would be a great idea to train students to work in small groups of five to seven students. And when working in

groups, it would be beneficial for students to sit around in a circle so that everyone could have a chance to participate. (2) to reduce stress and noise level, teachers need to set simple rules for class management (such as: establish of acceptable behavior for everybody to observe when working in groups, in pairs or individually). The rules that are set by teachers at the beginning of the class might be considered as one of ways that teachers can do of having demotivation of teaching caused by the students' factors. (3) It is also recommended that teachers uses technology to ease their teaching and learning process. Technology ensures that everyone has time to connect with the teacher.

4. Conclusion and Remark

Handling the challenging situation in the class and outside the class makes teachers exhausted, which hinders the success of teachers. Motivation is thought to be responsible for why people decide to do something, how long they are willing to sustain the activity and how hard they are going to pursue it. Being intrinsically and extrinsically motivated increases job satisfaction. The need to avoid pain and the need for psychological growth are two basic elements found in job enrichment theory. It is important to maintain the teachers' motivation. Motivation factors should be intrinsic which present tasks that are more enjoyable, interesting and psychologically rewarding. Achievement, recognition, work, responsibility, advancement and possibility of growth take place in that group. On the other hand, other factors are extrinsic in terms of the context or setting where the work is performed. Organizational policy and administration, technical supervision, salary, working conditions, status, job security, effects on personal life, and interpersonal relations with superiors, peers and subordinates.

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READER'S THEATER : A SOLUTION TO IMPROVE READING FLUENCY AND READING COMPREHENSION ACHIEVEMENTS OF EFL STUDENTS

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Abstract

Nowadays, reading is a very essential skill for people since they can obtain information from it. Reading means comprehension since the process of reading is where the readers strive to understand and respond the ideas that are expressed in written text. But at the fact, reading achievement in Indonesia still low based on EF survey in 2013. To solve the problem of Reading Comprehension achievement, the students should focus on Reading Fluency first. Many researchers said that there are a correlation between Reading Fluency and Reading Comprehension. They said that fluency is an important part in reading curriculum, but teachers do not understand it. This article will propose a strategy to improve Reading Fluency and Reading comprehension namely Reader's Theater strategy and also discusses briefly the utilization of Readers Theater strategy to EFL students.

Keywords: Reading comprehension, reading fluency, reader's theater

1. Introduction

Nowadays, reading is a very essential skill for people since they can obtain information from it. The process of reading is where the readers strive to understand and respond the ideas that are expressed in written text (Mraz, Nichols, Caldwell, Beisley, Sargent & Rupley, 2013). The information can be obtained from many sources, such as from the internet, journals, and various types of reports. According to de Debat (2006), reading is a crucial skill for the students who learn English as a foreign language or a second language. It can be said that much knowledge which they need to support their learning can be gained from reading materials.

According to Lakhsmi and Rao (2006), reading without comprehension is not reading at all. Reading means comprehension. Pearce (1994) adds that reading comprehension involves more than successful decoding or fluent oral reading. It means that the Indonesian students who learn English need to have reading comprehension skill. The result of survey of English proficiency in 44 countries by EF (English First) as language teaching institute (2011), showed that Indonesian students was ranked 34[th] out of 44 coutries in the world. This means English proficiency of Indonesian students still on the low category. According to Soureshjani and Naseri (2011) who investigated the relationship between self-esteem, proficiency level, and reading ability of Iranian EFL language learners found that learners' proficiency level was more correlated with learner's reading achievement. As Jafari and Shokhpour (2012) explained that students' failures in understanding the English texts are because they are lack of English proficiency, unfamiliarity with the content of the text, and less effective reading strategies use. It can be said that Indonesian students achievement in reading English text still low based on their English proficiency.

To improve students' reading comprehension, the teachers should concern with reading fluency. According to the National Reading Panel (2000), fluency was closely related with comprehension. Reading fluency must increase first before reading comprehension. As Rasinski and Padak (2000) state reading fluency is a significant obstacle to proficient reading for elementary students and many older reader experiencing difficulty in learning to read. Researchers like Reutzel & Hollingsworth (1993) and Zuttel & Rasinski (1991) state that fluency is an important part in reading curriculum, but teachers do not understand it. As mentioned above, researchers also state that most teachers do not have a clear understanding of fluency and what it encompasses, possibly because it is not a central topic on which pre- and inservice teachers are trained. It can be said that the teachers should have a clear understanding about reading fluency of the students. In addition, Rasinski (2006) states that fluency is the ability to read with speed, accuracy, and proper expression.

It means that those aspects are the important point in building a fluency of the students.

Repeated reading is the effective approach to teach fluency (Rasinski & Padak, 2000; Samuels, 2002). While repeated reading was effective to gain reading fluency, some students felt that repeated reading had a weaknesess in meaningful purpose, and thus perceive it as a monotonous task (Clark, 2006). It is caused by students lacking motivation toward repeated reading activities. Rasinski (2003) states that there are more desirable solutions for fluency instruction namely Reader's Theater wherein students are given a script and a specific part, as if they were in a play. RT are closely related to repeated reading since RT is a form of repeated reading. Most of RT scripts are created from pieces of literature text, such as simple fairy tales, short stories, fables, poetry, or prose (Worthy & Prater, 2002).

In this paper, the writer will discuss about one kind of repeated reading strategy to improve Reading Fluency and Reading Comprehension namely Reader's Theater (RT) strategy. The writer will explain briefly that RT can be a solution to improve Reading Fluency and Reading Comprehension achievements of EFL students based on the previous research and also will explain the way of the utilization of RT strategy to improve Reading Fluency and Reading Comprehension achievements of EFL students.

2.   Theoretical Background

Reading Fluency and the Aspects that Teachers Should Know

Fluency is a key point in reading instruction. Egmon et.al (2013) state, fluency is important to the readers because fluent readers are more likely to comprehend and thus are more likely to choose read. Walley (1993) also states that the students who have a good reading fluency can support students to focus on constructing meaning from the text.

Many studies in the past concluded a general definition of reading fluency as the ability to read quickly and automatically (Harris & Hodges, 1995; Logan, 1997).

However, nowadays the definition of fluency is broadened. Reading fluency is not about word calling but also comprehension (Nathan & Stanovich, 1991). The National Reading Panel (2000) defines fluency as the ability to read automatically with proper accuracy, speed, and expression, thus freeing the reader's cognitive abilities, so the meaning of the text can be made. It will proposes that fluency have a relationship with comprehension in reading. In line with Caluris (2006) statement that the relationship between fluency and comprehension is reciprocal.

Many aspects which can be measured in reading fluency. Zutell and Rasinski (1991) state that fluency as a proficient oral reading that includes effortless or automatic, correct phrasing, and the use of pitch, stress, and intonation. In their research, Zutell and Rasinski (1991) did not include word recognition and comprehension in their definition, they focused on educators' attention; on the extent to which reading 'sounds' like speaking, that is, how much it conforms to the rhythms, cadences, and flow of oral language.

Because there are many different definitions of reading fluency,Wolf and Katzir-Cohen (2001) conducted a literature review and made some general report of fluency through three theories: the informational-processing theory, the connectionist theory, and the rauding theory. The Informational-processing Theory proposes that fluency is acquired through automaticity. It means that a readers can get a visual stimulus in reading fluency. The kind of stimulus in reading fluency for the readers such as the letters in a word, and with practice and exposure, the features (letters) in the stimuli become a unit. As Wolf and Katzir-Cohen (2001) state, these units accumulate and letter perception becomes increasingly automatic, attention to early visual coding process decreases. The next theory, Connectionist Theory are contrast with the first theory. The second theory emphasizes on "continuous, distributed interaction of phonological, orthographic, syntactic, and semantic processing codes during word recognition" (Wolf & Katzir-Cohen, 2001, p. 75). The Connectionist Theory does not view retrieval mechanisms as the source for coding but acknowledges the importance of other linguistic features, such as prosody. Experts

states that prosody, or intonation and inflection used by readers, is one of the key links to becoming a fluent reader, yet it has become the "unattended bedfellow," in that researchers and educators pay little attention to it (Dowhower, 1991; Rasinski, 2003). The last theory is according to Carver (1984), the central focus of Rauding Theory is on the relationship between fluency and comprehension. Carver (1984) defines that this theory through three laws. The first law concern on the way how the readers understand a passage at a constant and fluent reading rate. The second law concern on the efficiency of passage comprehension depends on the accuracy and reading rate. The last law concern on the most efficient rate of comprehending. In other words, the rauding theory defines the fluency as the fastest rate at which a reader can efficiently understand complete thoughts in each sentence.

Researchers (Dowhower, 1991; Nathan & Stanovich, 1991) agree with the rauding theory in that automaticity and rate alone do not define reading fluency. In other word, to get a better comprehension in reading must be included with more complete fluency in reading. It could be said that three theories above agree that fluency in reading is necessary and desirable to the readers if the readers want to have a good comprehension.

Wolf and Katzir-Cohen (2001) state, the unsettling conclusion in reading fluency involves every process and subskill in reading. Upon close examination, most of the definitions found in the literature can be synthesized into three components: (a) speed, (b) accuracy, and (c) prosody.

3.   Method

Accuracy as a Part of Reading Fluency

The most common measurement of reading accuracy is the percentage of words read correctly during a fluency test. Reading words quickly with the correct pronunciation is a skill that relies heavily on phonics. Edwards and Beckam (2008) conducted an action research project in a classroom consisting of sixteen ninth grade students and found that a high school level, structured phonics program is the most effective way to 38 impact the reading fluency of adolescent at-risk readers. Without accuracy, fluency is impossible; without a solid phonetical foundation accuracy is impossible. The phonics-accuracy-fluency-comprehension relationship is at the heart of the emphasis on phonics in early childhood education. Thus, it should be at the heart of any attempt to remediate reading difficulties in adolescent readers as well. A reader who reads accurately exhibits automaticity, has an excellent grasp of phonics skills for sounding out new words, and does not substitute or omit words while reading.

Prosody and the Indicators that Linked to Reading Fluency

According to Rowen, Biggs, Watkins and Rasinski (2015), Prosody or expressive reading completes the bridge by linking fluency to comprehension. In order to read with appropriate expression a reader has to monitor the meaning of the passage, then Prosody reflects and adds those meaning. It means that Prosody take an important part in relation between reading fluency and reading comprehension. Allington (1983) and Dowhower (1991) also state that Prosody skill has been hypothesized to predict word reading accuracy and comprehension.

Prosody encompasses many oral readingskills, such as expression, intonation, suprasegmental ability, and voice pitch (Miller & Schwanenflugel, 2008). Whalley and Hansen (2006) state, prosodic cues help segment the speech stream into phrases, words and syllables, inform syntactic structure and emphasise salient information to facilitate understanding. Schreiber (1991) also discussed how prosodic cues segment speech into word chunks to aid reading comprehension. Prosodic reading is as easy to

identify as it is difficult to define. It is often said that it is easy to hear when a student is reading with adequate prosody, even though the term "adequate prosody" is not consistently defined in reading literature. Schreiber (1991) states that there are certain phonological cues that provide relatively consistent indication of certain aspects of phrasal organization, especially the 'higher order' units of phrasal structure, such as the subject noun phrase and the predictive verb phrase. These cues are the so-called prosodic features. These features are, of course, overtly present in the speech signal and are hence available as primary and observable cues to structure. Conversely, poor prosody can lead to confusion because phrasal structure is poorly organized or completely misunderstood (Yildrim, Yildiz, Ates, & Ctinkaya, 2009). Dowhower's (1991) states that foundational work on reading prosody listed his six indicators of prosodic reading:

1. There is a presence or lack of pausal intrusions with valid duration.

2. There is a minimum of seven words per phrase.

3. There is an appropriateness to phrasing (suprasegmental ability).

4. There is a lengthening of final words in phrases.

5. There are terminal intonation contours (pitch changes at punctuation).

6. There is a maximum of one stressed word for every five words read.

Effective prosodic reading can be most simply and accurately defined by breaking down prosodic reading into the specific skills (the major ones) that are needed to produce it, according to reading research. Those skills are absence of pausal intrusions, suprasegmental ability, and appropriate attention to textual features.

The Crucial point of Reading Activity; Reading Comprehension

Reading comprehension is the crucial point in reading activity. According to Doyle (2004), comprehension is the progressive skill in attaching meaning beginning at the same level and proceeding to attaching meaning to an entire reading selection. It means that the readers should interpret the meaning of the text to get some comprehension. As Royer (2004) states reading comprehension is the process of

understanding and constructing meaning from a piece of the text. Comprehension is revolves around the readers ability in finding and determining main idea and topic sentence of the text. When the readers comprehend the meaning of the text it can be said they are the successful readers. In this case there is an interaction between writer and readers through the text.

Having a prior knowledege of the text could be a ways how the readers get a good comprehension. As Kendeou and Broek (2007) state, a general component in many definitions of comprehension is the interpretation of the information in the text, the use of prior knowledge to interpret this information and, ultimately, the construction of a coherent representation or picture in the reader's mind of what the text is about. Many aspects can build a comprehension of the readers. That is why comprehension are the one of important part in reading activity. The readers would not be able understand the message that would be delivered from author in a text without having comprehension.

Based on the theories, it could be concluded that reading was an active process of getting meaning or information from the text transfered by the writer where is reading comprehension are the important level while reading.

Reading comprehension is considered to occur at four levels of complexity. These levels are often referred to literal level, inferential level, critical level and creative level (Smith, 2003 as cited in Westwood, 2001, p. 21-22)

1. Literal level

   In this level, the readers has access to the surface details of the text, and can recall details which have been directly related. The skills in this level are identification and remembering simple or detailed information.

2. Interpretative level

In this level, the students go beyond what it is said and read for deeper meaning. They process their ideas based on what is not stated, but implied, by author, including points the author intended the reader to deduce.

3. Critical level

At the critical level the reader assesses the good sense of what she/he reading, its clarity, accuracy, and any apparent exaggeration of bias. To read critically is to make judgment about how a text is argued.

4. Creative level

In creative reading, the readers try to come up with the new or alternative solutions to those presented by the writer. Creative reading uses divergent thinking skills to go beyond the literal comprehension, interpretative and critical reading.

In the level of EFL student, the main focus in the learning of reading comprehension are on the literal and interpretative level of comprehension. Students were required to find, select, and use the information which means that they had to identify the details of information (literal) and find what actually implied by the writer or what ideas/ points that actually the author wants to share to the readers (intrepretive).

Meanwhile, Burns and Roe (1999) describe the types of questions used in reading comprehension:

1. A *main idea* questions asks for the central them of the selection.

2. A *detail* questions asks for bits of information directly stated in the material.

3. A *sequence* questions requires knowledge of events in their order of occurrence.

4. A *cause-and-effect* question names a cause and asks for its effect or mentions an effect and asks its cause.

5. An *inference* question asks for information that that is implied, but not directly stated, in the passage.

6. A *vocabulary* question asks for the meaning of a word or phrase used in the selection.

The reading comprehension test which was administered in this study covered these six types of comprehension questions.

4. Result and Discussion

The literature on fluency indicated that there is a positive relationship between reading fluency and reading comprehension. Rasinski (2003) conducted a study that used a correlational research design to examine that relationship between fluency and comprehension in seventy-seven third grade students and sixty-five fifth grade students in a large Midwestern city. His findings indicated that fluency is a reasonable predictor of comprehension in third and fifth graders. Another study by Stahl and Heubach (2005) indicated that fluency-oriented reading instruction leads to gains in comprehension in second grade students. Using a pretest-posttest design, researchers discovered that students who received fluency-oriented reading instruction made "significantly more than one year's reading growth in one school year" (Stahl & Heubach, 2005).

Many scholars also state that the most compelling reason to focus instructional efforts on students becoming fluent readers is the strong correlation between reading fluency and reading comprehension (Allington, 1983; Jhons, 1993; Samuels, 1988) . According to Hudson, Len and Pullen (2005), each aspects of fluency has a clear connection to text comprehension. Without accurate word reading, the reader will have no access to the author's intended meaning, and inaccurate word reading can lead to misinterpretations of the text. Poor automaticity in word reading or slow, laborious movement through the text taxes the reader's capacity to construct an ongoing interpretation of the text. Poor prosody can lead to confusion through inappropriate or meaningless groupings of words or through inappropriate applications of expression.

Reader's Theater as a Solution

Nowadays, integrating literature into English language teaching classroom is a hot topic. One of example are integrating Reader's Theater (RT) into teaching and learning activity. RT is one of technique of theaters plays. Many researcher was conduct a research about this strategy. The result of the studies indicated that this strategy is useful to develop a problem in language skills. One of them in reading skills. Experts concluded that RT had a good impact in reading fluency, comprehension, motivation, and attitude towards reading for the students (Rees, 2005; Graves, 2008; Visser, 2013).

Reader's Theater strategy is developed based on repeated reading (Egmon et.al., 2013). According to Hertzberg (2000), the scripts of RT are adapted from a piece of prose or poetry so they suitable for oral reading. But the other experts state that non-fiction and informational texts can also be used as a valuable source for scripts in RT (Martinez et.al., 1998). It means that it is possible to use any text to be a source to be transcript as RT script.

This strategy is different from traditional theater plays. It is because in playing characters and practicing with their peers, the students repeat the scripts as taking on voice of the characters without costumes or props while rehearsing and performing in public (Keehn, 2008). The students no need to memorize their dialogues, they just read the script in front of class. That is why many experts state that this strategy has a good impact in reading fluency, because from the students preformance, the teachers can measure their fluency when the students read the script.

After being studied and practiced in real reading class for years, RT has been recommended by many educators and scholars (e.g., Tyler and Chard, 2000; Prescott, 2003; Bafile, 2005; Garrett & O'Connor, 2010) to be an effective instructional process by considering the following points.

First, repeated reading required in RT provided students with practice to move decoding to an automatic level (Caluris, 2006). The significant goals of RT are to enhance students' reading skills and comprehension (Tyler & Chard, 2000; Caluris,

2006) as well as build their confidence through repeated reading with a purpose. Therefore, the students must re-read scripts created from grade-level books or stories in the instruction of RT. Young and Rasinski (2009) found that most students were more willing to participate in the practice if knowing that they would perform in front of audiences. Thus, RT offers all students, particularly for those reluctant students, a real reason to read aloud and re-read the same text several times during the rehearsal (Tyler & Chard, 2000; Bafile, 2005).

Second, unlike playing a drama, RT does not require students to memorize the lines of scripts. The emphasis of the presentation of RT is on how students read their lines, and it is meant to motivate students to improve their fluency, enhance their comprehension through multiple rereading of texts, and reduce students' anxiety and pressure of learning.

Third, the teamwork involved in the presentation has also served to motivate students to engage in more attentive readings (Caluris, 2006). Additionally, having the group members' assistance and the repeated reading activity made those struggling students much more willing to read because reading has already become an easier and less stressful task (Tyler & Chard, 2000).

In sum, as Prescott (2003) points out that the benefits of RT could not only develop students' reading fluency, but also enhance confidence and transform reluctant readers into book lovers under the instruction of RT in reading class.

Teaching Procedures using Reader's Theater Strategy

RT strategy was different with the theater traditional, the teachers should pay more attention to use this strategy to improve Reading Fluency and Reading Comprehension Achievements of EFL students.

There were 7 steps to practice RT for each script adapted from Wu and Yang (2013). The steps were as follows.

Step 1: Researcher explained about repeated reading aloud and the rules of RT strategy to the students.

Step 2: Researcher read the text of RT material and explained it then the students repeated it after researcher's modeling.

Step 3: Researcher gave an instruction to the students to make a group. Group members were discuss what they want to add to the script based on the text.

Step 4: Researcher collected the script from all groups.

Step 5: Researcher read the script again, and the students repeated it. During this process, the students played different rules to read aloud their scripts.

Step 6: Rehearsal. Each students prepared his/ her lines and make a rehearsal with the group members.

Step 7: The participants performed in front of the audience. After their performance, the researcher gave an instruction to make an open discussion about the performance related to their comprehension about the story.

5. Conclusion and Remark

This paper has attempted to show the way how Reader's Theater strategy can be a solution to improve Reading Fluency and Reading Comprehension of EFL students. It suggests some reasons, benefits, recomendation and teaching procedures to use RT as a solution and alternative strategy to improve not only Reading Fluency and Reading Comprehension to EFL students. Some researches showed the result of the research about RT, almost of their research indicates that RT can be a solution to EFL students especially to improve their Reading Fluency and Reading Comprehension achievements if the teacher use RT strategy right on the track.

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THE IMPLEMENTATION OF STUDENT WORKSHEET MODEL IN ASSESSING TEACHER QUALITY BASED ON CURRICULUM 2013

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Abstract

The research is a part of a three-year research; it was the implementation stage of the complete research. It employed Educational Research and Development (R&D) design, which was modified in several features. The main objective of the research was to produce a comprehensive student worksheet which focuses on scientific project referring to the implementation of Curriculum 2013. The instruments used in the research were cognitive skill test, scientific attitude scale, observation sheet and interview. The implementation stage of the research utilized inquiry-based worksheet that was integrated with Animal Physiology subject, problem-based-learning (PBL) worksheet which was associated with Animal Ecology course, and project-based learning (PjBL) worksheet which was merged with Biotechnology subject. The research involved 60 students of Biology Education Department of Unpas from academic year 2013-2014. 30 of them were the control group and the rests were experimental group. The research shows that there is a difference in terms of students' cognitive skill of the two groups. The cognitive skill of students in control group has an average of 2,47 (fair) and that of the experimental group is 3,56 (very good). The analysis on scientific attitude scale also shows a difference in terms of students' affective skill: the control group's average on this aspect is 2,70 and experiment group's is 3,56 (very good). Assessment on students' psycho-motor skill also presents similar trend as the control group's average is 2,67 (good) and that of experiment group is 3,83 (very good). The averages differences of the observed skills are supported by the data from statistical average comparison test–with the level of significance of $\alpha = 0,05$–which shows that the differences are significant. From the statistical data, it can be concluded that the model of learning which employs LKS is potential to provide students real experiences of scientific processes in the future, namely observation process that is problem-solving oriented. The ability to do the process in various projects can improve students thinking, which later leads to better attitudes.

Keywords: Affective, cognitive, Inquiry-Based Worksheet, Problem-Based Learning, Project Based Learning, psychomotor.

1. Introduction

Welcome the implementation of the 2013 curriculum LPTK constantly working to improve the quality of its graduates to compete in the world of work, by improving four competencies that must be owned by a teacher that is pedagogical, professional, social, and personality as set out in Permendiknas 16, 2007. Efforts to develop the competence of the teacher standards in improving the quality of graduates and welcome the implementation of the curriculum in 2013 of course we need a method, models and strategies that build creativity in teaching student teachers of biology.

Learning process on Curriculum 2013 for junior high school and senior high school or its equivalent be conducted using a scientific approach. The learning process touches three domains, namely the attitude, knowledge and skills. In the process of learning-based scientific approach, the realm of substance transformation took her attitude or teaching materials that the students "know why." Realm of the substance or the transformation took her skills teaching materials that the students "know how". The realm of knowledge took him by the transformation of the substance or teaching materials that the students "know what it is." The end result is an increase and balance between the ability to be a good human being (soft skills) and people who have the skills and knowledge to live a decent (hard skills) of participants learners that includes aspects of competence attitudes, skills and knowledge (Department of Education, 2013).

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an increase and balance between the ability to be a good human being (soft skills) and people who have the skills and knowledge to live a decent (hard skills) of participants learners that includes aspects of competence attitudes, skills and knowledge (Department of Education, 2013).

2. Theoretical background

3. Method

Model Inquiry

Scientific inquiry as part of their science lessons have various meanings. National Science Education Standards (NSES) defines scientific inquiry as various ways of scientists in studying the universe and suggests an explanation based on the results of their research. Inquiry is also an activity development of knowledge and understanding of science concepts made by students to emulate scientists in studying the universe. National Science Teacher Asosiation (NSTA) defines unequivocally that scientific inquiry is the best way to understand the material science, as students learn how to ask questions and use facts to answer these questions. Students also learn to design experiments and gather evidence from various sources, develop a description of the existing data and communicate and defend their conclusions (NSTA in Wenning, 2007).

Haury (1993) in an article of Teaching Science Through Inquiry, said that the inquiry is a behavior that is involved in human attempts to rationally explain the phenomena that provoke curiosity. In other words, inquiry related to activity and active skills that focus on the quest for knowledge or understanding to satisfy curiosity.

Inkuri method is a method of learning that is included in the information processing model of learning. According to Joyce (1996: 187), the method of inquiry is a model that essentially involves students into the original problem and confronts them with an investigation, helping them identify conceptual or troubleshooting method is contained in the investigation, and directs students to find a way out of

trouble   the.
Learning Model of inquiry can make students experiencing mental processes certain sophisticated (Sund & Trowbridge, 1973), namely: (1). explore symptoms and formulate problems, (2). Formulate hypotheses (3). Designing and implementing a way of testing the hypothesis, (4). Carrying out experiments, (5). Organize and analyze the data obtained, (5) integrating knowledge, (6). Develop specific scientific attitudes; objective, curious, be open, eager and attentive to moodel-theoretical model, and responsible.

Sun d and Trowbridge, 2000 suggests there are three kinds of methods of inquiry as follows:

1. Guided Inquiry (guided inquiry), learners gain guidelines as required. These guidelines are usually in the form of questions that guide. This approach is used especially for inexperienced learners, teachers provide guidance and direction is quite wide. In the implementation of most of the planning is made of teachers and learners do not formulate the problem because the problem is given by new teachers and learners determine completion of the process to investigate and solve the problem. Sund and Trowbridge (2000) argues that guided discovery is a mental process where students assimilate a concept / principle. Mental processes, for example to observe, explain,   classify,   make   conclusions   and   so   on. Guided discovery learning makes students' science literacy and technology, can solve the problem, because they are actually given the opportunity to participate in scientific activities in accordance with their intellectual development with the guidance of teachers. Guided discovery made by students can lead to the formation of the ability to perform free at a later invention (Carin, 1993).

1. Inquiry free (free inquiry), this method learners do the research yourself like a scientist. Learners must be able to identify and formulate a range of issues to be investigated.

2. Inquiry freely modified (modified free inquiry) in this method, the teacher gives

the problem or problems and then the students were asked to solve these problems through observation, exploration, and research procedures.

Model PBL (Problem Base Learning)

Problem-based learning (Problem-based learning), hereinafter referred to as PBL, is one of the innovative learning model that can provide active learning conditions for students. PBL is an instructional model that involves students to solve a problem through the stages of the scientific method so that students can learn the knowledge related to these issues and also have the skills to solve problems (Wood, 2002; Stepien, et al., 1993).

Further Boud and felleti, (1997), Fogarty (1997) states that PBL is an approach to learning by making confrontation to the learner (student / student) with practical problems, the form of ill-structured or open-ended through stimulus in learning. PBL has the characteristics as follows: (1) learning begins with a problem, (2) ensure that the problems are related to the real world student/student, (3) organizing lessons around each problem and not around each discipline, (4) to give a great responsibility to the learners in shaping and running direct their own learning process, (5) using a small group, and (6) requires the learner to demonstrate what they have learned in the form of a product or performance. Based on the description it seems clear that learning with the model PBL initiated by the problem (can be raised by students or teachers), and then the students deepen his knowledge of what they already know and what they need to know to solve the problem. Students can choose the issues that are considered of interest to be solved so that they are compelled play an active role in learning.

Fogarty, R. (1997) suggests there are five phases (stages) that needs to be done to implement PBL. These phases refer to the phase-practical stages conducted in learning activities with PBL as follows:

Phase 1: Orienting the students on issues Explaining the purpose of learning, the necessary logistics, motivate students actively involved in problem-solving activity selected

Phase 2: Organize students to learn Helping students learn limit and organize tasks related to the problems faced.

Phase 3: Guiding investigation Encourage individuals and groups of students gather appropriate information, carry out experiments and searching for an explanation and breakdown

Phase 4: Develop and present the work of Helping students plan and menyi-apkan appropriate work such as reports, videos, and models, and helping them to share the duties with his friend.

Phase 5: Analyze and evaluate the problem-solving process helps students reflect on the investigation and the processes used during berlangusungnya troubleshooting.

Model PPA (Project Base Learning)

According to the Global SchoolNet. (2000) "Project Based Learning is a learning model that involves students in problem-solving activities and provide opportunities students work autonomously construct their own learning, and ultimately produce the works of students valuable and realistic.

Project-based Learning (PBL) is a models for classroom activity that shifts away from the usual classroom practices of short, isolated, teacher-centered lessons. PBL learning activities are long-term, interdisciplinary, student-centered, and integrated with real-world issues and practices. Project-based learning is a model of class activities different from usual. PBL learning activities for long periods, interdisciplinary, student-centered and integrated with real world problems. Thus, Project Based Learning is an innovative learning-centered learning (student centered)

and puts the teacher as motivator and facilitator, where students are given the opportunity to work autonomously construct learning.

Method.

Method in this study was to use the research design and development of education (Educational Research and Development / R & D) were modified as needed. LKS model development is implemented in three subjects including LKS Model-based inquiry on the subject Physiology, LKS Model-based PBL (problem based learning) on the subject Animal Ecology and LKS Model PPA (Project Based Learning) in Biotechnology course. This implementation involved 60 student class of 2013 to 2014, consisting of 30 students and a control class 30 students experimental class. The second year of this study is the stage of product development implemented by research steps as follows: 1) Implementation of project-based LKS scientific models that have been validated on the activities of lectures and practicum., 2). Analysis of data from project-based implementation LKS scientific models to assess cognitive affective and psychomotor student, 3). Interpretation of the results of data analysis

Instruments and Data Collection At every step in the research activity is organized according to the needs. Instruments in this research are: 1). Written test in assessing the cognitive abilities of students, 2). Scale Test attitude in assessing the scientific attitude / affective student, 3). Guidelines for assessing the performance of the psychomotor abilities of students, 4). Guidelines questionnaire contains student response after using worksheets, 5). Interview guides lecturers. Research carried out to produce some of the data, which include quantitative data in the form of cognitive test results, and qualitative data in the form of affective and psychomotor test results are converted into quantitative data. Data processing using SPSS which was then analyzed to interpret.

4.   Result and Discussion
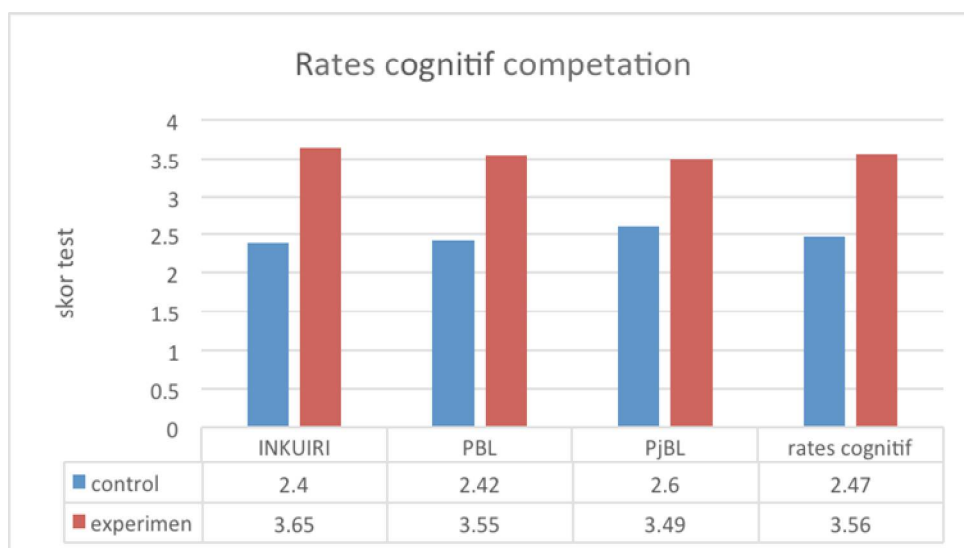
Figure 1. Summary of Comparative Score average cognitive abilities Experiment Class and Class Controls

Based on the results of the implementation of the model LKS-based Project Scientific tailored to the demands of the curriculum in 2013 developed into LKS-based Inquiry (open, guided and structured), PBL (Problem Based Learning) and PPA (Project Based Learning) are integrated on a variety of subjects practicum among subjects Physiology animals, animal Ecology and Biotechnology.

Based on the results obtained from the data field implementation of research findings were analyzed based on the average value of the cognitive abilities of the students between classes LKS control without using a model based on the model and the experimental class using a model-based worksheets. Here is the average test score of cognitive abilities of students gathered as shown in the image. One of the following:
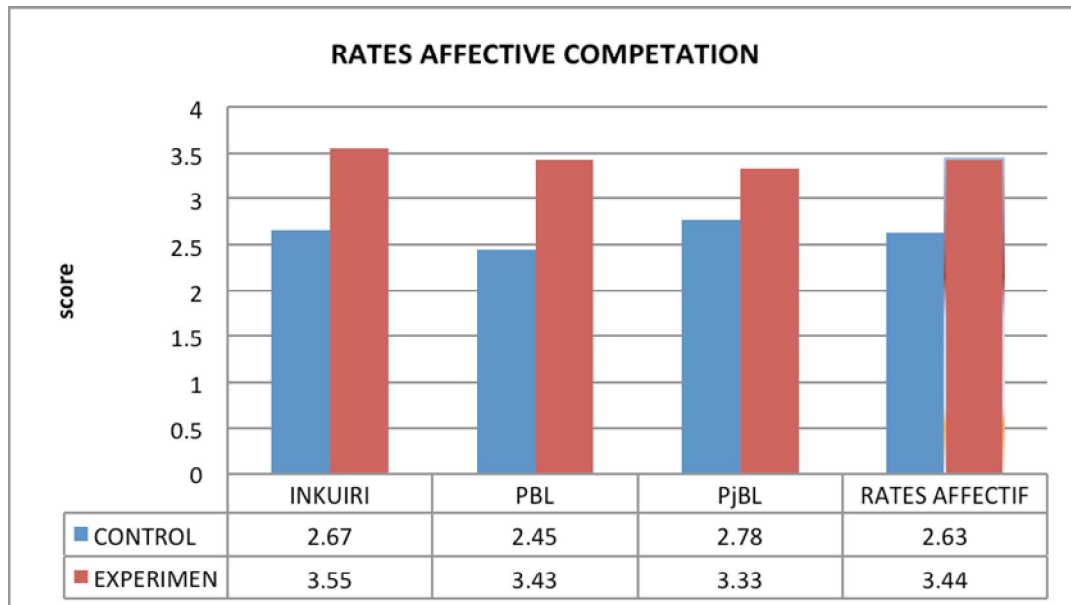
Figure 2. Summary of Comparative Score average affective abilities Experiment

Class and Class Controls

Based on the observation sheet that netted to assess psychomotor abilities of students between classes and grade control following experiment looks mean psychomotor abilities of students as shown in Figure 3 below:

RATES PSYCOMOTOR COMPETATION

	INKUIRI	PBL	PjBL	RATES PSYCHOMOTOR
■ CONTROL	2.82	2.6	2.6	2.67
■ EXPERIMENT	3.88	3.78	3.84	3.83
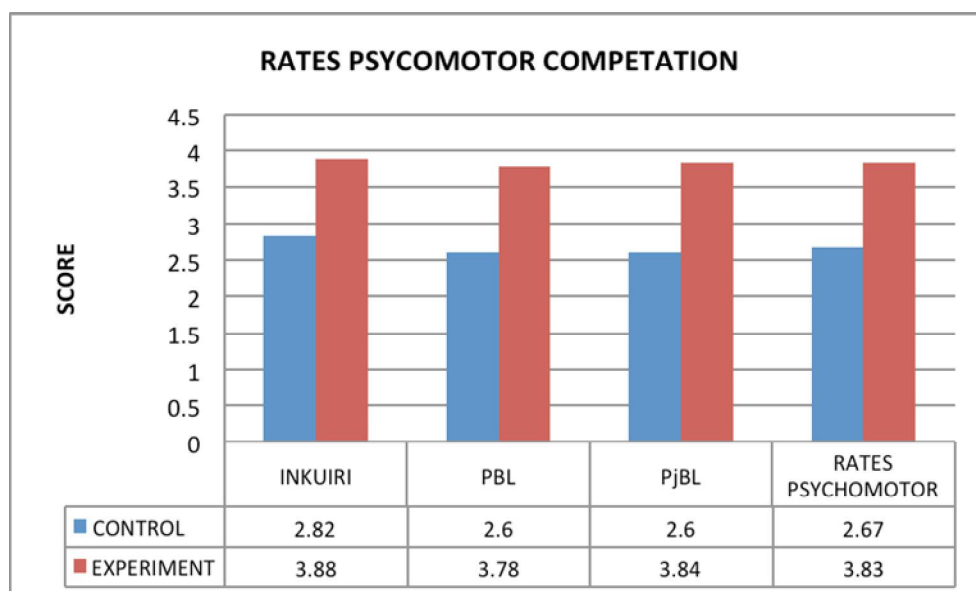
Figure 3. Summary of Comparative Score average psychomotor abilities Experiment Class and Class Controls

Based on the acquisition value of the average score psychomotor abilities between the experimental class with very good criteria and grade control with both criteria as a whole showed a significant difference.

5.   Conclusion and Remark

Based on the test mean cognitive test shows if the value of its sig 0.000 <0.05, H1 accepted. This means that there are differences between the mean cognitive test between sixth grade. As for further tested using ANOVA test line with those values sig = 0,000 Values greater than 0.05. Means that H1 is accepted, then there is a significant difference between the average test scores of cognitive control and class experiments class cognitive test scores. Based on the overall mean of the model-based LKS Project Scientific assess psychomotor abilities experimental class showed an average value of 3.83 categorized as very good / very high and the control class with an average value of 2.67 indicates a good category / high.

Based on the statistical test by testing mean at the level of 0.05 showed a mean difference significant psychomotor abilities between the experimental class and control class. Obtaining the average is very high in the experimental class Brazilians is an indicator that the model-based LKS Project Scientist who developed a model of Inquiry, PBL and PPA provides excellent effect, stronger and higher in giving a success rate of students especially psychomotor ability. Based on the findings of a class field experiments showed psychomotor abilities very high starting from the assessment phase of planning, implementation, project reports, presentations and exhibitions (showcase). In this case the student looks mempu develop his steps in the form of real work is highly creative and innovative. In connection with the assessment of skills, permendikbud No. 66 of 2013, menjeasikan that pendididk assess competency skills through the performance appraisal, the appraisal that requires learners to demonstrate a certain competence by using the practice test, and assessment projects fortofolio. Psychomotor abilities of students in planning such dimuali of Preparation, formulation title, formulation of hypothesis, variable observed, treatment plan, Define measures projects to be implemented / stacking, arranging and scheduling of the project and Determining the initial observation is greatly improved this matter because the stages LKS and project task requires students carry out the preparation process. Psychomotor ability students are assessed in the form fortofolio on Implementation process, required to be able assembles a practical reports and works very well.

This is evident from the systematic assessment of Writing, systematic steps and procedures of the project, data source and accuracy of information, quantity of data sources, data analysis, Preparation of project reports, drawing conclusions and presenting project results can guide the students did a very good performance Psychomotor ability students who assess the ability of Project reports such as assessing Performance presentation case (show case) such Accuracy in presenting, accuracy in the presentation, cooperation in the preparation and cohesiveness in the presentation and assessment Presentations include Significance (memillih materials

that are essential for orally presented , understanding (understanding the nature and scope of the problem, policies alternatf they identfikasi), argumentation (present and defend his views quite adequate), responsiveness (whether the answer to the repeater according to questions asked penyanya), cooperation group (mostly members of the group participated in penyaian) shows the activity of a very high performance this case with respect to the ability of students showed performasi very good. the final assessment of a project is assigned a student displays exhibits of artifacts / work / products with criteria penlaian Presentation of physical evidence the results of the project, Aesthetics , Innovation, neatness. As seemingly in the image below:

Figure 1. Show case/exhibition of works by students with assessment activities of lecturers (source researcher)

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LIFE TABLE AND LIFE CYCLE *GRAPHIUMEVEMON* (LEPIDOPTERA: PAPILIONIDAE) ON SOURSOP (*ANNONA MURICATA*L.)

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Abstract

Butterflies choose one or several particular plant species which are very closely as a place of food and life, as well as*G. evemon*. Soursop plant*(Annona nuricata*) is one of the natural food for the *G.evemon*caterpillars. This plant is widely spread both along the highway and in the office complex.Until now there is no research on the life cycle and life table of the*G.evemon* in the soursopplant. However the need of this information is important to preserve the existence of a butterfly as one of pollinating insects to determine the biotic potential of the *G. evemon*.The purposes of this study are to determine the life cycle andmorphometric of *G.evemon*. This study uses *rearing* method and the subject of the study are 30 eggs *G. evemon*.The length of time and morphology of each pre-adult stages ofthe *G.evemon* was recorded. The calculations in the table are based on the life stage of the development and mortality of each stage of the development of *G. evemon*.The results showed that the average time of the *G.evemon*life cycle on*soursop* plant was 28 – 50days. The morphology of each stage has a specific characteristic.

Keywords:*G.evemon*, *Annonamuricata*, *Life Cycle, morphology and morphometric*

1. Introduction

Indonesia is one of megabiodiversity country on plant and animal. One of instance is Butterfly. Butterfly important things supporting various diversity in Indonedia, one of functionis pollinating flowers(Bima, 2007). In general, host plant of these butterfly are in wide range. The existing of host plant role are as shelter, food and protection as well (Whitten et al, 1999).Due to its important to role to sustain ecological systemneed a conserve site to keep mainain its life in the future.

Butterfly is a famous animal because of its beauty. The magnificence of its color and wings which made it become a tourism object. It live is support by existing of host plant as food source on larvaae as well as on imago.

Deforestation and land use are example things that disturbbutterfly diversity for instace *Graphiumagamemnon* known as *Swallowtail Butterfly* bacause it has a large wings instead of others.

An investigation on alternave plant is needed. One of the good practice is Soursop leaf (*Annona muricata*), it succeeded achieve to imago on *G. Agamemnon*.

Time and place

This research was conducted in March 2016 until July 2016 at the Laboratory of Environmental Research UniversitasPendidikan Indonesia Bandung.

Materials used in this study were *G.evemon*, leaves of soursop, Alcohol 70%, honey bee 10 %, and distilled water. The tools used were jars, cages imago, termohigrometer, insect net, digital cameras, calipers, styerofoam, streo microscopes, calculators, board extenders and specimen boxes.

2. Theoritical Background

3. Method

Pre-study phase

Survey method was conducted by observed buttefly on sousop plant near campus between 09.00 am up to 13:00 pm, these observations include the selection of media laying eggs butterfly *Graphiumevemon* around or on the plant soursop (*Annonamuricata* L)

Study Phase

Sampling

Egg retrieval was conducted on the fourth day after the pre-study. Preparation of eggs begins with capturing adult male and female butterfly *G. evemon* that were laying eggs around the plant soursop (*A. muricata*). Imago females captured using

insectnet. Imago females were caught and then entered into a mason jar 29 cm diameter coated paper towel and unbiased young leaves along the stem of the plant soursop. Of the 30 eggs obtained, only 30 eggs were sampled in this study. Then leaves that are egg G. evemon preserved in jars of 8.5 cm diameter by means of leaf stalks are plugged eggs on a damp sponge. Eggs awaited and observed until hatch into larvae. After hatch into larvae, the larvae were taken 30 and each larva was transferred into a jar diameter of 8.5 cm.

Graphiumevemon

Larvae kept in a jar was topped covered gauze. Each of the jars were filled only one larvae and labeled. As has become a pupa imago, the imago imago transferred into cages measuring 50x50x75 cm.

Morphology Each Stadia in Lifecycle Graphiumevemon

Observations were made every day at 9:00 to 13:00 pm. The method used is the method of rearing. Do observations from egg, larva, pupa to imago. At the moment an egg stadia, parameters measured and observed that the color of the egg, egg shape, and size of the diameter of the eggs. After the eggs hatch into larvae, the parameters measured and observed that the color of the larvae, larval body length, diameter of the thorax, caput diameter, and the number of instar stages. The feeding is done every morning and stopped when the larvae enter the stage pupasi. In the pupal stage, the parameters observed were discoloration pupa. The time required for each phase observed from egg to imago phase ie from laying eggs to hatch, change of skin in the larva, the larva changes into a pupa, pupa becomes imago, the imago until death. During the course of each stage G. evemon, is recording physical factors include the indoor air humidity and temperature using termohigrometer. When G. evemon been out of the pupa, also recorded the date and counting sex ratio (number of males and females). After that, it was noted long life span of each butterfly. Butterfly lethal taken for morphometric measurements. In the thorax butterfly, injected with 70%

alcohol, this is done so that the butterfly is not moldy. Then, the samples are stored temporarily in the bag papilot.

Morphometrics Mounting

Samples removed from the paper papilot, then stabbed in the thorax using a pin parallel to the axis of the body. When they are aligned, then the sample was inserted into a gap spanning the board and set the left and right wing positions, and also the position of the antenna, and covered with waxed paper with a plus pin so that the paper is not shifted. Samples *G. evemon* that has spanned / extenders for mounting on board is dried using artificial oven with a temperature of 45C for ± 2 weeks. The dried samples removed from the board extenders and moved on Styrofoam (Peggy, 2014). Then do the morphometric measurements by measuring the body length, length of the antenna, the length of the front wing, front wing width, wing span, length and width of the rear wing rear wing. Data have been obtained are then analyzed descriptively in narrative form and displayed in the form of tables and figures.

The number of individuals who have survived from egg to imago phase was calculated and recorded.

Data Analysis

The method of analysis in this research was quantitative descriptive. In the descriptive statistical analysis techniques used calculating measures of dispersion (standard deviation) as well as the data presented in the form of: (1) Table. By this analysis will be known tendency of research findings, whether in the category of low, medium or high; (2) Visual like charts (Muhson, 2009).

4. Results and Discussion

In this study, feeding only natural given at instar larval instar of 1 to 5. The average time it takes the life cycle *Graphiumevemon* on host plants Annonamuricata were presented in Table 1.

Tabel 1. Life Cycle of *Graphium agamemnon* Feed on *Annona muricata* leaf

Stadia	N	Kisaran waktu (hari)	Soursop (*Annona muricata*)	
			Length (mm)	Width (mm)
Egg (d= 3mm)	30	1-2	-	-
Instar 1	20	1 – 4	2.5 – 4	1
Instar 2	15	1 – 5	6 – 9	2 – 3
Instar 3	13	1 – 3	8 – 19	3 – 6
Instar 4	12	2 – 5	15 – 21	5 – 7
Instar 5	11	6 – 8	22 – 27	7 – 9
Prepupa	9	1	33 – 43	8 – 10
Pupa	9	14 – 17	31	8
imago	5	1-3	-	-

Description: (*) values in the table are the minimum and maximum values. (X) average. (SD) Standard Deviation.

The average time of the life cycle Graphiumevemon was 28-50 days. Phase shortest is prepupa with an average time of 1.00 ± 0.00 days (Table 1). The longest is the larval phase with a total average of 11-2 days. In the phase of eggs, hatching time of 30 samples of eggs is 2 days.. The time of each stage varies *Graphiumevemon* in the life cycle. The longest occurred in larval stage, this is because the larval stage through several molting (moulting). Factors affecting the life cycle period of which is the

amount of feed consumed and the effects of the hormone responsible for the process of metamorphosis. There feed on the leaves of nutrients needed or used in the process of metabolism and regulating the flow of energy. According Suhara (2009) production of secondary compounds on host plants affect the growth and development of the larval body. Nutritional deficiencies can interfere with metabolic processes that will inhibit the growth and development of the larval body. In addition to nutrition, the hormone regulating the process of metamorphosis was influential on the development of each life stage *Graphiumevemon*. The main hormone that plays a role in the process of metamorphosis is a juvenile hormone and hormone edyson (Hadi et al., 2009). The data obtained in the observations long life cycle time will be used as a reference for the calculation of life tables.

Morphology and Morphometric *G. Evemon* feed on Sousop leaves

In this second study, morphology and morphometricf theat feedingon soursp leaves that describe all stadia from egg until Imago were presented in Table 2 and Table 3.

Table 2. Morphology andMorphometric *Graphiumevemon egg*

Morphology	Characteristic	Morphometric	Average ± SD (cm)
Shape	Round	Diameter	0,12 ± 0,00
Color	Greenish white		

Stadia of Larvae	characteristics of Morphometric		
	Length	Diameter of thorax	Diameter of caput

	Average ±SD (cm)	Average±SD (cm)	Average ±SD (cm)
Instar 1Larave	$0,35 \pm 0,11$	$0,09 \pm 0,06$	$0,1 \pm 0,00$
Sign			

Caput dark brown to black.
- The body of the dorsal part black to brown, while the
  ventral white.
- Part of the last segment of the abdomen is white.
- A pair of brownish-yellow lateral spines found on each
  each segment of the thorax, while a pair of anal spines (the final segment
  abdomen) are white.			

instar 2 Larvae	$0,65 \pm 0,13$	$0,22 \pm 0,04$	$0,15 \pm 0,00$
Sign			
-Caput yellowish brown. - Segment thorax larger than the other body segments. - Pair of lateral spines on pterothorax shrinkage (Reduction in proportion to body size). - Regional sub-spirakular on abdominal segments brownish white.			
instar 3 Larvae	$1,09 \pm 0,15$	$0,33 \pm 0,03$	$0,18 \pm 0,00$
KarakteristikMorfologi			
Caput brown orange. - Pair of lateral spines are black, while the final spina abdomen colored white.			
instar 4 Larvae	$1,71 \pm 0,26$	$0,45 \pm 0,04$	$0,25 \pm 0,02$
KarakteristikMorfologi			

-Body pale brown dorsal section, while the ventral colored white. - Part of the last segment of the abdomen is brown.			
instar 5 Larvae	3,05 ± 0,54	0,59 ± 0,06	0,35 ± 0,00
Morphology			

- Caput yellow orange (the beginning of molting) then changed
  be green.
- The body of the dorsal orange yellow or brown faded
  (The beginning of molting) then changed to light green to dark green,
  whereas the ventral part is white.
- Part of the last segment of the abdomen is green.
- Lateral spines Part 1 (prothorax) is declining.
- Lateral spines Part 2 (mesothorax) reduced (lost).
-Spina lateral section 3 (metathorax) contained circle like a ring
  small yellow.
- A pair of lateral spines 3rd metallic blue color.
- Part of the last abdominal segment follows the same color as the
  other segments.
- Spina at the end of the abdomen is white greenish, then there
  a straight line is black outer edge of the spine.			

Prepupae There are white lines ranging from the thorax to abdomen and skin shrivel.	
Pupae - Green but in some parts there is a colored linelight yellow. - There is a horn at the mesothorax slender and pointy. - Has a pair of horns cephal short and blunt. - Do not have legs prolage to stick on the leaves. - When the butterfly is ready to hatch, then: - Part black thorax greenish blue spots appearsomewhattransparent. - The end of a transparent abdomen.	

Imago			
Morphometric	Male (♂) (4Individu) Average ± SD (cm)	Female (♀) (4 Individu) average ± SD (cm)	

- Long body	2,2 ± 0,00	2,2 ± 0,00
The length of the antenna	1,3 ± 0,00	1,3 ± 0,00
The length of the front wing	3,7 ± 0,12	3,74 ± 0,13
The width of the front wing	3,25 ± 0,15	3,26 ± 0,17
The length of the rear wing	7,4 ± 0,24	7,48 ± 0,27
wing span	2,46 ± 0,06	2,4 ± 0,09
The width of the rear wing	2,24 ± 0,14	2,26 ± 0,14
KarakteristikMorfologi		
- - The head (caput) shaped capsule. - The type of oral appliance haustelata. - Long filament-shaped antenna with an enlarged end like a club. - Rear wing wavy edge, basic color black front and rear wings, on the outer edge of the wings are small spots of blue-green. - In the middle of the wing there is a large spots turquoise. - At the base of the rear wing are large white spots. - There is an additional red spots on the ventral part of the rear wing. - The composition of the tile of similar scales. - The head, thorax, and abdomen black (dorsal) but white on the ventral sightings.		

5. Conclusion and Remark

The results of the data in Table 2 and Table3 indicate that occur during the process of growth and development of stadia *G. evemon*. It can be seen from the shape and size of the body is growing every stadia. The observation is in line with Dyar (1890) who noted that an increase in the diameter of the capsule head 1.2-1.4 times between the larval stage (instar1-5) of some Lepidoptera species. This study concludes that the average period of the life cycle *A.muricata* of the host plant of *G. evemon*on soursop leaves was 28 -50 days.

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THE ILLOCUTIONARY ACT OF ISLAMIC VIDEO ENTITLED "THE MEANING OF LIFE" BY TALK ISLAM

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Abstract

The title of this research is "The Illocutionary Act of Islamic Video Entitled 'The Meaning of Life' by Talk Islam". This research is purposed to answer the problem formulation that questioning about the types of the utterances, the functions of illocutionary acts, and the context of illocutionary act's functions.This research used descriptive qualitative method that described the data which have been collected. The object of this research is the illocutionary acts of the video entitled "The Meaning of Life" by Talk Islam. The data are collected by downloading the video through You Tube site. The collected data, then was analyzed by dividing the illocutionary acts into some types of utterance, they are; imperative, interrogative, and declarative. To find the context, the illocutionary acts are divided into some functions, those are; representative, directive, expressive, commisive, and declarative. Furthermore, The result shows that the speaker spoke mostly declarative utterances followed by interrogative utterances, and then imperative utterances. The speaker delivered most of his illocutionary acts with representative function, the following illocutionary acts are with expressive function, directive function, declarative function, and commisive function. Seeing the percentages, it shows that the speaker intended to provides the strong argument with the massive evidences sourced from the Holy Quran.

Keywords: Illocutionary Act, Speech Act, The Meaning of Life

1.   Introduction

Illocutionary act is a kind of pragmatic study which is concerned in this study. It is one of three types of the speech acts namely locutionary act, illocutionary act, and perlocutionary act. The second course of action namely illocutionary acts are acts of doing something. Discussed in this speech acts is about purpose, function, or the power of speech.

Based on the description above, this study is proposed to answer how far the illocutionary acts are included in the Islamic video entitled "The Meaning of Life" by Talk Islam. It is aimed is to find out the purposes of the video and to verify the message that the producer wants to share through the video.

2. Theoritical Background

3. Method

Researcher believes that the qualitative research is concidered more appropriate toward this study –analyzing the illocutionary act. This believe is in line with Hancock, et al., (2009) that qualitative research is concerned with developing explanations of social phenomena. That is to say, it aims to help us to understand the social world in which we live and why things are the way they are.

The technique of collecting data that is used in this research is observation. Based on Hancock, et al., (2009), observation is a technique that can be used when data cannot be collected through other means, or those collected through other means are of limited value or are difficult to validate. In some research observation of people is not required but observation of the environment. This can provide valuable background information about the environment where a research project is being undertaken. To sum up, the researcher used observation technique in order to collecting data from the video entitled "The Meaning of Life" by Talk Islam. The original video entitled "The Meaning of Life" was published by the official administrator of Talk Islam on September 15th 2013.

Further, The data analysis involves processing or summarizing the mass of the data collected then present the most important features (Hancock & Ockleford, 2009). Hancock added that in qualitative research, the practice of data analyzing is such describing the phenomenon, articulating what it means, and understanding it. While in this research, the researcher applying all the implementations that are mentioned by Hancock. The researcher analyzed the data by making a percentage of the types of utterance and the functions of illocutionary act. after that, the

researcher described the percentages. The last, the researcher interpretated the illocutionary acts based on the functions.

4.   Result and Discussion

Result

In this part, the researcher tabulates the collected data of utterances that are classified as illocutionary act. The researcher classified 44 utterances (printed in bold) from the total 77 utterances in the video entitled "The Meaning of Life" by Talk Islam as illocutionary act. It means that the numbers of illocutionary acts are dominant by represent the 57,14 % of the whole utterances in the video.

Further, the division of the utterances is required for content analysis. It makes the analizing proccess easier and clearer. By deviding the utterances, the context of the utterance will be discovered. The utterances are devided based on the types and the functions. The utterances are divided into three types; *a) imperative*, *b) interrogative*, and *c) declarative*, while the illocutionary acts are divided into five functions; *a) representative*, *b) directive*, *c) expressive*, *d) commisive*, and *e) declarative*.

Discussion

The rsearcher analyzes the data in order to answer problem formulation. As the demand of it, the researcher provides the research finding as; *a) types of utterance*, *b) functions of illocutionary act*, and *c) the context of illocutionary acts' function*.

1. **The Types of Utterance**

a. **Imperative**

The data show that there are five utterances that are categorized as imperative form. It has been known that the numbers of illocutionary act are 44 in the video entitled "The Meaning of Life" by Talk Islam. Based on the calculation above, it can be concluded that there are 11,36 % of illocutionary acts that are spoken in imperative form.

b. **Interrogative**

Based on the data collected, the researcher found three illocutionary acts that are spoken in interrogative form. It means that there are 6,82 % of illocutionary acts that are have interrogative form. It is less than the imperative forms which is represent 11,36 % of the illocutionary acts.

c. **Declarative**

From the data collected, it can be seen that there are 36 utterances that are used in the declarative form. The speaker used 81,81 % of the illocutionary acts in the decclarative form. It made the declarative utterances become the majority of the illocutionary acts delivered by the speaker in the video entitled "The Meaning of Life" by Talk Islam.

2. **The Functions of Illocutionary Act**

a. **Representative**

From the data collected, it can be found that there are 21 illocutionary acts which have the representative function. It represent 47,73 % of all illocutionary acts in the video entitled "The Meaning of Life" by Talk Islam.

b. **Directive**

The data show that there are 8 illocutionary acts which have the directive functions. Those represent 18,18 % of the whole illocutionary acts that are used by the speaker in the video entitled "The Meaning of Life" by Talk Islam.

c.   **Expresive**

Based on the data collected, there are 10 illocutionary acts which have the expressive function. It means that there 22,73 % of illocutionary acts in the video have the expressive function.

d.   **Commisive**

The data shows that there are only two illocutionary act which have the commisive function. It can be conclud that there are 4,54 % of illocutionary acts have the commisive function.

e.   **Declarative**

There are three illocutionary acts that have declarative function. It shows that 6,82 % of the illocutionary acts which are spoken by the speaker have declarative function.

3.   **The Context of Illocutionary Act's Functions**

a.   **Representative**

It is the act of speech which bind the speaker to the truth of what (s)he says, i.e; stating, reporting, mentioning, proposing, complaining, expressing opinion etc. The illocutionary acts with the representative function are:

> **(53)** *To a man who couldn't read or write, as he would recite whatever the angle spoke.*

He meant to describe why did he call the Holy Quran as miracle. By saying this utterance, he mentioned that all those scientific and historical contents are inside the Holy Quran which was given to prophet Muhammad ﷺ who could not read or write. He justified that it is a miracle because somebody who could not read or write is impossible to creat such complete package like the Holy Quran.

b.   **Directive**

It is the act of speech which is proposed to make the audience to do the act that is mentioned in the utterance, i.e; commanding, requesting, demanding,

suggesting, challenging, ordering, advising etc. The illocutionary acts with the directive function are:

> **(76) *And don't let that day be the first day you find out what's your life really means!***

> The word *'that day'* refers to the death day. The function of this utterance is to suggest the audience to think immediately for everything he has explained while they are able to breathe.

c. **Expressive**

Its function is to reveal or express the psychological attitude of the speaker towards the circumstances that is implied in illocutionary, i.e; praising, thanking, criticizing, complaining, congratulating etc. Some utterances that have expressive functions in the video entitled "The Meaning of Life" by Talk Islam are as follow:

> **(26) *So many sign, yet we still deny.***

The function of this illocutionary act is to criticize those who still disbelieve after all. By saying this utterance, he demanded all the unbelievers to think further about their limited point of view.

d. **Commisive**

It is the act of speech that binds the speaker to carry out what (s)he has mentioned in the utterance. So, it is strongly related to the future act, i.e; promising, vowing, threatening, offering etc. The illocutionary acts with the commisive function in the video entitled "The Meaning of Life" by Talk Islam are as follow:

> **(25) *And if the whole world was to come together, we wouldn't be able to create a single fly.***

By saying this utterance, the speaker vowed that even the highest intelligence of human being would not be able to be compared with Allah's creation.

e. **Declarative**

Declarative is the act of speech that is done by the speaker in order to make or declare something such; status, circumstances, situation, and so on. The speaker stated by saying the following utterance:

(31) *So you can believe in the big bang but I'd rather believe in He Who caused it to explode.*

The speaker declare his faith that big bang is not naturally happen, instead of there is Allah l who made it happen.

5. Conclusion and Remark

This section provides the conclusion related to the result of the research. Those are covering the types of utterances are used in the video entitled "The Meaning of Life" by Talk Islam, the functions of illocutionary act, and the meaning of illocutionary act's functions. There are 44 illocutionary acts in the video.

The utterances which are classified as illocutionary act have three form, those are; *a) imperative*, *b) interrogative*, and *c) declarative*. The result of the research shows that the speaker spoke 81,82 % of declarative utterance, 11,36 % of interrogative utterances, and 6,82 % of imperative utterance when delivered his illocutionary acts. It means that the most of the utterances are in declarative form.

The research also had discover there are 47,73 % of illocutionary acts use representative function, 22,73 % of illocutionary acts use expressive function, 18,18 % of the illocutionary acts use directive function, 6,82 % of illocutionary acts use declarative function, and 4,54 % of illocutionary acts use commisive function. The data shows that the speaker used mostly representative functions which mean that the speaker directed the audiences to believe what he believes. Another functions are also used in order to make the presentation becoming more varieties and interesting.

This research is also proposed to analyze the meaning of illocutionary acts. Based on the data that had been collected, the speaker used mostly representative

functions of illocutionary acts. The speaker gave a massive evidences to empower his argument through the representative functions of illocutionary act. The evidences that the speaker brought are referred to the Holy Quran.

Besides to give a massive evidence towards the speaker's thought, the used of representative functions was also reflected his knowledge about the unbelievers perspective. The speaker tried to show the weakness of the unbelievers perspective. After all, the speaker intended to give an alternative perspective through the video entitled "The Meaning of Life". He directed the audiences to accept his perspective.

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THE DECLINE OF MELAYU LANGUAGE IN PATANI

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Abstract

Malay has reached the glorious stage some time ago to be the lingua franca and the language of science. However, Patani Malay dialect started to change since the launch base Siamisasi Thai kingdom, namely Kempen improve the culture of the call Ratthaniyom Thai. The use of textbooks and exams will be determined by the Thai Ministry of Education, when all religious teachers let registered in line with ministry rules. Stakeholders are expected to get involved in this effort. Measures for restoring to make the language great and Patani Malay language needs to happen on a regular basis. Starting from parents which is a prelude to nurture and sow the seeds to childhood onwards by an educational system that fingering a role in this. Thus, let the new generation of heavy slump speak the mother tongue and love language of our ancestors so that the Malay language continued in use until the children and grandchildren and will reach the stage of a glorious future.

Key Words: Basic Siamisation, education system, Melayu language

1. Introduction

Malay is the national language for Malaysia, Indonesia and Brunei. The language is also one of the official languages in Singapore. In Indonesia, Malay referred to as Indonesian, Malay when in Malaysia also called Bahasa Malaysia. In addition to these four countries, Malay is also spoken by the population of Malay descendant in southern Thailand.

Malay has various dialects throughout the archipelago. One of them is Patani Malay dialect. Patani Malay dialect is a dialect spoken in the region of Pattani, Yala, and some parts of Naratiwat that is Songkla. DMP is the language of the country Thai minority, nevertheless, it is the majority language in the region of Pattani, Yala and

Naratiwat by the number of speakers is estimated 80-85 per cent. Most of them are Muslims.

Patani Malay dialect started to change since the launch base Siamisasi Thai kingdom, namely Kempen improve the culture of the call Ratthaniyom Thai. To revitalize Kempen For this, one of which is that all schools in the compulsory subjects wearing sukatan by Thai language in official business. In general, Malay and Jawi abolished. The use of textbooks and exams will be determined by the Thai Ministry of Education, when all religious teachers let registered in line with ministry rules.

2. Theoretical Background

Factors of the Decline of Malay in Patani

1. Basic Siamisation or Rathaniyom

The education system is dependent on the country's political Patani because Thai Patani under the government. By the royal Thai implement basic cause the Siamisation of the Patani Malay society. During the government Phibun Songkram in 1940 as prime minister at the time, raised the spirit of nationalism *kesiaman* to carry out basic Ratthaniyom Thai. Basic of Siamisation introduced by Phibun as follows;

- Prohibiting the educational institutes to teach the Malay language because that language is not an official language of this country.

- Closing institutes of Islamic religious education is taught in Malay.

- Prohibiting the Malays speak Malay.

- Forcing people to exchange Malay Malay name to the name of Siam.

- Redeeming the names of the villages in the Malay language into the language of Siam in all regions of the Malay.

- Trying to cause trouble to the Malays who speak Malay when dealing in offices kingdom.

- Prohibiting the Malay people wear Malay clothes.

Although Rathaniyom base is opposed by residents of Patani, in connection with the language problem they argued because the vast majority of residents in the region comprised of the Malay race then naturally the Malay language is also used as an official language in addition to the language of Siam. They also demanded that the Malay language used as the language of instruction in schools kingdom. In their opinion the only way that our other untenable position of the Malay language. Nevertheless, royal Thai rejected almost all of these demands.

2. Education System

Education is a business and leadership order to expand and promote all abilities and the possibilities that exist in a child-man who trained with complete-complete and the maximum height of the physical and spiritual within certain limits. Before Patani was colonized by Siam education here is highly developed with the use of the Malay language as a tool for fatigue science. At the beginning of the 20th century Patani is a center of Islamic education in the archipelago. Since the kingdom of Siam did Siamisasi or Rathaniyom basis in Patani Malay society began to change, the Malays were not allowed to use the name of Malay, the Malay dress, speak and write in Malay and study the Islamic religion. When education system under the monarchy. All schools were required to use the language of Siam in learning process. Books and texts will be determined by the Thai Ministry of Education.

Thus, it may be said, the problem of illiteracy among language Thai Patani Malays are disappearing, and now the younger generation to education in the royal schools will use the Thai language well even though stage of mastery both of the languages of various ratings. Lower school classes, the ability to speak Thai rather restricted. Proficiency in writing is also less, still more Thai language designations in Malay dialect clearly. However, in general, this group can also communicate in Thai language and also be able to follow the design of television, radio, and newspaper.

Class middle-ranking students who follow academic subjects have proficiency in Thai high. When for ranking universities capabilities usage in the Thai language is very high, because in lecture using Thai language entirely. And exam materials are also based on the Thai language. Then this group can use the Thai language fully and almost all aspects. In conclusion, education plays a role in perpetuating the language, then in the Patani Malay community in the education system wholly speak Thai language, it is because the use of Patani Malay language is increasingly degenerate and the younger generation prefers to speak Thai.

3. Effect of Thai Language

Different than the influence of Sanskrit, Arabic and English. Thai language deeply affected the Patani Malay language in which its status as the majority language and the official language Thai. So this area is a bilingual region, by the most bilingual speakers DMP, and DMP Thai language.

Since Patani under the rule of Siam, residents here must learn the Thai language, if it do not know or reject the Thai language, it will not have a chance to advance themselves, both in terms of work or education. Therefore, Thai language becomes a key condition in life in Thai society.

The influence of the Thai language is very strong against the Patani Malay language. So that native speakers of Malay in Patani take Thai language vocabulary in their use of language. Although vocabulary Thai but in Malay dialect.By the way, the Thai language mempengaruhui upward Patani Malay language in all aspects. So, if spoken by residents of Malaysia or Indonesia would apply obstacle in communication because of the vocabulary of gauze or a different sentence structure.

3. Conclusion and Remark

Malay has reached the glorious stage some time ago to be the lingua franca and the language of science because that language is spoken directly with another language in addition to the characteristics of disclosure contained in the Malay language is influenced by other languages cause that language can thrive rapidly and become the lingua franca in the Malay Archipelago at that time.

As a child responsible to develop Patani Malay language so that he is not left out of the earth itself. Measures for restoring to make the language great and Patani Malay language needs to happen on a regular basis. Starting from parents which is a prelude to nurture and sow the seeds to childhood onwards by an educational system that fingering a role in this. In addition, the need to hold workshops on the Malay language, growing bodies fingering a role in this and attempt to propagate the design of radio, magazines, and for instance.

A nation that ignores its own language but other languages flattering height will not advance even thinking continuously shackled, did not have the self-confidence and low self-esteem was always tasteless. Thus, let the new generation of heavy slump speak the mother tongue and love language of our ancestors so that the Malay language continued in use until the children and grandchildren and will reach the stage of a glorious future.

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THE CORRELATION BETWEEN INTEREST IN LISTENING TO ENGLISH SONGS AND ENGLISH PRONUNCIATION OF THE STUDENTS OF ENGLISH EDUCATION STUDY PROGRAM, SRIWIJAYA UNIVERSITY INDRALAYA

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Abstract

The main purpose of this study was to describe whether or not the students' interest in listening to English songs and their English pronunciation have a significant correlation. The method used in this study was a descriptive method. The population of this study was all of the English Education Study Program students of Sriwijaya University Indralaya. There were 172 students and the sample of this study was 85 students: Semester V and VII. Sampling method used in this study was purposive sampling method. The data were collected by means of questionnaire and test. To verify the hypotheses, the data obtained were analyzed by using the correlation analysis. The result of the analysis showed that most of the students who had high interest in listening to English songs had good pronunciation. There was statistically significant correlation between students' interest in listening to English songs and their English pronunciation. The result of correlation analysis was 0.284, with p-value = 0.008. It meant that there was a significant correlation between students' interest in listening to English songs and their English pronunciation.

Key Words: Correlation, English Pronunciation, Interest

1.   Introduction

Where there's a will, there's a way. "It is used to mean that if you are determined enough you can find a way to achieve what you want, even if it is very difficult" (Cambridge dictionaries online, 2015). When someone is interested in something, he or she will do anything to get or achieve it. For example, when someone has to decide which study program he should take in a university, he will not choose the study program that does not interest him. The higher the interest of the students to a study program, the higher the possibility it will be chosen by them. In other words, in order

to achieve something more easy, people have to know what their interests are. Everyone had better do something that interests him than to do something unwillingly. It will be an obstacle in his own mind if someone does something uninteresting for him. Ones' interest may influence his activities, career, ability, and other major phases of his daily life, and the result would possibly be satisfying. Thus, interest plays a very important role in humans' life. Since interest is important, people should consider it more and more, especially in the world of education. According to Slameto (as cited in Angmalisang, 2013) learning is more successful when dealing with interest of students. Therefore, never abandon interest, unless the result would be bad.

In humans' daily life, songs are interesting sounds to listen to since they affect their mind. Everyone can feel the peace and happiness just by listening to songs. Start from children up to adults love listening to songs even though they do not know the meaning of the songs. One does not need to be pushed to listen to songs; he or she will listen to songs willingly and happily because they are very interesting for him. Songs are easy to get, you can ask for the copy from your friends. They can also be downloaded from internet by using computer or other gadgets such as hand phone and tab.

Nowadays, English songs are used as a medium in teaching English. English songs can be used in an English class as a medium for teaching and learning. Veronika (2007) claims, songs have a place in the classroom for helping create that friendly and co-operative atmosphere for language learning, but they can offer much more. She also mentioned the idea that songs are effective tool in education. In other words, English songs are very interesting and helpful learning media, especially for English Education Study Program students.

Pronunciation is one of the problems faced by students in learning English as a foreign language. Cowie (1983) states that pronunciation is the way in which a word is pronounced. In other words, pronunciation is very important. However, learning to pronounce English words is not easy, many students get difficulties in learning

pronunciation because English is not their native language. But, when they sing English songs, it seems that pronouncing English words is not difficult for them. Whether it is consciously or not, when people listen to English songs, they will pay attention to the way the singer pronounces the words. In addition, in order to sing a song well people should be able to pronounce every single word in the lyric as well as the singer does. Unintentionally, people who often listen to English songs will also be accustomed to the words they listen. They will follow the way the singer pronounces the words in English songs they have listened when they are speaking English with other people. Murphey (1992) states, songs can help young learners improve their listening skills and pronunciation; therefore they potentially help them to improve their speaking skills. In other words, English songs are very useful not only for amusement, but also for helping students to improve their pronunciation.

Students' interest in listening to English songs will help them to increase their will of learning English. Haghverdi and Abdpur (2013) state, in order to maintain students' interest in language learning when English is not seen as an important factor for their needs, teachers have to find creative ways to teach language and expand student's motivation to learn the language. In other words, the higher students; interest the higher their will of learning. Therefore, students' interest in learning should be concerned, not abandoned. English songs can be interesting media to use in English teaching and learning process that will increase students' will of learning.

Interest is a feeling of wanting to learn more about something or to be involved in something (Interest, 2015). Cronbach (1990) also describes and emphasizes that interests fall under the heading of personality besides motives, beliefs and attitudes, and so on. This pattern would be more clearly understood from its definition in Webster Dictionary (1998) as it defines, "Interests is a feeling of intentness, concern or curiosity about something (such as an interest in politics), the power of causing this feeling (such as books of interest of children); something causing the feeling (such as the academic interest of scholar)". Murphy and Charles (1991) define an interest as a response of liking. It is identified from affective response to an object or

activity. Furthermore they state that interest is linked to specific activities where the objectives one seek in order to satisfy a need can be obtained.

Hidi (2001, p.192) states, "After we recognized that interest had an important role in readers' text processing, we focused on gaining a better understanding of the concept of interest and the ways in which it has been investigated." It means that interest is considered as an important aspect in human's life. "Interest increases motivation, engagement, and persistence (Schraw, G & Lehman, S, 2009, para. 9).

Some authors had studied about the use of song in education to verify its effectiveness. Murphey (1992), finds that the majority of English language teachers all over the world use or have used song for teaching purposes. In his study, he also finds that songs may be exploited as effectively as any other text. They can be a source of language for presenting and practicing grammar and syntax, vocabulary, pronunciation, and the skills of listening, reading, writing, speaking and translation. The use of songs as material is believed to help introducing the individuals with sounds, stress, and rhythmic patterns, vocabulary, intonation, grammatical and conversational exchanges, (Davanellos & Akis, 1999). Therefore, teachers should consider using music to facilitate the language acquisition process. Coromina (2010), also defends that when students enjoy learning English through songs, they will indirectly make the effort to learn the lyrics of the songs they are listening to. Vernon (2006), also claims that English songs bring energy to the classroom and boost students' confidence. Fonesca-Mora el al and Qiu (2011, 2006) point out another two functions of English songs in teaching listening: to improve the memory and practice the pronunciation.

Jiang (2004) includes songs in listening teaching for two main reasons: Affective reason and linguistic reason. For affective reason, Jiang says that using English song in class is an effective method since it can create a relaxed and pleasing atmosphere. For linguistic reasons, songs have strong and typical rhythms, which are easy for the students to memorize and they enhance the effect of teaching.

Pronunciation is one aspect that must be learnt by the students if they want to make a good speech. Therefore, good pronunciation is necessary to support the ability to communicate in English orally. Talking about pronunciation, it has close relationship with speaking. When we speak, we produce sounds, rhythm, and also intonation where all of them are aspects of pronunciation (Sheeler and Markley, 1991). Furthermore, Hornby (1989) states that "pronunciation is the way in which a language is spoken or way in which a word is spoken".

The problem of pronunciation usually appears because the system of the English pronunciation is different from that of learners' native language system. For example, in Bahasa Indonesia we pronounce the word by following how the words are spelled. However in English, how we spell and how we pronounce the same exactly word is almost totally different.

The writer found some previous related studies which were related to his study. The first one was a study done by Angmalisang (2013) at *SMA Kristen Irene Manado*. The finding of her study was that there was a significantly positive correlation between students' interest in listening to English songs and their listening ability. She concluded that the higher students' interest in listening to English songs, the higher their listening ability. The second related study was a thesis written by Jannah (2011). The result of her study showed that there was a positive correlation between students' interest in listening to English songs and speaking ability. The third related study was the journal written by Haghverdi and Abdpur in 2013. The aim of their study was to examine the effect of song and movie on the language achievement of high school students. The result of this study showed that the implementation of song and movie used in the study had significant effect on student's language achievement in their listening, reading, vocabulary and grammar. The last, a study by Farmand and Pougharib (2013) which was done in an English institute of Mazandaran province in the year 2012 also showed that the use of English songs had impact on language learners' pronunciation, and it improved their oral production. From these previous

related studies, it can be concluded that the higher student's interest in learning, the higher their English achievement.

By viewing these related studies, the writer intended to conduct a study entitled *The Correlation between Interest in Listening to English Songs and English Pronunciation of the Students of English Education Study Program, Sriwijaya University Indralaya.* Research question of this study was as follows: Is there any significant correlation between students' interest in listening to English songs and their English pronunciation?

2.   Method

The writer conducted a correlative study to describe the correlation between students' interest in listening to English songs and their English pronunciation. The method used was a descriptive method to collect detail information about specific situation. "Descriptive research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way" (Shuttleworth, 2008, para. 1). There were two variables in this study. They were predictor variable and criterion variable. In this study, the predictor variable was students' interest in listening to English songs, while the criterion variable was students' English pronunciation. To collect the data about students' interest in listening to English songs, the writer used a questionnaire, while for testing the pronunciation the writer used a written pronunciation test.

The population of this study was all the students of English Education Study Program, Sriwijaya University Indralaya in academic year 2014/2015. The writer used purposive sampling due to the need of data collection. Since semester V and VII students had taken Phonology, they were chosen as the sample of this study. They consist of 85 students. The data of this study were collected by using questionnaire and test.

To check if the test and the questionnaire had good content validity, the writer made them in line with the objective of the study. Because the objective of the study was to

find out whether or not there was significant correlation between students' interest in listening to English songs and English pronunciation of the students of English Education Study Program, Sriwijaya University Indralaya, the test focused on students' English pronunciation and the questionnaire focused on students' interest in listening to English songs. In addition, the writer consulted the items on the questionnaire and test to his advisors to ensure that the items on the questionnaire and the test were valid.

In order to find out the reliability, the questionnaire and test were tried out to the students who were not the sample of this study. They were English Education Study Program students of Sriwijaya University Palembang Campus. Wallen and Fraenkel (1991) state that the reliability should be at least 0.70 or preferably higher. To find out the reliability of the test, the writer used Pearson Product Moment correlation coefficient. The calculation was done by SPSS Program version 21.0. After calculation, it was found out that the coefficient obtained was 0.719 which is higher than 0.70. It meant that the test was reliable. Meanwhile, in order to know the reliability of the questionnaire, the writer calculated it by using SPSS version 21.0 through Cronbachs Alpha's Formula. The writer found out that the reliability of positive questions on the questionnaire was 0.860 and the reliability of negative questions was 0.915. It can be concluded that the students' answers were consistent. Since the reliability of the questionnaire was higher than 0.70, It meant that the questionnaire was reliable.

To verify the hypotheses, correlation analysis was applied on the result of students' interest in listening to English song and students' English pronunciation. To find out the correlation coefficient of the variables, the raw-score correlation formula (the Pearson's product moment) was used. Afterwards, the result of accounted correlation coefficient was compared to the r-table of product moment in order to determine whether the correlation was significant at the level of significance of $p<0.05$ with

degree of freedom (df) N-2. To run the analysis, the writer employed the Statistical Package for Social Science (SPSS) version 21.0 for windows.

3. Result and Discussion

Referring to the objective of the study, the collected data were presented in the data distribution. The data of students' interest in listening to English songs and their English pronunciation were distributed in the form of score.

The writer distributed a set of questionnaire to be answered by the students. Then the answers were rated by using likert-scale, which made it possible for the writer to score the answers. The highest possible score of students' interest was 60, and the lowest was 15. Based on the distribution of students' score from the questionnaire, the writer found that the highest score was 60 and the lowest score was 23. The data distribution of the students' interest in listening to English songs is presented in Table 1.

Table 1. The Score Distribution of the Students' Interest in Listening to English Songs

Class Interval	Category	Frequency	Percentage
46 – 60	Very High	67	78.82 %
31 – 45	High	17	20 %
16 – 30	Low	1	1.18 %
> 15	Very Low	0	0 %
Total		85	100 %

From the table above, it can be concluded that almost all the students have very high interest in listening to English songs. There are 67 students in very high category, 17 students in high category, and only 1 student is in low category.

The scores of the students' English pronunciation

The highest score of students' English pronunciation was 10 and the lowest one was 5.5. The data distribution of the students' English pronunciation can be seen in Table 2.

Table 2. The Score Distribution of the Students' English Pronunciation

Score	Frequency	Percentage
10	55	64.71 %
9.5	11	12.94 %
9	10	11.76 %
8.5	2	2.35 %
8	3	2.53 %
7	1	1.18 %
6	2	2.52 %
5.5	1	1.18 %
Total	85	100 %

Table 3. The Score Category Distribution of Students' English Pronunciation

Category	Score	Frequency	Percentage
High	7.0 – 10	82	96.47 %
Average	5.6 – 6.9	2	2.35 %
Low	5.5 or less	1	1.18 %
Total		85	100 %

From table 2 and 3, it can be concluded that almost all the students have high score in their pronunciation test. There are 82 students in high category, 2 students in average category, and only one student in low category.

In order to verify the hypotheses, correlation analysis was applied. The writer used raw-score correlation formula to find out the correlation between students' interest and the students' English pronunciation.

After the data were analyzed, it was found out that the correlation coefficient was 0.284. The data are shown in table 4.

Table 4

The Correlation between Students' Interest in Listening to English Songs and Their English Pronunciation

Variables		R (Pearson Correlation)	P Sig (2-tailed)
Interest	English Pronunciation	.284	.008

To interpret this study, the value of r-obtained should be consulted to the value of r-table. If the value of r-obtained is higher than value of r table and p (probability) value is lower than 0.05, it means that there is a significant correlation between the variables. On the contrary, if the value of r-obtained is lower than the value of r-table and p value is higher than 0.05, it means that there is no significant correlation between the variables. From the table above, it was shown that the r-obtained (0.284) was higher than value of r-table (0.213). It also showed that p value (0.008) was lower than (0.05). Since the r-obtained was higher than r-table the null hypothesis was rejected, and investigators' alternative hypothesis was accepted. In short, there was a

significant correlation between the students' interest in listening to English songs and their English pronunciation. In line with this study, a study done by Angmalisang (2013) at *SMA Kristen Irene Manado* showed identical result. The finding of her study was that there was a significant correlation between students' interest in listening to English songs and their listening ability. She concluded that the higher students' interest in listening to English songs, the higher their listening ability. In line with that, the result of the previous related study written by Haghverdi and Abdpur (2013) showed that the implementation of song and movie used in the study had significant effect on student's language achievement in their listening, reading, vocabulary and grammar. Besides, the result of previous study by Jannah (2011) showed that there was a positive correlation between students' interest in listening to English songs and speaking ability. The last, a study by Farmand and Pougharib (2013) which was done in an English institute of Mazandaran province in the year 2012 also showed that the use of English songs had impact on language learners' pronunciation, and it improved their oral production. From the result of these studies, it can be concluded that interest plays an important role in students' English achievement. The more interested the students are, the better result will be achieved.

Based on the discussion above, the writer believes that students' interest in listening to English songs has a positive effect on their English pronunciation. The higher students' interest in listening to English songs, the better their English pronunciation. However, the result of this study can not be generalized to other students in other places.

4.   Conclusion and Remark

Based on the findings and interpretation above, the conclusion is drawn and some suggestions are offered. From the data gathered during the study, it can be stated that almost all students were interested in listening to English songs and they have good pronunciation. Since the obtained r-coefficient (0.284) exceeded the r-table (0.213), it was concluded that both students' interest in listening to English songs and their English pronunciation are related to each other with the significant correlation.

Having read the conclusion above, it means that students' interest in listening to English songs influences their English pronunciation. Since students' interest plays an important role in the learning process, it is suggested to the lecturers to consider using English songs as materials in teaching English, especially pronunciation since English songs give positive effect on students' English pronunciation. Encouraging students' interest will improve their activities and creativities in the learning process. Beside, students will not get bored while learning since they are interested in the lesson. For the students, they can use English songs to learn English pronunciation since English songs give positive effect on their English pronunciation.

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SCIENTIFIC APPROACH-BASED OF INTERACTIVE LEARNING MEDIA TO IMPROVE MATHEMATICAL THINKING SKILL AND SELF-REGULATED LEARNING

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Abstract

The aim of this research is to write a learning book and to develop a software of interactive media based on scientific approach to facilitate students in discovering concept, improving their mathematical thinking skill, and self-regulated learning. This is a two-year Research and Development, whereas in the first year is to write textbooks, and develop a interactive media software. The second year is to measure the validity of the entire instrument, the pre-test and post-test mathematical thinking skill, implement the software in a learning process, distribution a self-regulated learning questionnaire, implement the software in a learning process, explore the students' perception towards this software through interviews. The sample of this research is seven grade students of junior high school in Tasikmalaya. Two schools are selected randomly. The developing of this software complies of stages: concept, design, material collecting, assembly, testing, and distribution. The validity test of all instrument used consists of consideration of two experts (a mathematician and learning-media expert); revision based on advices and input from both experts, empirical trial test, revision further if necessary. Based on the results of consideration two experts of instructional media and mathematician, test empirically, and perceptions of students that textbooks, textbook and software interactive learning media based approach to scientific, worthy implemented in the learning of mathematics students at the junior high school.

Keywords: interactive learning media, scientific approach, mathematical thinking skill, self-regulated learning

1. Introduction

Mathematics is a subject that is less favored by students, this assumption is developing both regionally and nationally. Though individually, many are successful at math competitions nationally and internationally. This is in accordance with the opinion of Abdi (2004) which states that most students find it very difficult to be able to quickly absorb and understand about mathematics courses, but the difficulty

students understand math taught it be related to how to teach teachers in classes that do not make students feel happy and sympathetic towards mathematics, approaches used by mathematics teachers are generally less variable. For students who have a high level of intelligence, attitude and action as well as how to teach anything is not a problem. However, for students who have an average level of intelligence, and low math will drab causing not pleased to learn mathematics.

Various factors that cause poor performance of students in mathematics, according to Ruseffendi (1991) there are ten factors that could affect the success of student learning is child's intelligence, readiness of children, child talent, willingness to learn, the child's interest, the model presentation of the material, the attitude of the teachers, the atmosphere of teaching , the ability of teachers, and the community. From the ten factors, presentation model of the material, the attitude of the teachers, the atmosphere of teaching, as well as the ability of teachers continue to be quality improvement effort, through changes in the curriculum, improving the quality of teachers through courses-upgrading and continued his studies at a higher level, but from businesses it has not produced any meaningful results. Various efforts have been made by the government to boost student achievement, including the conduct of curriculum change, apply a variety of innovative learning model so that learning becomes more meaningful, students are not only learning to know about but also learning to do, learning to be and learning to learn, as well as learning to liver together. With studying patterns like the above will happen interpersonal communication, cooperative group learning among students. Students can relate the concepts learned with other concepts that are relevant to a comprehensive thinking process as a whole, and learn to solve problems as a learning exercise to familiarize with high cognitive level. If the condition the learning as above, it is expected that the classroom comes alive for students to become happy feelings.

Curriculum enforce government policy in 2013, is one of the government's efforts to improve student achievement. In the implementation of Curriculum 2013, the government issued some sweets among Permendikbud number 103 in 2014, standard

learning process for teachers are required to implement the learning process using a Problem Based Learning Model, Discovery or Inquiry Learning and Project Based LearningModel as well as the need to integrate scientific aproach to any learning process. Moreover, that the computer must be integrated in the learning process, the teacher acts as a facilitator so that learners can discover and build knowledge. Thus the teacher should facilitate students' learning in the form of computer-based media, one of which is an interactive learning media. Currently available software that facilitates learning but rarely students learn to find the concept.

Based on the interview with the Chairman MGMP that teachers are still rare use interactive learning media, hence the need for innovation in the learning process. Therefore, efforts are needed to improve the learning process through the use of media-based interactive learning approach scientifik. This is because the use of interactive learning media can motivate students to learn. Previous research has had an impact quite well that the media interactive learning ease the burden on students learn independently. In the current circumstances, the lesson should no longer be a tedious thing, as a few decades ago. Thanks to the development of information technology so rapidly, teaching materials can be presented with sounds and images are dynamic, not boring, as well as solid information. Therefore, the development of computer-based learning is expected to improve the quality of the learning process in the classroom.

Implementation of interactive learning media in the learning of mathematics can present the concept and practice of mathematical thinking skills such as critical and creative thinking and independent learning. The advantages of interactive multimedia applications of mathematics in explaining a concept requires students to explore and analyze, try and explore the concepts and principles contained in the material that it faces, so it is relatively faster build students' understanding structure. This is caused because the integration of components such as voice, text, animation, pictures or graphics, and video functions to optimize the role of the senses in receiving information into the system memory. Regular learning has been done without the

help of interactive media do not give students the opportunity to explore and develop their creativity. Therefore, the development of interactive learning media predicted to be able to facilitate students to develop the ability to think mathematically and Self Regulated Learning.

The purpose of this research is to develop textbooks, software media interactive learning, identify and analyze the mathematical thinking skills and self Regulated Learning students. Outcomes of this study is mathematics textbooks and software media interactive learning.

2. Theoretical Background

Some experts give a definition of instructional media, among others Schramm (1977) suggested that learning media is the messenger technology that can be used for learning purposes. Meanwhile, Briggs (1977) argues that learning media is the physical means to convey the content or learning materials such as books, movies, videos and so on. Meanwhile, the National Education Associaton (1969) revealed that the learning media is a means of communication in the form of print and view, listen, including hardware technology. From three above opinion concluded that the learning media is anything that can deliver the message, it can stimulate the mind, feelings, and the willingness of students so as to encourage the creation of a learning process. Learning media can be either print media or electronic media.

Media classified into five groups: human-based media (teachers, instructors, tutors, role playing, group activities, field-trip); print-based media (books, guides, workbooks, work tool, and loose pages); visual-based media (books, work tools, charts, graphs, maps, drawings, transparencies, slides); based audio-visual media (video, film, slide-tape program, television); and computer-based media (computer aided teaching, interactive video, hypertext). The results of other studies, Kusuma (2008, 2009) states that the computer-based interactive learning can be presented in an interesting, efficient, and effective interaction patterns tutorials, simulations, or games; Learning model development based e-Learning improve high-level

mathematical thinking skills; and improved reasoning skills, communication, connection, problem solving, critical thinking, and creative thinking mathematically through learning computer media better than students in the regular classroom learning; implementation of the use of computer media can significantly increase positive attitudes and interests of students in learning mathematics. In mathematics, interactive media greatly assist students in understanding the various materials that seem abstract independently.

In this research used media presentation in the form of random (non-linear), which is one form of interactive video. This learning media according Seels & Glasgow (Arsyad, 2007) belong to the media type microprocessor based on cutting-edge technology media selection. Media cutting-edge technology itself is divided into a telecom-based media, such as teleconferencing, distance learning, and microprocessor-based media, such as computer-assistted instruction, computer games, intelligent tutoring systems, interactive, hypermedia, and compact (video) discs. Based on these opinions, the preparation of the learning process through interactive media begins with preparing teaching materials following practice questions in the form of interactive animated video. In the learning process, students interact with computers and learn mathematical concepts independently, the teacher acts as a facilitator and motivator.

Scientific approach is an approach to learning according to the curriculum in 2013 include: Observe, ask, reasoning, Trying, Summed known as 5M. Thus, students find the concept begins by presenting the problem, observe first, then asked to given problems, reasoning, then try and draw conclusions. Thinking is an activity that is individualized, but it is not done in isolation, must be mediated by others. Marzano et al. (1989) argues that thinking includes five dimensions of metacognition, critical and creative thinking, thinking, thinking ability of the core, and the relationship between thinking with particular knowledge. In line with these opinions, Fisher (1995) suggested, thinking it involves critical and creative aspects of the mind, both are used in reasoning and build ideas. Additionally thought to be involved in any mental

activities that help to formulate or solve a problem, make a decision or to build understanding, then through thinking we can interpret it.

According to Fisher (1995), experts distinguish two types of thinking that is creative thinking exploratory and analytical reasoning or logic or critical. According Sumarmo (2006) generally think mathematically can be defined as conducting or mathematical processes (doing the math) or a mathematical task (mathematical task). Judging from the depth or complexity of mathematical activity involved, mathematical thinking can be classified into two types: low-level mathematical thinking (low-order mathematical thinking) and high-level mathematical thinking (high-order mathematical thinking). Critical and creative thinking of mathematics, both of which are types of thinking are included in the high-level mathematical thinking. In addition, according Sumarmo (2004) Self-Regulated Learning is a process of self-monitoring design and careful review of the cognitive and affective processes in completing an academic task. According to Zimmerman (Darr and Fisher, 2004) Self-Regulated Learning includes three main phases are repeated, namely: forethought, performance control, and self-reflection. Schunk and Zimmerman (Sumarmo, 2004) there are three main phases in the cycle of Self-Regulated Learning, namely: designing learning, monitor learning progress for implementing the design, and evaluate the results of the complete study.

3. Method

The method in this research is a developmental research, conducted with junior high school students in the city of Tasikmalaya, taken 7th grade students of SMPN 1 and SMPN 3 Tasikmalaya. The study is planned for 2 years, the first year of making textbooks and developing interactive learning software media. Textbooks cover material: Triangle Quadrilateral, Linear Equations and Inequalities One Variable, Arithmetic, Social Transformation, Opportunities and Statistik.The second years to make about mathematical thinking skills tests, questionnaires Self-Regulated Learning, and the validity test empirically, but had previously requested an

assessment of two the mathematician and interactive learning media. Then pretest mathematical thinking skills, implementation of interactive learning Software media in learning, mathematical thinking skills test, questionnaire distribution Self Regulated Learning, and was last conducted interviews with student representatives. The development of interactive learning media includes the following phases: concept, design, material collecting, assembly, testing, and distribution. Mathematicians assess the material aspect, text, image, order, and clarity, while interactive media experts assess the aspects of text, image, audio, animation, and interactivity.

4. Result and Discussion

Outcomes of this research is the development of textbooks and interactive learning media software. Textbooks prepared covering material Triangle Quadrilateral, Linear Equations and Inequalities One Variable, Arithmetic, Social Transformation, Probability and Statistics. Software media interactive learning using Scientific approach include: Observe, ask, reasoning, Trying, concluded (5M). After teaching materials and software-based interactive learning media Scientific approach has been compiled, to see the reliability of such instruments held due diligence about the face validity and content validity enlist the help of two people mathematician and interactive media. Face validity views of the editorial aspect, appearance, color matching, and readability, content validity, from the aspect of material conformity with the syllabus. To test the validity of content and face validity textbooks evaluated the suitability of teaching materials to the syllabus, materials, text, image, order, and clarity by a mathematician. As for the test content validity and face validity media interactive learning is evaluated on the material, text, image, order, and clarity by an interactive learning media.

Some input from mathematician to textbooks include: the text should be clearly do not give rise to confusion, picture adjusted to the material covered, and order delivery of content to be reexamined. Based on the advice of a mathematician, later revised

textbooks. Some suggestions from the expert media interactive learning include: the menu should be clear, and there are hints, text should be concise clear, the color should be interesting, the logic should be obvious. Based on the advice of expert media interactive learning, interactive learning media software then revised. Scientific approach based teaching materials that have been framed Software developed into an interactive learning media using Adobe Flash. Based on the evaluation of two mathematicians and media, it was concluded that the textbooks and software media interactive learning feasible to implement in the process of learning mathematics in junior high school students next year.

5. Conclusion and Remark

Based on the results of consideration of two mathematician and interactive learning media: mathematics textbooks and software-based interactive learning media declared eligible scientific approach implemented in the process of learning mathematics in the next year. Suggestions put forward in this study, should teachers design their own teaching materials and media interactive learning in order to motivate students to learn tailored to the characteristics of students, presentation materials, as well as skills to be achieved.

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USING TALKING CHIPS TECHNIQUE TO IMPROVE SPEAKING ACHIEVEMENT OF 11th GRADERS OF ONE SENIOR HIGH SCHOOL IN INDRALAYA UTARA

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Abstract

The objectives of this study were to find out whether or not there were a significant difference in speaking achievement of students who were taught by using Talking Chips technique, a significant difference in speaking achievement between the students who were taught by using Talking Chips technique and those who were not, a significant improvement in each aspect of speaking achievement after they were taught by using Talking Chips technique, and an aspect of speaking that gave the biggest and the smallest contributions to the speaking achievement of the 11th grade students of one senior high school in Indralaya Utara who were taught by using Talking Chips technique. The sample of this study was 61 eleventh grade students of one senior high school in Indralaya Utara which were grouped into a control and an experimental groups. In collecting the data, each group was assigned a pretest and a posttest. The data were analyzed statistically by using paired and independent sample t-test. The results of this study are as follows: 1) there was a significant difference in speaking achievement of students who were taught by using Talking Chips technique; the mean difference was 9.355 and p-value=.000, 2) there was a significant difference in speaking achievement between the students who were taught by using Talking Chips technique and those who were not (mean diff= 13.65, and p-value=.000), 3) there was significant improvement in each aspect of students' speaking achievement, and 4) there was an aspect of speaking that gave the biggest and the smallest contributions to the speaking achievement of the 11th grade students of one senior high school in Indralaya Utara who were taught by using Talking Chips technique. In conclusion, there was a significant difference in speaking achievement between the students who were taught by using Talking Chips technique and those who were not. The result of this study showed that Talking Chips Technique is effective in improving students' speaking achievement.

Keywords: Speaking Achievement, Talking Chips, Eleventh Grade Students

1. Introduction

English plays a very important role in international communication. It is a key to the store house of the knowledge because many books on all branches of knowledge are written in English (Patel & Jain, 2008). English is also used as a tool for international communication in many fields such as transportation, commerce, banking, tourism, technology, diplomacy, and scientific research (Brown, 2001).

In Indonesia, English is taught as a compulsory subject for Junior High School and Senior High School (Depdiknas, 1989). This is also supported by The Government Regulation, Number 28, 1990, (as cited in Lauder, 2008) which states that English is to be taught from the first year of Junior High School. Thus, it can be inferred that teaching and learning English is very important in Indonesia.

There are four language skills in the teaching and learning of English. They are listening, speaking, reading, and writing. These four language skills are equally important, but speaking skill is the leading skill during English teaching and learning process. As Welty and Welty (1976) claim, speaking is the main ability in communication, thus speaking is the most important language skill to master. According to Nunan (as cited in Bahrani & Soltani, 2012), a success in language learning is measured in terms of the ability to carry out a conversation in the (target) language. In addition, the meaning of a language is a means of communication. It means when students are able to speak a target language, they are considered success in learning or acquiring the language. Thus, speaking plays the most important role in terms of the successfulness of students to learn a language.

According to the Regulation of National Education Minister Number 23 in 2006 (Depdiknas, 2006), the aim of teaching speaking skill is to help the students be able to express the meaning in transactional and interpersonal language in daily life context. People who have a good ability in speaking would be better in sending and receiving information or message from the others. Despite the fact that Indonesia is in the 32nd position out of 70 countries for English Proficiency Index (EPI) and is categorized as moderate (Education First, 2015), English proficiency among

Indonesia students is low (Lie, 2007) . In addition, Indonesia students face many difficulties in communicating in English (Muamaroh, 2013). This is supported by a research conducted by Mukadimah and Jamilah (2013) who got involved the 11th graders of SMAN 1 Pengasih in Yogyakarta showed that there were five common problems faced by the students in speaking English. The first problem was the opportunity to speak English. Teachers usually dominate the students. In fact, the students need a lot of opportunities to express their thought in speaking. The second problem was the vocabulary. Because of the lack of vocabularies, as the result the students usually got stuck to speak. The third one was pronunciation. The students rarely spoke English in their daily life. Therefore, the students found it hard to pronounce the words. Another problem was the resources used during learning process. The last one was the activities in the classroom which did not encourage students. As the results of those problems, the students failed to speak English (Mukadimah & Jamilah, 2013).

In line with the finding of research conducted by Mukadimah and Jamilah, Syafryadin (2011) who conducted a research by involving one of senior high schools in Bandung found that the tenth grade students faced many problems in learning speaking such as the lack of vocabularies, mispronunciation, and less motivation. Therefore, the students were not enthusiastic in doing the speaking activities.

Furthermore, a research conducted by Ghassanie (2015) by involving one of senior high schools in Palembang showed that eleventh grade students found it hard to speak. For example, they were not confident in speaking and did not know how to express what they wanted to say.

Those problems mentioned above were also faced by the 11th grade Students of one of senior high schools in Indralaya Utara. A preliminary investigation through interviewing the English teacher oshowed that the students found it hard to speak. They lacked vocabularies and had less motivation in learning English. In addition, they also did not know how to pronounce the words of English correctly and fluently.

To help the teacher to solve the problems faced by the 11th grade students of one of senior high schools in Indralaya Utara in speaking, the writer applied Talking Chips technique which was developed by Kagan and Kagan (2009). It is one of the techniques in cooperative learning. This technique allows the students to work in groups to discuss a specific topic. Moreover, Kagan and Kagan (2009) says that Talking Chips technique is a technique of teaching speaking which make the students interested and help the students to speak. It is because this technique can make the students: be active in the classroom, learn how to cooperate in a group and have a chance to speak English because the students are divided into several groups and each member will have a turn to speak English.

The implementation of Talking Chips technique had been proven in many previous studies. For example, the research conducted by Syafryadin (2011) who involved one of senior high school in Bandung found that there was improvement in speaking achievement. Mukadimah and Jamilah (2013) also showed that there was a positive improvement in speaking achievement. Another study conducted by Estiningrum (2014) who involved junior high school students in Klaten showed that there was a significant improvement in speaking achievement.

Accordingly, the writer was interested in conducting a study entitled "Using Talking Chips Technique to Improve Speaking Achievement of 11th grade Students". There were three problems that were formulated in this study; 1) Was there any significant difference in speaking achievement of the students before and after they were taught by using Talking Chips technique?, 2) Was there any significant difference in speaking achievement between the students who were taught by using Talking Chips technique and those who were not?, 3) Was there any significant improvement in each aspect of speaking achievement of the students after they were taught by using Talking Chips technique?, and 4) which aspect of speaking that gave the biggest and the smallest contributions to the speaking achievement of the 11th grade students of one senior high schools Indralaya Utara who were taught by using Talking Chips technique.

2. Theoritical Background

Despite the fact that speaking is a tool by which a language is used and is considered important since by speaking, people can share and deliver what they need to others, it is considered a complex skill in language learning because it, at once, involves those five aspects of language spontaneously when one wants to deliver his massage to others. According to Harris (1969), speaking takes the part of pronunciation, vocabulary, grammar, fluency and comprehension altogether. Thus, it is important to find out a strategy to teach speaking.

Kagan and Kagan (2009) develops Talking Chips as one of the teaching strategies of cooperative learning. This technique supports accountable participation in small group interaction by regulating how often each group member is allowed to speak. As this technique points out the full and even participation, it encourages passive students to be more confident in speaking. This technique also helps the students to improve their critical thinking since it is possible for the students to discuss controversial issues which will lead them to engage to one another opinion.

In implementing the Talking Chips Technique, the writer modified the procedures proposed by Syafryadin (2011) which are as in the following.

1. Teacher provides a discussion topic. The teacher could provide certain topics for the groups to be discussed. It would help the students to maintain their ideas to be shared.

2. Begins the discussion. Anyone in the group could start the discussion related to the topic by placing his or her chip in the center of the team table.

3. Continues the discussion. Any student could continue the discussion by using his or her chip. However, they need to wait until the first speaker done speaking.

4. When all chips are used, teammates collect all their chips.

5. During the students' discussion about the topic, the aspects of speaking would be observed.

3.   Method

In conducting this study, the writer applied a quasi-experimental research method. According to Creswell (2012, p. 309), "quasi-experiments are experimental situations in which the researcher assigns, but not randomly, participants to groups because the experimenter cannot artificially create groups for the experiment."

In this study, the writer gave the pre-test and post-test to both of the experimental group and control group. Pretest was given to the sample before the students get the treatment while the posttest was given after the students get the treatment. The posttest was given to measure the students' speaking achievement after being treated by using Talking Chips Technique. Meanwhile, the teaching materials during the treatment were based on the students' guide book curriculum 2006. The materials also had been already discussed with the teacher in charge.

The population of this study was the eleventh grade students of one of senior high schools in Indralaya Utara in the academic year of 2015/2016 with the total number 117 students. The writer applied a convenience sampling method because the school only provided two specific classes to be involved as the sample. In convenience sampling, the participants were selected because they were willing and available and they represented some characteristics the writer sought to study (Creswell, 2012, p. 145). In this study, there were two classes which were available; XI IPA 1 and XI IPA 2. Those two classes represented the characteristics the writer sought to study that they had problems in speaking. These two classes were taught by the same English teacher. From the two classes, the writer took one class as the experimental group and the other class as the control group. In deciding which class would be the experimental group and control group, the writer got suggestion from the teacher who taught both of the classes.

The data collection used by the writer to collect the data was speaking tests which was conducted twice; pretest and posttest. The pretest and posttest were given to measure the students' speaking achievement before and after the treatment. The

students were asked to present a specific material. The writer recorded the students' voice while they were doing their speech.

For achieving a high degree of the content validity, the writer devised a topic in accordance with the objectives of the test that is to measure students' speaking achievement. Then, the writer asked two advisors to check the appropriateness of the content of the test. To estimate the reliability of the test, inter-rater reliability was applied. Two raters did the scoring for the students' pre-test and post-test based on the rubric provided by the writer. The first rater is a lecturer of English Education Study Program of FKIP in Sriwijaya University and the second rater is an English instructor of Sriwijaya University Language Institute.

To check the reliability of the the results of the students' speaking checked by the two raters were, the writer used a statistical measure of the interrater reliability, which was Cohen's Kappa It ranges from 0 - 1.0. The data were analyzed using SPSS version 22. Then, it was found that the result of the reliability of experimental group pretest was 0.807, and the experimental group posttest was 0.810, the result of reliability of control group pretest was 0.761 and control group posttest was 0.843. It could be interpreted that reliability coefficient of pretest of experimental group and control group was in "Substantial agreement" and the reliability coefficient of posttest of the experimental and control groups was in "Almost perfect agreement". It means that the results of students' speaking test were reliable.

T-test was used in analyzing the data. Paired-sample and independent t-test were applied in this study. Paired sample t-test was used to find out whether or not there was a significant difference in speaking achievement of the students before and after they were taught by using Talking Chips technique, and to find whether or not there was a significant improvement in each aspect of speaking achievement in the experimental group after they were taught by using Talking Chips technique. Then, the independent sample t-test was used to find out whether there was a significant difference in speaking achievement between the students who were taught by using

Talking Chips technique and those who were not. To run the analysis, the writer employed the Statistical Package for Social Science (SPSS) version 22 for windows.

4.   Results and Discussion

1.   The Scores Distribution

Based on the data obtained (see Table 1), there were seventeen students (54.8%) in the experimental group were in Average category and fourteen students (45.2%) were in Good category based on the result of the pretest. In the pretest, there were no students (0%) in the Excellent category. However, after the students got the treatments for 16 meetings, there was improvement from the students' score. There were six students categorized as Excellent, twenty students were in Good category, and four students in Average category. Furthermore, there was significant improvement in students' mean score from 68.97 to 78.32. Thus, it can be concluded that there was a progress occurred in experimental group.

Table 1

The Score Distribution in the Experimental and Control Group

Score Interval	Category	Control Group				Experimental Group			
		Pretest		Posttest		Pretest		Posttest	
		Freq	%	Freq	%	Freq	%	Freq	%
86-100	Excellent	0	0	0	0	0	0	6	19,4
71-85	Good	6	20	8	26,7	14	45,2	21	67,7
56-70	Average	24	80	16	53,3	17	54,8	4	12,9
41-55	Poor	0	0	6	20	0	0	0	0
0-40	Failed	0	0	0	0	0	0	0	0
TOTAL		30	100	30	100	31	100	31	100

In addition, in the pretest of control group, there were twenty four students (80%) in average category and four student (20%) in good category, and there was no student in poor and excellent category. Meanwhile, in the posttest there were six students (20%) in poor category, sixteen students (53.3%), eight students (26.7%) in average category, and there was no student (0%) in excellent category. There was no improvement in control group's mean score. It could happen because the control group students did not get the same treatment as experimental group.

2.   Normality Test

Before checking the data by using t-test, normality test was conducted to know whether the data have normal distribution or not. In analyzing the normality test, one sample of Kolmogorov-Smirnov Z test in SPSS version 22 was applied. In one sample of Kolmogorov-Smirnov Z test, if the significance (2-tailed) ≥ 0.05, the distribution of the sample in the population is normal. The result of normality test of the data in this study was presented in the following table.

Table 2

The Result of Normality Test

Group	Pretest				posttest			
	Mean	Std. Deviation	Sig.	Kolmogorov-Smirnov Z	Mean	Std. Deviation	Sig.	Kolmogorov-Smirnov Z
ExpGroup	68.97	6.711	**.200**	.126	78.32	7.268	**.117**	.141
Cg Group	65.47	7.982	**.125**	.142	64.67	9.400	**.200**	.111

According to Harmon (2011, p. 33), data is normally distributed if $p > 0.05$. The significance (2-tailed) of pretest and posttest of the experimental group were 0.200 and 0.117, while the significance (2-tailed) of pretest and posttest of the control group were 0.125 and 0.200. Since all of the significance values higher than 0.05, it was concluded that the data were normally distributed.

3.   Homogenity Test

Homogeneity test was applied to know whether the sample groups from the population had similar variance. Levene's test was conducted to know the homogeneity of the sample groups; experimental and control groups. The data were homogenous if the significance (2 tailed) is greater than 0.05. The result of homogeneity test of the data in this study is presented in the table below.

Table 3
The Result of Homogeneity Test

Group	Levene Statistic	df1	f2	Sig
Pre-test and Post-test in EG	**.589**	**1**	**0**	**.446**
Pre-test and Post-test in CG	**.802**	**1**	**8**	**.374**
Pre-test and Pre-test in EG and CG	**.492**	**1**	**9**	**.486**
Post-test and Post-test in EG and CG	**1.123**	**1**	**9**	**.294**

The significance (2-tailed) of pre-test and post-test in experimental group was 0.446, while the significance (2-tailed) of pre-test and post-test in control group was

0.374. In addition, the significance (2-tailed) pre-test and pre-test in experimental and control groups was 0.486, while significance (2-tailed) the post-test and post-test in both groups was 0.294. Since all of the significance values higher than 0.05, it was concluded that the data were homogenous.

4. The Result of Paired Sample t-test in the Experimental and Control Groups

Paired sample t-test was applied to analyze the score of pre-test and post-test in both group (experimental and control). The paired sample t-test was used to answer research question number 1 (Was there any significant difference in speaking achievement of the 11th grade students of one senior high schools in Indralaya Utara before and after they were taught by using Talking Chips technique?). The summary of statistical analysis of the pre-test and post-test in experimental and control groups can be seen in Table 4. Based on the result of paired sample t-test in the experimental group (see Table 4), the mean score of the posttest (78.32) was higher than the mean score of the pretest (68.97) with the mean difference -9.355. Since the p value was less than 0.05 (0.000 < 0.05) (see the *sig 2 tailed* column), it could be concluded that there was a significant difference between the mean score of pretest and posttest of the experimental group.

Table 4

The Result of Paired Sample t-test for Students' Speaking Achievement

Groups	Test	Mean	Mean Diff	Std. Dev	Std. Error Mean	t	df	Sig. (2-tailed)
Experimental Group	Pretest	68.97	-9.355	6.711	1.205	-7.368	30	**.000**
	Posttest	78.32		7.268	1.305			
Control Group	Pretest	65.47	.800	7.982	1.457	0.845	29	**.351**
	Posttest	64.67		9.400	1.716			

Meanwhile, the result of paired sample t-test in the control group showed that the mean score of the posttest (64.67) was lower than the mean score of the pretest

(65.47) with the mean difference was .800. Since the *p* value was higher than 0.05 (0.000>0.05), it could be said that there was no any significant difference in the mean score of pretest and posttest of the control group.

The writer also used paired sample t-test to find out whether or not there was significant improvement in each aspect of students' speaking achievement after they were taught by using Talking Chips technique.

Table 5

The Result of Paired Sample T-test for Each Aspect of Speaking Achievement Score

Aspect of Speaking	Exp Group		Mean dif	Std. Dev	Sig.	Cg Group		Mean dif	Std. Dev	Sig.
	Pre	Post				Pre	Post			
Content	3.58	4.25	.677	.665	**.000**	3.18	3.3	.116	.625	.315
Fluency	3.48	4.06	.580	.708	**.000**	3.6	3.45	-.150	.297	.010
Pronunciation	3.41	3.76	.338	.637	**.006**	3.18	3.10	-.083	.349	.202
Vocabulary	3.26	3.56	.306	.494	**.002**	3.17	3.17	.000	.435	1.000
Grammar	3.50	3.95	.451	.522	**.000**	3.23	3.15	-.083	.296	.351

As shown in Table 5, there was significant improvement in each aspect of the students' speaking achievement score. It means that there was significant improvement in each aspect of students' speaking achievement after being taught by using Talking chips technique. Meanwhile, based on the table, there was only one aspect of speaking in the control group which was improved, that is *Fluency*.

5. Independent Sample t-test of Experimental and Control Groups

To find out whether or not there was a significant difference between the students who were taught by using Talking Chips technique and those were not, the writer compared the result of the posttest of experimental group and control group, the result is presented in the table 6 below

Table 6
The Result of Independent Sample t-Test Analyses

Pretest					Postest				
Group	**Mean**	**Mean diff**	**Std Dev**	**ig.P**	**Group**	**Mean**	**Mean diff**	**Std Dev**	**Sig.P**
Exp	8.97	3.501	11.33		xp	78.32		7.28	.000
Cg	5.47		11.96	068	g	64.67	3.65	9.40	

The result of independent sample t-test revealed that although the mean of pre-test in Experimental group was higher than in control group (68.97 > 65.47), the *p* value was higher than 0.005 (0.068 >0.005). Since *p* value > 0.005, it means that there was no significant difference in pre-test of speaking achievement of both experimental and control groups. Meanwhile, the mean score of the post-test in the experimental group was higher than the mean score of the post-test in the control group (78.32 > 64.67). According to Mendenhall, Beaver, and Beaver (2008, p. 352), if *p* value is less than or equal to 0.05, the null hypothesis can be rejected. Since the *p* value (sig. 2-tailed) was less than 0.05 (0.000 < 0.05), it can be concluded that there was significant difference in the post-test between the experimental and control group. In conclusion, it could be claimed that the null hypothesis (H_02) was rejected and research hypothesis (H_A2) was accepted.

6. The Result of the Independent Sample t-test for Each Aspect of Students' Speaking Achievement Score

The analysis of speaking score per aspects; content, fluency, pronunciation, vocabulary, and grammar, was done by using independent sample t-test (see Table 7).

Table 7

The Result of the Independent Sample t-test for each Aspect of Students'

Speaking Achievement Score

Aspects	Postest		Mean Difference	Sig
	Exp Group	**Cg Group**		
Content	4.258	3.300	.958	.000
Fluency	4.064	3.450	.614	.000
Pronunciation	3.758	3.100	.658	.000
Vocabulary	3.564	3.166	.397	.005
Grammar	3.952	3.150	.801	.000

It **can be inferred from the data presented in Table 7 that** there were significance differences in the mean scores between posttest of control and experimental groups for each aspect of students' speaking achievement scores.

7. The Result of Regression Analysis

Multiple regression analyses was conducted to know the significant contribution in each aspect of the students' speaking achievement after they were taught by using Talking Chips technique. To analyze it, multiple regression analysis was used by applying stepwise method. The result of the analysis can be seen in the following table.

Table 8

The Contribution of each Aspect of Speaking of the Experimental Group

(N=31) toward Speaking Achievement

Model	R^2	AdjR Square	Change Statistics	
			R Square Change	Sig. F Change
Content	**.714**	**.704**	**.714**	**.000**
Fluency	**.878**	**.869**	**.164**	**.000**
Pronunciation	**.945**	**.938**	**.067**	**.000**
Vocabulary	**.988**	**.986**	**.044**	**.000**
Grammar	**1.000**	**1.000**	**.012**	**.000**

Table 8 shows that each aspect of speaking gave significant contribution to the students' speaking achievement score. *Content* gave contribution 71.4%, *Fluency* 16.4%, *Pronunciation* 6.7%, *Vocabulary* 4.4%, *Grammar* 1.2%. The result showed that the aspect of speaking that gave the highest contribution was *Content* and the lowest was *Grammar*.

Discussion

Based on the findings of this study, some interpretations are drawn. The findings show that (1) there was a significant difference in speaking achievement of experimental group before and after given treatment, (2) there was a significant difference in students' speaking achievement of both experimental and control group, and (3) there was significant improvement in each aspect of speaking achievement after they were taught by using Talking Chips technique.

The first finding showed that there was significant difference in speaking achievement of experimental group before and after they were given the treatment. It can be seen from the mean difference of students' speaking test in pre-test and post-test. The mean difference between pre-test and post-test in the experimental group was 9.355 at the significance level of p value <0.05), H_01 was rejected and there was

a significant difference in speaking achievement between pre-test and post-test of experimental group. The improvement itself could happen because after the experimental group was assigned pre-test, the writer gave them the treatment by using Talking Chips technique for one month. Meanwhile, there was also improvement in control group although it was not really significant. However, the experimental group showed much better improvement than the control group. Thus, it can be stated that the use of Talking Chips technique in the experimental group gave significance contribution in improving students' speaking achievement.

There are two reasons why Talking Chips technique can improve students' speaking achievement. Firstly, Talking Chips technique offers an interesting way of learning in which they have a turn to speak. By Talking Chips, each student was motivated to be active. Even though they had equal chance to speak, the students can only speak if they still have the chips. It is supported by Kagan and Kagan (2009) that Talking Chips make the students interested and provide accountability to speak.

Secondly, Talking Chips encourage students to be confident and respect their friends during discussion in order to create mutual understanding. It is in line with the finding of Mukadimah and Jamilah (2013) Talking Chips technique allowed the students learn how to give contribution in discussion by giving and sharing their opinion.

The second finding confirmed that there was significant difference in speaking achievement between experimental and control groups. The mean difference between the post-test and pre-test in the experimental group was higher than the mean difference between post-test and pre-test in the control group. It can be stated that there was significant difference in students' speaking achievement both of experimental and control groups. There was also an improvement in control group's speaking achievement although it was not as much as the experimental group. The control group was only given pre-test and post-test. However, during the teaching and learning activity, the students also learned the same materials as experimental group. Mostly, the teacher gave them explanation about the materials. They were barely

exposed to express their ideas, they only took note and actively answered questions on the text book.

The third finding showed that there was significant improvement in each aspect of students' speaking achievement in experimental group. It can be proven from the statistical analysis done by paired sample t test. Furthermore, the result of the multiple regression analysis by using stepwise method showed that all the aspects of speaking achievement contributed significantly. This could happen because during the treatment, they were exposed to a group discussion to discuss a specific topic in which they had to take turn to speak.

The improvement in the speaking aspect *Content* is relevant with what Kagan and Kagan (2009) state that Talking Chips is a way to expose the students to communication. It helps students to get new vocabularies as they shared their opinion to one another. Before the students were exposed to Talking Chips, the students were lack of ideas in expressing their opinion. They had difficulties to convey the ideas meaningfully.

The improvement in the speaking aspect *Fluency* is relevant with what Estiningrum (2014) state that the students are able to be more confident in expressing their opinions. Initially, the students had difficulties in speaking fluently. The students found it hard to speak since they rarely spoke English during learning process. However, since the students were exposed to Talking Chips technique, they could be able to express their opinion.

The improvement in the speaking aspect *Pronunciation* is also in line with what Estiningrum (2014) state that through Talking Chips technique, the students actively get involved in teaching and learning process. During the teaching and learning process, the researcher corrected the students' pronunciation. Before the treatment, the students found it hard to pronounce the words correctly. They pronounced the words as they are written.

The improvement in the speaking aspect *Vocabulary* is also relevant with what Estiningrum (2014) state that in the implementation of Talking Chips technique, the

students' vocabulary mastery become better because they are exposed to various topics. In the beginning, the students still had difficulties in selecting appropriate vocabularies. But step by step, after giving them more topics to discuss, they became good at speaking by using appropriate words.

The last, The improvement in the speaking aspect *Grammar* , mostly the students found grammar as the most difficult aspect. Sometimes the students neglected the structures of the sentences as they did not know the correct structures. Nevertheless, gradually the students learned how to organize sentences correctly while they were discussing.

The forth finding showed that there is an aspect of speaking that gives the biggest and the smallest contributions to the students' speaking achievement. The aspect of speaking that gives the biggest contribution is *Content* aspect. According to Kagan and Kagan (2009), talking chips technique allows the students to deliver their opinion in turn. Therefore, each student will get many ideas from the other students that will enhance their knowledge. Meanwhile, the aspect that gives the smallest contribution is *Grammar* aspect. It is because the students still found it hard to use grammar while they were speaking.

From the explanation above, the experimental group performed better than control group. It could be concluded that the students who received the treatment had significant improvement in speaking achievement. Although the score of control group increased as well, but the increasing was not high as the score of the experimental group was. Therefore, it can be stated that Talking Chips technique was effective to improve speaking achievement of the experimental group. Hence, using Talking Chips technique is considered effective in teaching speaking to the 11th grade students of SMAN 1 Indralaya Utara.

5. Conclusion and Remark

Based on the findings and the statistical analysis in previous chapter, the writer concluded that Talking Chips technique is significantly effective to improve the students speaking achievement in class XI IPA 1 (experimental group) of SMAN 1 Indralaya Utara. Most of the students in the experimental group showed better improvement that can be seen from the result of the students in test. The result of the study showed that there was significance difference between the 11th grade students of SMAN 1 Indralaya Utara who were taught in the experimental group by using Talking Chips technique and those who were not taught in the control group. The statistical analysis in paired sample t-test showed that there was significance difference in mean score between students' pretest and posttest both in the experimental and control group; however the experimental group showed much better improvement than the control group. It was also proved by the independent sample t-test that there was significance difference between the mean score of posttest in the experimental group was higher than the mean score of the posttest in the control group. It means that the treatment was effective to improve students' speaking achievement.

In accordance to the above explanation, the writer proposes the following suggestions.

1. For English Teacher

    English teacher should be more active to find interesting and appropriate topics in applying Talking Chips technique. It is very helpful to encourage the students to improve their speaking, especially to help those who are lack of confidence.

2. For Students

    The students also have to be active in the classroom. It is also suggested to the students to do more practices in speaking not only in the

classroom but also outside the class. Thus, they will find speaking as interesting activity to do.

3. For Other Researchers

The writer hopes this study becomes a reference for next researchers who are interested in conducting a study to improve the students' achievement in speaking by using Talking Chips technique. It is suggested that other researchers use bigger number of sampling and provide more topics and time allocation in teaching and learning process in order to engage the students and enhance their learning achievement. In addition, to make sure the students have different opinions, the students can be grouped in to two different groups; positive and negative.

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IMPROVING THE ELEVENTH GRADE STUDENTS' READING EXPOSITORY TEXT ACHIEVEMENT BY USING CRITICAL READING STRATEGY AT SMA PLUS NEGERI 4 OKU

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Abstract

The purpose of this study were to find out (1) whether or not the usage of Critical Reading Strategy significantly improve the eleventh grade students' reading expository text achievement at SMA Negeri 4 OKU, (2) whether or not there is significant difference in reading expository text achievement between the students who are taught by using Critical Reading Strategy and those who are taught by using common strategy, (3) whether or not there is significant difference among the eleventh grade male students in reading expository text achievement who are taught by using Critical Reading Strategy and those who are taught by using the common strategy, (4) whether or not there is significant difference among the eleventh grade female students in reading expository text achievement who are taught by using Critical Reading Strategy and those who are taught by using the common strategy, (5) whether or not there is significant difference between the eleventh grade male students and female students in reading expository text achievement who are taught by using Critical Reading Strategy, and (6) what The eleventh grade students' perception on the implementation of Critical Reading Strategy in their classroom. The population of this study covered all of the eleventh grade students of SMA N 4 OKU in academic 2011/2012. The sample were selected using purposive random sampling from the whole population. The writer chose fifteen male's student and female's students in experimental and control groups. The study was conducted in form of an experiment by doing 16 meetings of teaching including pre-test and post-test. During the research, the students in experimental group were taught reading material by using critical reading strategy. The reading material were taken based on validity of the test. They are the levels of difficulty and the levels of appropriateness of reading test items. To check whether the application of the instruction could run well, the students were given reading comprehension tests. The obtained data were analyzed using t-test. The findings showed that there was a statistically significant progress in the English reading achievement of the students who were taught by using critical reading strategy. The questionnaire was used to find out the students perception on the implementation of critical reading strategy in their classroom. The results of t-test was used by the writer showed that there was significant different for all objective. In conclusion, Critical Reading Strategy was considered applicable to improve reading expository text achievement at SMA Negeri 4 OKU.

Keywords: *Critical Reading Strategy, Reading Expository Text Achievement.*

1. Introduction

According to Aunola, et,al. (2002:313), learning to read is a basic academic skill, particularly in early elementary school years, which provide one of the foundations for success at school thereafter. The level of reading performance is usually expressed in terms of two components, word recognition and comprehension (Bast & Reitsma, 1997; Elley, 1992). Moreover, the development of reading comprehension skills benefits from general knowledge of the world, helping to make relevant associations and enhancing the students' ability to monitor his or her own comprehension. So in reading, students will be taught strategies to help them read with understanding, to locate and use information, to follow a process or argument and summarize, and to synthesize and adapt what they learn from their reading.

Further, what makes the students have difficulties in reading is their lack of critical reading skill. Most of them find it difficult to put their point after reading. According to Chamot (2004) states that teachers may avoid asking students to read books because the learner's vocabulary is low. This, however, leads to a vicious cycle whereby learners do not have enough vocabulary to read, but there is not enough reading in order for learners to learn more words. So, as a consequence, students rarely associate reading with an enjoyable activity. Reading is viewed as 'too difficult', and texts they are given are often unimaginative and not conducive to enticing learners to read for pleasure (take a look at any low level course book and the reading passages there).

Effective critical reading really depends upon how we view the world around us (Blair, 2010 :1). It means that the critical reading strategy used by the teachers may influence the result of learning and determine the success or failure of the process of teaching and learning activities. Further, Chamot (2004) says that learning strategies are the thoughts and actions that individuals use to accomplish a learning goal. Based on the explanation above, it is clearly understood that the reading strategies used by the teachers may greatly influence the students' reading comprehension achievement.

Problems of the Study

Referring to the introduction above, the problems of this study are formulated into the following questions:

1. Does the use of Critical Reading Strategy significantly improve the eleventh grade students' reading expository text achievement at SMA Negeri 4 OKU?

2. Is there any significant difference in reading expository text achievement who are taught by using Critical Reading Strategy and those who are taught by using the common strategy?

3. Is there any significant difference between the eleventh grade male's students in reading expository text achievement who are taught by using Critical Reading Strategy and those who are taught by using the common strategy?

4. Is there any significant difference between the eleventh grade female's students in reading expository text achievement who are taught by using Critical Reading Strategy and those who are taught by using the common strategy?

5. Is there any significant difference between the eleventh grade male's students and female's students in reading expository text achievement who are taught by using Critical Reading Strategy?

6. What is the eleventh grade students' perception on the implementation of Critical Reading Strategy in their classroom?

2. Theoretical Background

The Importance of Reading Comprehension

Reading principally means understanding the message that is written explicitly or implicitly stated in the text. According to Pang, Muaka, Bernbardt & Kamil (2003), Reading is about understanding written texts. It is a complex activity that involves both perception and thought. Reading consists of two related processes: word recognition and comprehension. Word recognition refers to the process of perceiving how written symbols correspond to one's spoken language. Comprehension is the

process of making sense of words, sentences and connected text. Readers typically make use of background knowledge, vocabulary, grammatical knowledge, experience with text and other strategies to help them understand written text.

Moreover, Ruddell (2005:118) proposes three level of reading comprehension. They are:

a. Literal comprehension refers to meaning derived from "reading the lines".
b. Interpretive comprehension refers to meaning derived by "reading between the lines".
c. Applied comprehension refers to meaning derived by reading "beyond the lines".

So, in general, reading comprehension as the complex process of understanding the meaning of one word or series of words presented in oral or printed form and also the process of readers' interaction with the printed material.

Kinds of Text (The Nature of Expository Text)

This study will focus on strategies for developing reading comprehension skills in relation to expository, or informational, text and the need for this type of instruction in contemporary elementary classrooms. According to Lwai (2007) states that Expository texts are written to convey, describe, or explain non-fictional information. It is more difficult for ESL/EFL learners to understand these types of materials than narrative texts because they have specific text structures, contain technical vocabulary, and require readers to have background knowledge. The overall aims of the present study are to investigate how teachers and students talk about expository texts in the classroom; and to investigate to what extent structured text talk affect teachers´ and students talk about expository texts.

The Generic Structures of Expository Text

The main purpose of expository text is to inform or describe. Authors who write expository texts research the topic to gain information. The information is organized in a logical and interesting manner using various expository text

structures. The most common expository text structures include description, enumerative or listing, sequence, comparison and contrast, cause and effect and problem and solution. Livingston (2004) describes that:

a. **Descriptive:** This includes main idea and detail such as the following

b. **Enumerative/listing:** This includes listing connected information, outlining a series

   of steps, or placing ideas in a hierarchy,

c. Sequence: This includes a series of events leading up to a conclusion, or the sequence

   of occurrences related to a particular happening.

d. **Comparison/Contrast:** This involves describing how two or more events, places,

   characters, or other ideas are similar and or different in several ways. Comparing

   several habitats or eco-systems is one example of this type.

e. **Cause/Effect:** This may involve several reasons why an event occurred, or several

   effects from on cause, and of course, as single cause/effects situation.

f. **Problem and Solution:** Authors use this technique to identify the problem, give

   possible solutions with possible results and finally, the solution that was chosen.

So, based on the generic structures above, students are expected to understand what have they read following the steps. Also, every student needs a chance to apply the skills they are learning immediately in a meaningful context. We need to explicitly connect what students learn in isolated skills lessons to their purposeful reading.

Critical Reading Strategy

Effective literacy instruction begins with the teacher's knowledge of the text. Critical reading refers to a careful, active, reflective, analytic reading (Kurland, 2000). It must take time to read and understand the texts that use in the classroom. Because texts present a variety of linguistic and structural challenges, it needs to expose students to a wide range of texts and teach them critical reading skills that will help them comprehend these difficult texts. Once it have read the text, it can decide on how to best read it (or if we want to read it).

Characteristics of Critical Readers (Kurland, 2000)

- They are honest with themselves
- They resist manipulation
- They overcome confusion
- They ask questions
- They base judgments on evidence
- They look for connections between subjects
- They are intellectually independent

Critical reading means that a reader applies certain processes, models, questions, and theories that result in enhanced clarity and comprehension. According to Jones (2004), critical reading and thinking will be promoted by searching for implicit and explicit messages in popular magazines. So, the public viewing of essays will also be an opportunity for critical reading and exploring other perspectives. There is more involved, both in effort and understanding, in a critical reading than in a mere "skimming" of the text. What is the difference? If a reader "skims" the text, superficial characteristics and information are as far as the reader goes. A critical reading gets at "deep structure" (if there is such a thing apart from the superficial text!), that is, logical consistency, tone, organization, and a number of other very important sounding terms.

Critical reading involves using logical and rhetorical skills. Identifying of this study a good place to start, but to grasp how the writer intends to support it is a

difficult task. So, here the writer will use seven ways to implement the Critical Reading strategy.

These are the seven steps of Critical Reading strategies:

a. Previewing: *Learning about a text before really reading it.*

b. Contextualizing: *Placing a text in its historical, biographical, and cultural contexts.*

c. Questioning to understand and remember: *Asking questions about the content.*

d. Reflecting on challenges to your beliefs and values: *Examining your personal responses.*

e. Outlining and summarizing: *Identifying the main ideas and restating them in your own*

   words.

f. Evaluating an argument: *Testing the logic of a text as well as its credibility and emotional*

   impact.

g. Comparing and contrasting related readings: *Exploring likenesses and differences between*

   texts to understand them better.

3. Method

The research design that be used in this research was non-equivalent- Control Group Design as describes by McMillan (1992: 176). He states "This design, which was often referred to as quasi-experimental design because it closely approximates the most desirable experimental designs, is commonly used in educational research".

Figure 1. Nonequivalent- Control Groups Design

	O_1	X	O_2
EG	(Pre-test)	(Treatment)	(Post-test)

	O_3		O_4
CG	(Pre-test)		(Post-test)
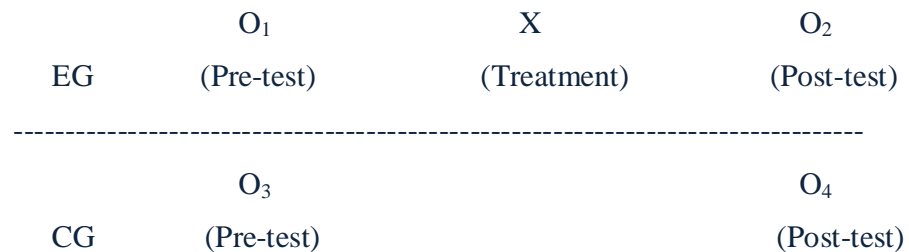
Population

The target of participant in this study was all the eleventh grade students of SMA Negeri 4 OKU in academic year 2011/2012, and total number of population were 172 students.

Table 1

Population of the Research

Class	Male	Female	Total
XI IPA 1	10	25	35
XI IPA 2	10	23	33
XI IPA 3	9	26	35
XI IPS 1	9	25	34
XI IPS 2	9	26	35
Total	47	125	172

Source: SMA Negeri 4 OKU database

Sample

The sample of this study was taken from population by using purposive random sampling technique. Sometimes, it was desirable as in the audience research to purposively choose the region and the respondents for a specific purpose.

Meanwhile, Mcmillan (1992:76) states that in purposive random sampling (sometimes referred to as judgment or judgmental sampling) the reseacher selects particular elements from the population that will be representative or informative about the topic. Several objective of this study was discussing about the gender. So, the writer wanted to see common sense and the best judgment of this sample in choosing the right habitations, and meeting the right number of right people for the objective of her study.

The criterias of taking the sample was the homogenous groups, each group containing subjects with similar characteristics. On the basis of similarity of the age of students, and English teachers' judgment at SMA Negeri 4 OKU. And the writer also used the documentation of student's score in English subject. She divided into three levels. There are high, middle and low levels. The writer took the students in middle and low level because the students was in the high level had had a good ability.

The steps of selecting the sample randomly were as follow:

a. Wrote each student's names in small piece of paper and rolled it. It was seperated by each class and put it in different glass.

b. Shook each glass and took fifteen students of female and male of experimental group. Then, it was contionued to take fifteen students of female and male of control group.

c. Because of the gender, it was taken the same male and female number from the whole class.

Table 2

Sample of the Study

No	Group	Male	Female	Total
1.	Experimental Group	15	15	30
2.	Control Group	15	15	30

Source: SMA N 4 OKU

The conclusion of the sample chosen was because the different total of students' gender in each class. In this study, the writer found out the difference between male and female in reading expository text achievement, so the sample should be the same number.

Validity of the Test

A good test should fulfill its validity and reliability. Harmer (2006:381) states that a test is valid if its texts what it is supposed to the test. In order to find the validity of the test, it was tried out for non sample students before it was administrated for sample students.

Table 3
Specification of Test Items
English Subject Class XI semester 2

No.	Kinds of Aspect	Number of Item	Item Number
1.	Vocabulary Meaning	4, 9, 14, 20, & 24.	5
2.	Literal Comprehension	3, 7, 8, 10, 12, 15, 19, & 22.	8
3.	Inferential Comprehension	1, 13, 16, & 17.	4
4.	Applied Comprehension	2, 6, 11, 21, & 25.	5
5.	Critical Reading	5, 18, & 23	3
	Total		**25 items**

Reliability of the Test

In addition of the validity, a test must be reliable if it is used in a study. Reliability is enhanced by making the st instruction absolutely clear, restricting the scope for variety in the answers and making sure that test conditions remain constant (Creswell, 2005: 148)

In this study, the writer found out the reliability of the test analyzed by using SPSS version 19. To find out the reliability of the test, the writer tried it out once. The

try out was admistrated on 3rd May 2012 of the eleventh students of SMA 1 OKU at XI IPA 2 class. It was found that the reliability of the test in this study was 0.703 . From the result it can be seen that the reading comprehension test was reliable. The reliability of the test was higher than 0.70 and it meant that this test can be used.

4. Result and Discussion

The students in this research was devided into two groups, they are experimental and control group. The reading expository test was administrated to the students. The students in experimental group were also asked to fill in a questionnaire to get information after using Critical Reading Strategy.

The reading expository test was consisted of 25 items. It was formed in essay. Whereas, the questionnaire was consisted of 30 items. Likert sclae prevented a number of positive and negative statement regarding to critical reading strategy. The response options were assigned values from 4 (Strongly agree) to 0 (strongly disagree).

The Result of Normality Test of Pre-test and Post-test Scores of Experimental Group and Control Group

One-Sample Kolmogorov-Smirnov Test

		pretestexp	postestexp
N		30	30
Normal Parameters[a,b]	Mean	61,33	78,13
	Std. Deviation	6,504	7,482
Most Extreme Differences	Absolute	,159	,154
	Positive	,124	,094
	Negative	-,159	-,154
Kolmogorov-Smirnov Z		,871	,846
Asymp. Sig. (2-tailed)		,433	,472

a. Test distribution is Normal.
b. Calculated from data.

The Kolmogorov-Smirnov test of the pre-test and post-test in experimental group showed that significance (2-tailed) was 0.433 and the post-test was 0.472. Since 0.433 and 0.472 > 0.05, so it can be said that the data obatained was considered approximately normal data (Santoso, 2002:36).

One-Sample Kolmogorov-Smirnov Test

		pretestcontrol	Postetstcontrol
N		30	30
Normal Parameters[a,b]	Mean	60,67	66,93
	Std. Deviation	7,508	5,552
Most Extreme Differences	Absolute	,169	,157
	Positive	,169	,157
	Negative	-,131	-,143
Kolmogorov-Smirnov Z		,924	,861
Asymp. Sig. (2-tailed)		,360	,449

a. Test distribution is Normal.
b. Calculated from data.

The Kolmogorov-Smirnov test of the pre-test in control group showed that significance (2-tailed) was 0.924 and the post-test was 0.861. Since 0.924 and 0.861 > 0.05, so it can be said that the data obatained was considered approximately normal data (Santoso, 2002:36).

The Analysis of Independent Sample t-test in Reading Expository Text Achievement (Male and Female) in Experimental Group

Independent Samples Test

F	2,987
Sig.	,095
T	2,556
Df	23,584
Sig.(2-tailed)	,016

The statistical summaries above showed that the mean of post-test (male) was 81.33, while the mean of post-test (female) was 74.93. In short, it can be said that the post-test (male) value is higher than that post-test (female). The analysis of independent sample t-test for male and female in experimental group shows that the mean difference was 6.400 and the significant level was 0.016. Since 0.016 was lower than alpha value 0.05, it means that there was a significant different between male and female in this group.

The Result of Questionnaire

After administering the post-test in experimental group, the writer distributed the questionnaire. She explained to the students that this questionnaire was the statements of implementation after using Critical Reading Strategy.

The students filled out the items from strongly agree until strongly disagree. So, the writer analyzed the results of questionnaires responses by finding out the percentage of respondent's angreement and disagreement toward each statement in the questionnaire. The objective of the questionnaire distribution was to find out the information about the implementation of Critical Reading Strategy in reading Expository text achievement. The percentage of all respondents' angreement and disagreement toward each statement in the questionnaire was presented in the table 16 below.

The Student's Score Range and Percentage

No.	Score Range	F	Percentage (%)	Categorized
1.	71 – 120	5	17	Very Good
2.	61 – 70	22	73	Good
3.	31 – 60	3	10	Enough
4.	0 – 30	0	0	Poor
	Total	**30**	**100**	

From the table 16 above could be concluded that the students gave the balance responses for some items. It was proved by the most of students (22 students) or 73% in category good, they used this strategy. There were also five students (17%) in category very good. The students' responses from the data questionnaire confirmed that the students' dominant implementation Critical Reading Strategy in reading expository text was: the students applied the critical reading strategy when they did reading activity and they also did the exercises easier after they used critical reading strategy.

5. Conclusion and Remark

First, after applying Critical Reading Strategy, mostly students used this strategy in reading activities. In the experimental group achieved significantly improve in reading expository text achievement. It was found that from the results pre-test to post-test analysis showed that a good progress from pre-test scores until post-test scores. Also, in this case the writer analyzed the paired sample t-test. The results of statistical analysis showed that the significant different from pre-test scores and post-test scores.

Second, there was significantly difference in reading expository text achievement between experimental and control groups.. It was found that the experiemental group got better reading reading expository achievement if it was compared to the students in control group. Futhermore, in the setting of experimental group, the students could read the information that follows each paragraph to get better understanding of what it is about, apply their critical reading, find the answer to each question they formed.

Third, Both male's students in experiemental and control groups achieved a significantly difference in reading expository text achievement. It was found that there was a progress from their post-test after using critical reading strategy. Male's students in experiemtal group were very smart in learning process. Then, they felt

strenght with the strategy used but in the next meeting they felt better. But the students in the control group, they used the strategy that usually apply in the class.

Fourth, it is the same with male's students in the experimental and control group, the female's students in these groups achieved not a significantly difference in reading expository text achievement. It was found that there was rather the same ability that female had in both group. They had a good expression, performance and also a good progress from their post-test after using critical reading strategy. Female students enjoyed and felt better in understanding reading expository text. It could be concluded that they female students got the better before they used this strategy.

Fifth, to find out the difference between male and female in reading expository text achievement in experimental group, the writer used Independent sample t-test. It was found that male's students got better than female's students. Male's students was keep their silent but it was thingking, while female's students was very anthusias in reading activities. Female's students were more active to perform theirs but male's students were almost silennt but thingking.

Sixth, the questionnaire was administrated for experimental group. It was given after they did the post-test. The results of the questionnaire could be concluded that some of the students gave the similar responses for some items. Most of the students had a positive perception in answering the questionnaire. They always chosen the agreement's statement after implimenting critical reading strategy. So, the results of percentage showed that most of the students chosen in the good level.

The writer could conclude that there was significant difference did Critical Reading Strategy to the eleventh grade students' in reading expository text achievement. The fact was from the result of regression analysis showed that there was a good progress before and after using Critical Reading Strategy. It was also found that the results of normality of the test of pre-test and post-test scores in experimetal and control group were considered approximately normal. The last, there was a significant different between male and female in reading expository text achievement in experimental and control group by analyzing the post-test score.

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USING GAMES TO ENHANCE SPEAKING PERFORMANCE OF THE SEVENTH GRADE STUDENTS OF SMP NEGERI 43 PALEMBANG

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Abstract

This study investigated whether or not the use of games could enhance students' speaking performance. This study used Quasi-Experimental research method and applied the pretest-post -test one group design. The population of this study was the seventh grade students of SMP Negeri 43 Palembang in the academic year 2013/2014 and the sample consisted of 33 students who were chosen by using convenience sampling method. The data were collected by means of speaking test which was administered as a pretest and a post-test. The result of the test was checked by two raters and then analyzed by using t-test analysis. The result of paired sample t-test showed that there was a significant difference in the speaking performance before and after the students were taught by using games. In conclusion, Games could enhance the seventh grade students speaking performance of SMP Negeri 43 Palembang.

1. Introduction

English as one of the subjects taught at junior high school in Indonesia is a compulsory subject. In the Curriculum 2006, the teaching of English covers four language skills such as Listening, Speaking, Reading, and Writing. Speaking, as one of the language skills mainly takes place in the classroom. This is related to the role of English as a foreign language in Indonesia. This means that English is not used as a means of communication outside the classroom. Therefore, it is arguable to say that it is a challenging task for the English teachers to get their students use English in the classroom during the English lesson.

As previously described, the opportunity to practice English Speaking for Indonesian students is mainly in the classroom. However, to ask students to practice their speaking in the classroom is a challenging task for an English teacher. According to Zen (as cited in Riasati, 2012), there are several factors that influence students willingness to speak, such as familiarity with environment, lack of confidence, discomfort and fear of making mistake.

Based on the writer's teaching experience during her teaching practice at one of senior high schools in Palembang, the students had low motivation to speak English in class because of the monotonous activities. Lacks of vocabulary also was the factor that made the students were not confident to speak English during English lesson.

Similarly, the problem concerning English speaking also occurs at SMP Negeri 43 Palembang. Based on the personal communication between the writer and one of the English teachers of SMP Negeri 43 Palembang (Personal Communication, 08th February 2014), the writer found out that it was quite hard for the English teacher to build an active speaking class. The teacher also mentioned that the students did not have courage to speak English in class for a number of reasons such as afraid of making mistake, felt nervous and lack of confidence. In line with the teacher's statement, having no confidence and less motivation were also stated by some of the students who were interviewed by the writer as the reason why they found Speaking English was terrifying.

Considering the role of speaking as one of the English language skills that Indonesian junior high school students have to learn, the writer believes that an effort should be done to help students improve their speaking performance. Using Games is one of the ways to enhance students speaking performance. According to Huyen and Nga (2003), games can make students relax and get fun, help them learn and add new words more easily and games can also interest the students and keep them involving in a competition. In addition, games can be applied to help students learn better because the way they received the information is through an enjoyable learning process. Deesri (2002) explains that games can help lower students' anxiety, make

them comfortable and make them want learn more. In addition, Deesri (2002) explains that since students know how to play games, they may feel relax and it will make them feel free to communicate without worrying to make mistake. As a result, students who do not feel worry can avoid having the stress and it can give impact to their speaking performance.

In relation to speaking skills, games have a contribution to motivate students to speak up in the classroom. As Yulianto (2012) says, game is one of the techniques that can be applied in teaching speaking because games in one of the potential activities that gives students the opportunity to express their opinion orally and to interact not only with their friends but also with the teacher.

2. Theoritical Background

The Definition Speaking Performance

There some factors that influence students hard to express their thought, emotion or opinion, either from intrinsic or extrinsic. Speaking is one way to communicate or express the feeling, emotion or opinion. Speaking also productive aural/oral skill or consist producing systematic verbal utterances to convey meaning (Bailey, 2003). There are many experts explain about definition of speaking. Speaking is a productive language skill. It means that speaking is a person's skills to produce sounds that exists at the meaning and be understood by other people, so that able to create of good communication. As Bailey (2003), states speaking is a mental concept that processed by someone in such a way to form a meaning when uttered. In their own language children are able to express emotions, communicate intonations and reactions, explore the language and make fun of it, so they expect to be able to do the same in English. In other words, speaking activity must be done on fun situation that make the students feel enjoyable to learn it. When the condition of the learning process class are good, enjoy, fun, full of spirits, etc. it will make the brains of the

students are processed, so that acquisition process of the students run effectively. Speaking Performance is performance whenever people speak, it is tend to monologue. According to Kim (2009), there are some types of speaking performance;

1. **Imitative**

   Imitation is carried out not for the purpose of meaningful interaction, but for focusing on some particular element of language form. (e.g., learners practicing an intonation pattern a certain vowel sound.). Drills offer students an opportunity to listen and to orally repeat certain strings of languages that may pose some linguistic difficulty.

2. **Intensive**

   Intensive speaking goes one steps beyond imitative to include any speaking performance that is designed to practice some phonological or grammatical aspect of language. Intensive speaking can be self-initiated, or it can even form part of some pair work activity, where learners are "going over" certain forms of language.

3. **Responsive**

   A good deal of students speech in the classroom is responsive: short replies to teacher- or student-initiated questions or comments.

4. **Transactional (Dialogue)**

   Transactional language, carried out for the purpose of conveying or exchanging specific information, is and extended form of responsive language.

5. Interpersonal (Dialogue)

It carried out more for the purpose of maintaining social relationships than for the transmission of facts and information.

6. Extensive (Monologue)

Students at intermediate to advanced levels are called on to five extended monologues in the form of oral reports, summaries, or perhaps short speeches, Here the register is more formal and deliberative. These monologues can be planned or impromptu.

The English speaking that students learn at SMP Negeri 43 Palembang is explained by the syllabus based on curriculum in 2006. The level of speaking that students should be mastered was described in Basic competence in the second semester. As shown in Table 2.1:

Table 2.1

Speaking Basic Competence

9.1	The students are able to express the meaning in the form of transactional (to get things done) and interpersonal (social) conversation accurately, smoothly, and well by using various simple spoken English expressions in daily context covering: asking and giving service, asking and giving things and asking and

	giving fact.
9.2	The students are able to express the meaning in the form of transactional (to get things done) and interpersonal (social) conversation accurately, smoothly, and well by using various simple spoken English expressions in daily context covering: asking and giving opinion, expressing like and dislike, asking clarification and response individually.
10. 1	The students are able to express the meaning in the form of transactional (to get things done) and interpersonal (social) conversation accurately, smoothly, and well by using various simple spoken English expressions in daily context.
10.2	The students are able to express the meaning of simple monologue accurately, smoothly, and well by using various simple spoken English

	expression in daily context covering in the form of descriptive and procedure texts.

Based on the syllabus asks, students use all the types of speaking performance which was mentioned by Kim (2009). The types of speaking that was used by students are imitative, intensive, responsive, transactional (dialogue), interpersonal (dialogue) and extensive (monologue).

Definition of Games

Game is activity that has rules and aims its fun and amusing. According to www Merriam Webster com, states "Games activity engaged in for diversion or amusement". In addition Jill (cited in Deesri, 2001), mentioned that game is an activity with rules, a goal and element of fun. In Educational environment, Games usually use as learning media. Cailonas (cited in Garris, Ahlers & Driskell, 2000) also has argument that game is an activity that is voluntary and enjoyable. Moreover, Games activity that used in classroom which help students to learn better, sometimes called Educational Games.

Games are good media to help students learn better because games will make them study in fun and relax way, it is because games is activity not only amusing activity but also can enhance their ability in every skill. In line with this, Poulsen (2010) states, "playing a game is an activity that enhancing skill use to solve the obstacle and playing a game is also basically a learning experience". Games also teach students other things that they do not get from usually way learning activities. For example, playing games can motivate them to win the game, teach them to be optimistic, make them add some encouragement to show their opinion, to be confident, feel more relax tough they are studying. Smith (2008) in her article also agrees that games help

students to overcome their anxiety and enhance their skill, she said "Games can also help students master the skills useful throughout life, such as: teamwork, competition, strategy, problem solving, victory, and retention".

To conduct this research, the writer will choose the following classification of games provide by Wright, Betteridge & Buckby (as cited in Leon & Cely, 2010, p. 18) for the teaching material.

A. *Picture Games*: Most of these games involve the learners in the relative free use of all language at their command. They involve comparing and contrasting pictures, considering differences or similarities and possible relations between pictures.

B. *Psychology Games*: These games let us work with the human mind and sense. They involve telepathy, visual perception, characters, imagination and memory. They also encourage the students' concentration and language use.

C. *Magic Tricks*: Language can sometimes be exemplified in a concise and memorable way through a magic trick. These tricks always attract attention and invite comments.

D. *Sound Games*: Sound effects can create in the listeners an impression of people, places and actions. There is a demand for the listeners to contribute through imagination. This inevitably leads to individual interpretations and interactions as well as the need to exchange points of view and to express ideas and opinions.

E. *Card and Board Games*: These games can be adaptations of several well-known card games and board games like snakes and ladders.

F. *Word Games*: These games are used for spelling, meanings, using words for making sentences, words in contexts and word for categorizing according to grammatical use. Students, in many cases, have to communicate in full sentences, give new ideas and argue at the same length.

G. *True-false Games*: In these games someone makes a statement which is either true or false. The game is to decide which it is.

H. *Memory Games*: These games measure the players' ability to remember different events which, in turn, leads to discussion, in which opinions and information are exchanged.

I. *Caring and Sharing Games*: These games pretend to encourage students to trust and get interested in others. They have the participants share personal feelings and experiences with other class member.

J. *Guessing and Speculating Games*: In

these games someone knows something and the others must find out what it is. There are many games and variations based on this simple idea.

K. *Story Games*: These games provide a framework for learners to speak as well as write stories and share them with classmates

This research will apply three kinds of games Caring& Sharing, Guessing-Speculating & Story Games. This games based on the consideration of basic competence of syllabus which ruled by the Curicullum 2006 that used by the students of SMP Negeri 43 Palembang in studying

English lesson. These following table showed games which was used in this study:

Crazy Story	Sutrisno *(2012)*
Chain of Event	Sutrisno*(2012)*
Characters Trait Roulette	*www.ESL.com*
Cards Games	www.ESL.com
Drawing Who Is It	*Sutrisno (2012)*
Find your partner	Sutrisno(2012)

Hide and Speak	*www.ESL.com*
Role Play	www.ESL.com
Shopping Free	Sutrisno (2012.
This is How We Roll	*www.ESL.com*
W-H Question Games	*www.ESL.com*

3. Method

This study applied a Quasi Experimental research method. The design was pretest posttest one group design which involved only one group which called an experimental group. According to Krysik & Finn (2013), one group pre test posttest research design is a design which the dependent variable is a measured both before and after the independent variable is introduced and it is useful for measuring the change after the intervention.

Population and Sample

This study was conducted at SMP Negeri 43 Palembang. There were ten classes for seventh grades and there were four English teachers at SMP N 43 Palembang. However, only one English teacher who had her times to talk to the writer. As the English teacher suggested (Personal Communication, 8[th] February 2014), only class VII.9 (N=33) could be involved in this study because the students of this class had low performance in speaking. Therefore, class VII.9 became population and also the sample of this study.

4. Result and Discussion

The result of the pretest showed that the lowest score was 25, the highest score was 87.5, and the mean of the score was 48.86. Te result of posttest showed that the lowest score was 50, the highest score was 100, and the mean score was 74.24. based on the result of pre-test twelve students (37%) were in Failed category, eleven students (33%) in Poor categories, seven students (21%) were in Average categories, three students (9%) were in good categories and no student was in the excellent category. The result of posttest showed that four students (12%) in Poor category, seven students (21%) in the Average category, thirteen students (40%) in Good category, and nine students (27%) were in the Excellent category and none students was categorized into Failed category. The results of paired sample t-test are also showed that t-obtained was 12.704 while the t_{table} was 2.037 with p-value 0.000 because the $t_{obtained}$ was higher than t_{table} and it was significant. The null hypothesis $_1$ ($H0_1$) was rejected and research hypothesis $_1$ ($H1_1$) was confirmed. The mean difference between pretest and posttest was 25.38, with sig. (2-tailed) .000, showing that there was significant difference between pretest and posttest.

Next, after getting the results of the students' speaking test from two raters, the writer applied inter rater reliability test. According to Tunner (2014), Inter-rater reliability is a measure of the consistency of two (or more) raters. Next, the scores from two raters were analyzed quantitatively by using Pearson Product Moment Correlation. If there is a significant correlation between the test checked by the first rater and the second rater, it means the result of the students' speaking test is reliable. The result of the students' speaking test checked by two raters had a good reliability. The Pearson product moment correlation was 0.59 and it was positive.

One Sample Kolmogorov-Smirnov test was used to find the normality of the test. Data are expressed normally distributed if the significance is greater than 5% or 0.05. The result of statistical analysis showed that the sig. (2-tailed) for the pretest was .295 and .119 for the posttest it means the data were normally distributed.

Interpretations

The result statistical analysis showed that after receiving the treatment, the students' speaking performance was better than before they get the treatment. The improvement of the students speaking performance was proved by the result of the statistical analysis. The result showed that there was a significant increase in speaking performance after they were taught using games technique. The mean difference between pretest and posttest in the experimental group was 25.37879. From the result, it can be seen that students' score increase. The result of paired sample t- test in experimental group showed that the t_{count} was 12.704 at the significance level of $p<0.05$ for two- tailed test and (df) 32. Since the t_{count} was greater than t- table, the null Hypothesis$_1$ (H0$_1$) was rejected and research hypothesis$_1$ (H1$_1$) was accepted. In other words it can be stated that there was a significant increase in speaking performance before and after the students were taught by using Games technique.

The finding of this study was in line with the finding of study that conducted by Ulviana (2009) who found that games could stimulate students to speak English with joyful way if students stimulated to speak English they would unconsciously speak in English when learned English language. Games made the students were not under pressure when learning English and it also made them learn English in a fun way. It is true that they were motivated to join the learning activities because they wanted to win the games. A research done by Birova (2013) showed that games can motivate students to learn English because games made the learning activities fun and interesting to them. Moreover, games also increased the students confidence while they practiced to speak English and also Ramirez and Restopo (2012) in their research found that games can increase students self esteem and confidence of the students.

5. Conclusion and Remark

The conclusions are drawn based on the data analysis and the interpretation. First, there was a significant increase in speaking performance between the seventh graders of SMP Negeri 43 Palembang before and after taught through by using games. Second, the students who were taught using Games got higher score in posttest. It shows that the use of Games can serve as an alternative technique in teaching speaking.

The following suggestions are addressed to the English teachers and the students. First, games can be applied by teacher of English as one of the techniques in teaching speaking. It can enhance students' speaking performance. For the teachers of English who want to use games in their classroom, they should consider the time allocation in applying. In addition,   the teachers should be patient in explaining and applying Games in the classroom since the situation and condition of classroom and students sometimes are unpredictable. Students also need a lot of time or opportunity in practicing English speaking. The time allocation and member of students also give important roles. The teachers should also make sure that every student gets the opportunity to practice English speaking.

Second, EFL (English as a Foreign Language) students should be more active in the teaching and learning process. The students can play Games in their learning English because games help them to be confidence and   motivated to speak English and at same time enhance their English speaking performance.

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DESIGNING A DIDACTICAL SITUATION ON SYMBOL SENSE OF MINUS SIGN IN LEARNING ARITHMETIC OPERATION OF INTEGER

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Abstract

Mathematics textbooks are usually a reference for teachers to convey the material in class. The existence of textbooks help teachers to facilitate the learning process because their contain some descriptions of concepts, example problems, and evaluations so that the concepts and flow of thought contained in the textbook can guide teachers in the learning process. The study on mathematics textbooks of primary and junior high school on the material negative numbers less meaning the symbol of minus sign (*symbol sense of minus sign*) beforehand as the initial concept of negative numbers so that students do not understand the meaning of negative numbers at the next level. The learning process is more likely to emphasize the procedure only that resulting in a leap of information and thinking experienced by students. Finally, character of student's thinking forced to jump from the concrete into abstract thinking. Based on the results of a study conducted by researcher on the students of seventh grade, the concept of negative numbers became an obstacle in performing arithmetic operations of numbers. In integers which there are negative integers in shows that most of them do not understand the meaning of the symbol minus sign as a prerequisite to understanding arithmetic operations involving negative integers. Therefore, teachers need to design a learning through a didactical situation on symbol sense of minus sign which appropriate to the character of the student's thinking.

Keywords: *negative numbers, symbol sense, minus sign*

1. Intoduction

As children, we first encounter plus and minus signs as symbols of addition and subtraction of counting numbers and, perhaps, of fractions (Galbraith, 1974). Addition even been introduced to children from an early age. Subraction then submitted as advanced concept of addition. When it was first introduced, it might be easy for the child to determine 'what two cakes should be added in order to become 5

cakes?' when compared with 'how many 5 cakes are substracted three cakes?' This question becomes abstract for children when asked 'what does 5-3? Subtraction, on the other hand, is far more complex for children. Then, they recognized a symbol of minus sign beside plus sign. For them the minus sign means a subtraction operation with the meaning 'take away'. This concept then kept embedded in students until then recognized the concept of negative numbers.

We often associate the terms integers and negative numbers with difficulty, frustration, and confusion so many of us probably still remember our initial struggles to understand negative numbers and how to operate with them (Bishop et.al, 2011). Bofferding (2014) stated that many students struggle to make sense of negative integer concepts because they seemingly conflict with their established understanding of nonnegative numbers. As revealed by Bofferding, students start learning whole number concepts in kindergarten (or earlier), fractions in second or third grade, and decimals in fourth grade but, typically, do not learn negative number concepts until sixth and seventh grade. The *larger minus smaller* rule contributes to students solving problems such as $24 - 19$ as $29 - 14$ because they switch the digits in the ones place (Fuson in Bofferding, 2014). Even without hearing this rule, many students incorrectly solve problems such as $3 - 5$ as $5 - 3$.

Before they receive instruction on negative numbers, students primarily rely on the binary meaning of the minus sign, interpreting all minus signs as subtraction signs (Bofferding, 2010); this interpretation may be one reason why students call the negative sign a "dash" or "minus." However, students need to understand that the "dash," or negative sign, serves to designate numbers that are ordered before zero and have different values than positive numbers. In Indonesia, negative numbers are encountered in mathematics curriculum at the beginning of secondary school, ie at the seventh grade (Kemdikbud, 2013). In fact, these materials have been given to fourth grade students in elementary school. Unlike positive number, negative number has

not perception referential which is clear, and therefore, students should try harder to learn about negative number (Blair. et al, 2012). The concept of subtraction as the meaning of 'take away' are not applicable to students when faced with, for example, 2 – (-5). Based on auhtor's observation, there was found confuse in meaning 'take away -5' and when –(-5) changed into +5 on the students. This may not be the case if they were introduced to symbol of minus sign as 'opposite of'so they know that –(-5) as oppsosite of -5 meaning therefore its was obtanined +5.

Mathematics textbooks did not anticipate the obstacles faced by students in understanding the abstract concept of negative numbers. Based on author's, the 7th grade mathematics textbooks mostly prefer to procedure with memorization the mathematics formula that unfamiliar to them (see Fuadiah, 2015). In part the books are less attention to flow of thiking on students who are in the informal to the formal transition thinking. At this stage, students still use thinking arithmetic than algebra. A study conducted by the author, many students stating that -4 + 5 as -9. This is due to their latest information that the negative numbers with the positive numbers it will be negative numbers. Therefore, the textbook should be able to accommodate the students's condition to use the concepts of the symbol of minus sign thay they had previously understood so there is no 'thinking leap' on them.

The existence of textbooks would not be separated from the lesson plan prepared by the teacher. The main function of the learning plan is to give students learning opportunity so that a teacher must plan what would probably happen during the learning process (Sanchez & Valcarcel, 1999). Brousseau (2002) affirmed that the role of the teacher is to encourage mathematical ideas in a context through the inquiry process. Therefore, we need to realize entirely that it is important for teachers to design learning with didactic design to anticipate all possible student responses on a didactic situation (Suryadi, 2013). The application of the theory of didactic situations through the design of a didactic situation created by the teacher in the learning activities in the classroom are expected to develop the potential of students,

which they can construct their own knowledge that will be achieved through a series of processes of abstraction. Action and feedback through a strategy will allow the establishment of a new knowledge.

2. Theoretical Background

Theory of Didactical Situation

The theoretical idea that stays behind this approach is the main role given to the relation between students learning process and the environment where the learning happens (Manno, 2006). The first step in this theoretical approach is the analysis of teaching-learning phenomenon within the triangle teacher-knowledge-student (Didactic Triangle). Further, Manno also explained that the double implication of this triangle suggests that we are facing a complex interaction that works back and forward. When analysing the triangle it is important that no one of the members takes a main role, every study of the topic teaching-learning has to consider the three members at the same level.

Theory of Didactical Situation (TDS) is interested in didactical situations , that is, those designed and utilized with teaching and learning aims. Brousseau distinguishes two possible perspectives on didactical situations: a vision of these as the student's environment organized and piloted by the teacher; and a broader vision including the teacher and the educational system itself (Artigue et. al, 2014).

Reffering to Brousseau, Artigue et.al (2014, pp. 49-50) explained that there are some charateristics of TDS. The first important characteristic of TDS is the attention it pays to mathematics and its epistemology. In the theory, this sensibility is expressed in different ways, notably through the reference to Bachelard's epistemology and the didactic conversion of his notion of *epistemological obstacle*, and also through the notion of *fundamental situation*. Referring to Bachelard's studies in physics which led to a list of obstacles of epistemological nature, Brousseau (2002, p.83) extends its application to the fi eld of didactics of mathematics, defining

epistemological obstacles as forms of knowledge that have been relevant and successful in particular contexts, including often school contexts, but that at some moment become false or simply inadequate, and whose traces can be found in the historical development of the domain itself.

A second important distinction in TDS is linked to the following epistemological characteristic: mathematical knowledge is something that allows us to act on our environment, but the pragmatic power of mathematics is highly dependent on the specific language it creates, and on its forms of validation. This characteristic reflects in TDS through the distinction between three particular types of situations: *situations of action* , *situations of formulation* , and *situations of validation* (Brousseau, 2002; Kislenko, 2005; Perrin-Glorian, 2005; Manno, 2006; Wisdom. 2014).

The third important characteristic refers to students' cognitive dimension, particularly to the combination of the two processes *adaptation* and *acculturation*. Regarding adaptation, Brousseau's discourse shows an evident proximity with Piagetian epistemology:

> *the student learns by adapting herself to a milieu which generates contradictions, difficulties and disequilibria, rather as human society does. This knowledge, the result of the students' adaptation, manifests itself by new responses which provide evidence for learning. (Brousseau 2002, p.30)*

TDS key constructs take that teaching is an activity needing to conciliate two processes: independent adaptation and acculturation (Perrin-Glorian, 2005). Independent adaptation through the notions of *a-didactical situation* and *milieu* and acculturation through the notions of *didactical situation* and *didactical contract.*

A-didactical situation, with respect to knowledge *S*, is that situation that contains all the conditions that permit the student to establish a relationship with *S*,

regardless of the teacher. The actions that the student does, and the answers and arguments that she produces depend on her relationship (no completely explicit) with *S*, i. e. with the "problem" that she must solve or wit the difficulty that she must overcome. In this case, a process of devolution of responsibility is in action (Samaniego & Barrera, 1999). ***The milieu*** is the system with which the students interact in the a-didactical situation and an essential role of the teacher or the researcher is to organize this milieu. It includes material and symbolic resources, possibly calculators, computer devices, or all types of machinery (Artigue, 2014). In *a-didactical Situations* it is the students who have the initiative and the responsibility for what comes of the Situation (Brousseau et.al, 2014, p. 147). The teacher thus delegates part of the care for justifying, channeling and correcting the students' decisions to a *milieu*.

Didactical situation, with respect to knowledge S, is that situation design explicitly to encourage S. We can consider as didactical all the tasks done in a classroom with which the teacher intents to teach *S*, and with which the student is forced to learn *S* (Samaniego & Barrera, 1999). In *didactical Situations* , the teacher maintains direct responsibility for all stages of the lesson. She tells the students her intentions, what they will have to do, and what the results should be (Brousseau et.al, 2014). ***The didactical contract*** is the only rule and strategy of the didactical situation and it is strictly related to knowledge. Often students do not answer teachers' questions on the basis of the content that teachers mean to give them, but on the basis of what they think teachers expect from them (Manno, 2006). Miyakawa and Winslow (2009) stated that didactic contract is a contract that governs the responsibility of students and teachers and their interaction in the learning process.

The relationships between these processes through the dual notions of *devolution* and *institutionalization* (Artigue et.al, 2014). Further, Artigue explained also that through *devolution* , the teacher makes her students accept the mathematical responsibility of solving the problem without trying to decode her didactical intention, and maintains it, creating thus the conditions for learning through

adaptation. Through *institutionalization* , the teacher helps students to connect the contextualized knowledge they have constructed in the a-didactical situation to the target cultural and institutional knowledge.

Based on TDS, mathematics learning be implemented in three steps as revealed by Brousseau (2002, pp. 8-13) and that are described by Manno (2006);

1. Action

Students start working on the problem and produce new hypothesis and strategies proved

by new experiences. The interaction between students and the environment (other students,

the problem context, the teacher) is useful to create some first strategies and is called "dialectic of the action". At this moment students build an implicit model: a set of rules relations useful to take new decisions without being conscious of it or needing to express them in an explicit way.

2. Formulation

Now the context gives students the chance to create their own implicit model, to express strategies with words, to discuss and preserve them, making other student accept them. To do so every one will have to use a language understood by other students. The communication exchange between students lead them to a keep going strategy creation, we are in the dialect of the formulation.

3. Validation

Models that come from the previous steps can be accepted or refused by other students. In

their group all students have an equal grade so they can discuss their strategies, the hypothesis they all agree on becomes a theorem. Students often accept wrong theories, the a-didactical situation lead them to a review of their process to make sure that they use a proper strategy. In this way mistakes are a basic point in the knowledge building process. With the validation step it is possible to give the

mathematical concept a shape that in the traditional way of teaching is a starting and never a ending moment.

Symbol Sense of Minus Sign

The minus sign is used in three common ways. The three problems in table 1 use the symbol "–" that we refer to, in general, as the minus sign. However, each problem may elicit a different meaning for students. The first meaning is shown in problem 1, in which the minus sign indicates subtraction, the original use of the symbol that young children en-counter. In problem 2, the minus sign is part of the symbolic representation for a negative number, in this case, "negative 2." In problem 3, however, the first minus sign may be viewed as the *opposite of* so that one could read - -4 as "the opposite of negative 4" rather than students' more common reading of "negative negative 4" (see Bofferding 2014; Lamb, et al, 2012; Vlassis 2008).

Table 1. Three meanings of the minus sign

Problem	Meaning of the Minus Sign
1. $5 - 8 = \square$	Subtraction as a binary operation
2. $\square + 5 = -2$	A symbolic representation for a negative number
3. Which is larger, - -4 or -4?	The *opposite of*, a unary operation

In problem 1, the minus sign func-tions as a *binary operator* in that two inputs are used to produce one output. Addition, subtraction, multiplication, and division are examples of binary operators. For example, subtraction is a binary operator because the inputs of 5 and 8 result in one output, -3. In problem 3, in contrast, the minus sign is used as a *unary operator* in that it involves only one input and one output. When one thinks of –(-4) as "the opposite of negative 4," then one is view-ing the first minus sign as the unary operator, the *opposite of*. However, in problem 2, some people may view the minus sign in -2 as a unary operator, not as part of the number but instead as the *opposite of* 2. One who can view -2 in both ways can be said to flexibly hold both meanings of the minus sign. Although students may initially face

difficulties because three meanings are assigned to the same symbol, having the same symbol represent several ideas is important.

On the seventh grade students, based on author's observation, negative integers become separate obstacles in arithmetic operation of integer. This is in line with Larsen (2012) that negative numbers are an abstract concept for which students need phenomenological guidance in order to avoid epistemological obstacles. The author argues that the symbol of minus sign must be understood first by the students before understanding integer arithmetic operations because their understanding of these symbols of minus sign will be useful when they perform integer arithmetic operations. For example, in operation 8 – (-3), through the meaning of opposite as one of the meanings of the minus sign, the student will know that –(-3) means the opposite of -5 is +5 so 8 – (-3) equal to 8 + 3. For the other example, -4 will interprete as the opposite direction from 4 or +4. It expected to be easier to understand by the students than memorized the formulas of integer arithmetic operations.

3. Result and Discussion

Based on the background and the theoretical review that has been disclosed, the author tried to design a didactic situation in learning activities that can be carried out by the teacher before entering the integer operations in seventh grade. Learning design for the *Symbol Sense of Minus Sign* is based on the theory of didactical situations through three stages of the situation by paying attention to the meaning of the minus sign. This design is hypothetical so that still need testing to see the extent of its influence on students (see table 2). In this design, the author included prediction of response or feedback of students and the anticipations can be done by the teacher. This steudent's predictions of response certainly be evolve or change by trials. Thus the design can be revised based on the real response that appears and findings in the field.

Tabel 2. Design of Didactical Situation on *Symbol Sense of Minus Sign*

Learning Goal	Phase	Didactical Situation (teacher's input)	Student Activity	Mathematical Hyphotesis
1. Students know the meaning of the minus sign as "binary function" (subtraction) 2. Students know the meaning of the minus sign as "unary function" (number sign) 3. Students know the meaning of the minus sign as "symmetric function" (opposite of)	Action	Teacher prepares some questions in daily life associated with the minus sign on a piece of paper. The questions such as: ➤ Mother has 12 cakes. Eight cakes given to your sister. How do you calculate the remaining cakes? ➤ Rani stepped forward as much as 5 steps. How to write five steps back? ➤ What the opposite of 4?	Students determine the answers according to the questions through discussions with friend bench or their group and then paste on a piece of cardboard	Students can give some answers involving symbols of minus sign
	Formulation	Ask for the students to make a few questions or statements themselves as teachers gave earlier. The teacher asks the students attention frequent symbol. The teacher asks the students to show their work on the board.	Designing some questions and answers themselves through discussion. Pair of this questions and answers is placed on a piece of cardboard. Then they identifying the symbol of minus sign.	Students can construct the usage of minus sign
	Validation	Encourages the students to examine and discuss the answers, then provide reinforcement to the students' answers. Asks the students to determine whenever the minus sign is used, then leads to a conclusions and provides reinforcement	Students explain the answers requested to provide their own argument	Students can conclude meaning of the symbol of minus sign

One of the students' response that must be considered by the teacher is when students do not understand the meaning of questions. For example, teachers predicted there were some students do not understand if the 5 steps forward with 5 or +5, then

five steps back into -5. For this, teachers need to create a new didactical contract by giving another question that is easier to understand by the students and according to the objective of the that question. The question is made in stages, for example, teachers given the initial question: "*What do you write a temperature of 50^0 C above 0?*" If the answers correctly then asked them with the question: "*How about 50^0 C below 0? Written with what?*" This step is necessary as a bridge between learning goals with the students' thinking skills. Therefore, teachers need to set up some alternatives anticipate if some obstacles present in the learning process. Accordingly, there are balance between teacher-student- material within the didactics triangle. The synergy of the three components in the didactics triangle with anticipation didactic and the pedagogical are expected creating independence of learning in students (Suryadi, 2016).

4.   Conclusion and Remark

Bishop et. al (2011) recommended that although integers are not part of the first-grade curriculum, we would like teachers to be aware of ways in which they can easily enrich and extend children's mathematical thinking by building on their ideas about negative numbers when they arise naturally in the classroom. Given the success of the instructional interventions, it would be worthwhile to explore the use of similar instruction with older students, providing them with more targeted integer experiences around the multiple meanings of the minus sign and interpreting integer values from both positive and negative perspectives (Bofferding, 2014). Lamb et. al (2012) argued that these experiences will support students in developing symbol sense in relation to the minus sign that will foster their future learning as they move from middle school into high school and beyond. Students learn to interact the environment by adapting their knowledge of different strategies without the help of a teacher to a wide range of possibilities. Didactic actions of a teacher in the learning process will create a situation that can be a starting point for the process of learning.

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THE CORRELATION BETWEEN STUDENTS' GRAMMAR MASTERY AND THEIR ABILITY IN ARRANGING JUMBLED WORDS INTO GOOD SENTENCE

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Abstract

The objective of this research is to know the correlation between students' grammar mastery and their ability in arranging jumbled words into good sentence at the fifth semester of English Education Study Program Muhammadiyah University of Metro academic year 2015/2016. This research is quantitative research. The population in this research is fifth semester of English Study Education Program Muhammadiyah University Academic Year 2015/2016. The researcher used saturated sampling; all of the students at fifth semester. with amount 45 students. The data collecting technique used are the test of grammar mastery especially at simple simple past tense and the test of ability in arranging jumbledd words into good sentence. The researcher used Lilliefors formula to test the normality of the research and Product Moment Correlation to test the hypothesis. Based on the data analysis, the researcher finds there is correlation between students' grammar mastery and their ability in arranging jumbledd words into good sentence with coefficient $r_{xy} = 0,97$.

This value is consulted by $r_{table} = 0,294$ and the result is 0,97>0,294, therefore there is correlation between X variable and Y variable. The conclusion, there is correlation between students' grammar mastery especially at simple simple past tense and their ability in arranging jumbledd words into good sentence at fifth semester in Muhammadiyah University of Metro academic year 2015/ 2016.

Keywords : The Correlation between Students' Grammar Mastery and Their Ability in Arranging Jumbled Words Into Good Sentence, Grammar Mastery, Ability in Arranging Jumbled Words into Good Sentence

1.   Introduction

Grammar usually called as fundamental English rules is regulations of using English for written and spoken. This is a must in learning English especially for new learners blaming English as their second or even foreign language. By this statement, in this undergraduated thesis the grammar is focusing on Descriptive grammar used in book based rules. While considering the structure of sentence as sentence pattern.

This is extraordinary needed for learners for instance in using tenses for applying at many genres of texts, conditional sentences, and one is also for arranging jumbled words into good sentence.

In this research, grammar mastery limiting at simple simple past tense mastery is one of the variables investigated because simple simple past tense is one of many kinds material in Grammar that must be grabbed by students. It is one of the important aspects in arranging jumbled words into good sentence for students at fifth semester of English Education Study Program Muhammadiyah University of Metro. The case found, by limited understanding about simple simple past tense especially, students will also have a limited understanding in arranging jumbled words into good sentence. This is one of some problems confronted by English language learners including of students at fifth semester of English Education Study Program Muhammadiyah University of Metro.

The researcher conducted pra-survey at students of fifth semester of English Education Study Program Muhammadiyah University of Metro academic year 2015/2016 in grammar mastery especially for their simple simple past tense mastery and the ability in arranging jumbled words into good sentence. Below is the result of pra-survey.

Table 1. The Pra-Survey Result Data of Grammar Mastery Especially at Simple Simple simple past tense Mastery.

No.	Range of Score	Percentage	Frequency
1	0 – 60	20 %	9
2	61 – 75	60 %	27
3	76 – 100	20%	9
4	Number of students	100 %	45

Source : *The Pra-Survey Result Data at students of fifth semester of English Education Study Program Muhammadiyah University of Metro academic year 2015/2016 in grammar mastery especially for their simple simple past tense mastery.*

Based on the table 1 can be shown that the students' grammar mastery especially at simple simple past tense mastery is domined in middle criteria. There

are 27 students (60 %) have score 61 – 75 who include in middle criteria, 9 students (20 %) having score 0 – 60 who include in low criteria, and 9 students (20 %) having 76- 100 score who include in high criteria. Consequently, students in fifth semester have on the middle capability in mastering grammar especially at Simple simple past tense mastery. The students are expected to be able to increase their ability.

Table 2. The Pra-Survey Result Data in Grammar Mastery Especially for Simple simple past tense Mastery and The Ability In Arranging Jumbled Words Into Good Sentence

No.	Range of Score	Percentage	Frequency
1	0 – 60	60 %	27
2	61 – 75	20 %	9
3	76 – 100	20%	9
4	Number of students	100 %	45

Source *: The Pra-Survey Result Data at students of fifth semester of English Education Study Program Muhammadiyah University of Metro academic year 2015/2016 in grammar mastery especially for their simple simple past tense mastery and the ability in arranging jumbled words into good sentence.*

There are 27 students (60 %) have score 0 – 60 who include in low criteria, 9 students (20 %) having score 0 – 60 who include in middle criteria, and 9 students (20 %) having 76- 100 score who include in high criteria.So, students in middle criteria are expected to increase their score.

Showing on the result of two pre-surveys appeared above can be taken line the students' grammar mastery especially at simple simple past tense mastery and their ability in arranging jumbled words into good sentence is still low. The students are expected to be able to increase their ability especially in simple simple past tense mastery and ability in arranging jumbled words into good sentence well, and figure

out how the correlation students' grammar mastery and arranging jumbled words into good sentence ability.

Therefore, based on the problem background above the researcher is interested in finding the correlation between students's grammar mastery and arranging jumbled words ability into good sentence.

2. Theoretical Background

a. The Concept of Grammar Mastery

Grammar usually called as English structure is regulations of using English for written and spoken. This is a must in learning English especially for new learners blaming English as their second or even foreign language. States by Ms. Rajarajeswari M., Dr K Balamurugan, (2013: 61-62) ,

> Grammar is a branch of study of language in a particular somewhere between sound and meaning, that is to say grammar is concerned with phonetics and meaning and relates the two. Grammar is used as a touchstone to test whether the language being spoken or written is correct and acceptable or not. (Ms. Rajarajeswari M., Dr K Balamurugan, 2013: 61-62).

This is extraordinary needed for learners for instance in using tenses for applying at many genres of texts, conditional sentences, and one is also for arranging jumbled words into good sentence.

There are some definitions of grammar quoted from experts. Grammar is a set of rules that explores the forms and structures of sentences that can be used in a language (Gleason and Ratner, 2009: 231–269; Thornbury, 1999 as cited from Al-Mekhlafi, Abdu Mohammed Al-Mekhlafi. 2009: 71). (Azar,

2009) states that grammar is a set of rules by which people speak and write. These rules are not always understood consciously because the rules we refer to are those hardly anyone ever thinks about, but wish allow people to use their language easily and naturally most of the time. Based on the experts' definition of grammar above, it can be concluded that grammar is rules of how words and their component tparts are combined to make sentences.

As the limitation, researcher took simple simple simple past tense as a part of grammar correlating with students' ability in arranging jumbled words into good sentence.

In this research, the focus of grammar mastery is on simple simple past tense mastery. Taking definition of simple simple simple past tense, according to Lou (2005: 33) state that simple simple simple past tense is the tense normally used for the relation of past event. Azar (2003: 26) add that there are two forms of the simple simple simple past tense; regular verbs and be. From the explanation above, it can be concluded that simple simple past tense is one of tenses in English. The function of simple simple past tense is to tell about past events. Simple simple past tense has two kinds namely verbal simple simple past tense and nominal simple simple past tense. Verbal simple simple past tense use verb two in the sentence whereas nominal simple simple past tense does not use verb. More, simple simple past tense is a tense used for signing past event. It indicates that something done in the past time.

b. The Concept of Jumbled Words

Kaswan (2010 : 169-174) said that, "At the beginning of learning English, students will write a little. Those most involved copying the word or sentences. It is a good idea to use copying activity by encouraging children to think. It means using activities of puzzles, match, sort, or categorize. Copy at the level of word or phrases can be used of assistive devices, such as drawing, writing models, flowchart, etc. There are some writing activities such as Word Games**,** this activity designed for given exercise, especially for the set of words, such as colour, states, clothing, etc. The used for activities other writing. Bingo, Crossword 3 Puzzles, Acrostic Crosswords, Letter Boxes**,** Making Words from the Given Letters**,** Jumbledd Words**, (**write on the blackboard the words just learned by students, or the difficult words spelling with the scrambled letters. It's good to have words related to one theme. For example, you can givethe students following words: Gdo, Sumoe, Owc, Knymoe, Ibdr (Dog, mouse, cow, monkey, bird))."

Based on the statement given, we can conclude that learning grammar especially simple simple past tense usually we need play such as jumbled words to create students' mind and apply their understanding about simple simple past tense.

c. The Concept of Correlation

Correlation is relationship between one variable to other variables. According to Sukardi (2003:1) said that correlation is research which has function to get the data. Where it is used to determine that there is correlation and level of two variables or more. Kumar Singh (2006:304), states that correlation is in social study as well as psychology to know whether there any relationship between the different abilities of the individual or they are independent of each other.

Based on explanation above, the researcher concludes that correlation is relationship between a part of components and ability. In this case the researcher wants to find out whether any correlation between students' grammar mastery and arranging jumbled words into good sentence ability.

In this research, the researcher assumes that students' grammar mastery has affection with arranging jumbled words into good sentence ability. It is shown that the students will have good ability in arranging jumbled words if they have well grammer mastery especially in simple simple past tense.

Picture 1. Framework Of Students' Grammar Mastery And Arranging Jumbled Words Into Good Sentence Ability

Grammar Mastery	Arranging Jumbled Words into Good Sentence Ability
1. Students can identify simple past tense sentence. 2. Students can transform other tenses form sentences beside simple past tense to correct arrangement of paste tense.	1. **Students are able to rearrange jumbled words into good meaningful sentence by considering simple past tense formula rules.**
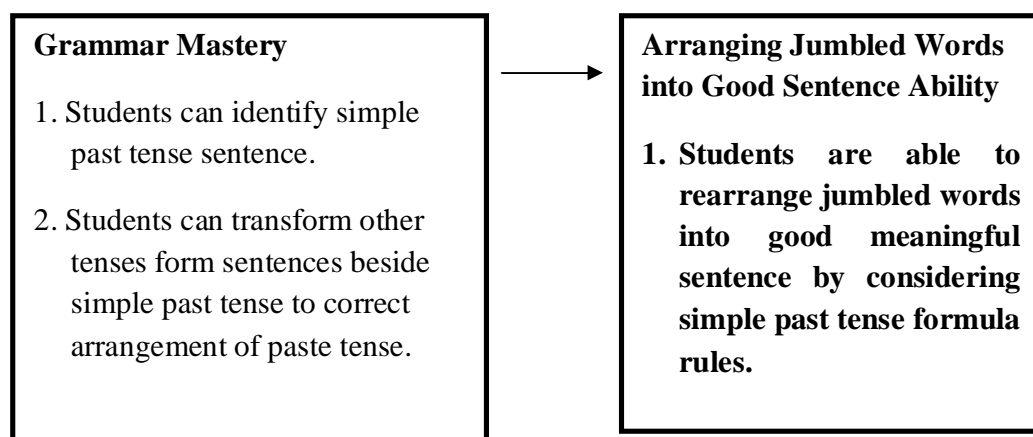
X : Independent variable (Students' grammar)
Y : Dependent Variable (Arranging jumbled words into good sentence ability)

⟶ : The correlation between X and Y

Source : Arikunto (2010:60)

From the picture above the researcher assumes that there is correlation between students' grammar mastery especially in simple simple past tense and arranging jumbled words into good sentence ability.

3. Method

This research uses correlation study design, and the writer uses quantitative method. The research does not apply any treatment to the samples and analyzed the collected data taken from student's answer the test about their grammar mastery especially at simple simple past tense and students' ability in arranging jumbled words into good sentence. It is intended to investigate is any correlation between students' grammar mastery and arranging jumbled words into good sentence ability of the fifth semester students English Education Study Program Muhammadiyah University of Metro.

The population for this research is undergraduated students of fifth semester of English Education Study Program Muhammadiyah University of Metro. The Sampling technique used is total sampling (saturated sampling) where all of students at the population are taken. So, the sample of this research is undergraduated students of fifth semester of English Education Study Program Muhammadiyah University of Metro by amount 45.

The design of this research as follows :

1. The researcher gives simple simple past tense multiple choices questions to know their grammar ability especially in simple simple past tense.
2. The researcher gives test of students' grammar mastery in particular of simple simple past tense and arranging jumbled words into good sententence ability. The test is in multiple choice.

The analysis techniques are for grammar mastery test and the correlation between students' grammar mastery especially at simple simple past tense and ability in arranging jumbled words into good sentence. The analysis of grammar mastery focuses on simple simple past tense is to know students' grammar mastery especially their simple simple past tense mastery. Students will be served a test consisting of 20 questions in multiple choices form with 4 choices (a,b,c,d). While the analysis technique of the correlation between students' grammar mastery especially at simple simple past tense and ability in arranging jumbled words into good sentence, the researcher also gives a test consisting 20 questions of jumbled words in multiple

choices form with 4 choices (a,b,c,d). They are commanded to choose wich one the right arrangement of jumbled words served by considering the formula of simple simple past tense, because all of the questions made with reckoning simple simple past tense formula.Here the formula to count the score of students' grammar mastery in particular of simple simple past tense test and the correlation between students' grammar mastery especially at simple simple past tense and ability in arranging jumbled words into good sentence,

$$score : \frac{R}{N} x100$$

Note

R   : the right answer

N   : total number of questions

4.   Result and Discussion
A.   The Result of The Research Test
1.   The Result of Students' Grammar Mastery Test

The result grammar mastery test is taken from test consisting of 20 questions. The highest score of this test is 95. The score is gotten by using the formula below :

$$score : \frac{R}{N} x100$$

After getting data from the result of grammar mastery test, the researcher found that the highest score is 95, the lowest is 45 and the average score is 70.67. Based on the data frequency distribution of the result it is obtain that from 45 students there are 3 students getting score between 45-53, 7 students getting 54-62, 18 students getting 63-71, 8 students getting 72-80, 5 students grabbing 81-89 and 4 students achieving 90- 98.

2.   The Result of Students' Arranging Jumbledd Words Into Good Sentences Ability Test

The result of arranging jumbled words into good sentences test is grabbing from test consisting of 20 questions. The highest score of this test is 90. The score is gotten by using the formula below :

$$score : \frac{R}{N} x100$$

After getting data from the result of arranging jumbledd words into good sentences ability test, the researcher found that the highest score is 90, the lowest is 45 and the average score is 65.2. Based on the data frequency distribution of the result it is obtain that from 45 students there are 6 students getting score between 45-52,11 students getting 53-60, 10 students getting 61-68, 12 students getting 69-76, 2 students grabbing 77-84 and 4 students achieving 85-92.

B. **The Data Analysis of Research**

1. The Result of Normality Test

The data of students' grammar mastery especially at simple simple past tense and ability in arranging jumbledd words into good sentence which are gotten from the research result, it is tested of normality by using Lilliefors formula.The summary data of normality test from each variable are provided in table below.

Table of The Data Result of Normality Distribution

Variable	X	SD	L-ratio	L-table (0,05)	Conclusion
X	70.67	12.14	0.1023	0.1321	Normal
Y	65.2	10,82	0.1300	0.1321	Normal

Source: The result of normality test.

From the data result above, it is obtained that L_{ratio} of each variables is lowest than L_{table} in the significant level 5% (α=0.05). Thus, it is implied that the data distribution test is normal.

2. **The Result of Hypothesis Test**

After giving the test and getting the result data of the test in this research, the researcher uses quantitative analysis in order to prove the hypothesis that there is correlation between each variable. To analysis the result data, the researcher used *The Product Moment.* Before conducting the hypothesis, the researcher proves that test result has normal data. It's hoped that there will be no mistake in taking a conclusion, as the effect of inappropriate formula usage.

The Test of Hypothesis

The test of first hypothesis is done by using analysis of *Product Moment Correlation*. The first hypothesis state that there is correlation between students' grammar mastery and ability in arranging jumbled words into good sentences.

The researcher used :

$$r_{xy} = \frac{\sum xy}{\sqrt{(\Sigma x^2)(y^2)}}$$

Table The Data Result of X_1 and Y Variable

X	$n_1 = 45$	$\Sigma x^2 = 6480.00$	Σxy
Y	$n_2 = 45$	$\Sigma y^2 = 5147.78$	5643.33

Source : Table data result of hypothesis test

The Correlation Test

$$r_{xy} = \frac{\sum xy}{\sqrt{(\Sigma x^2)(y^2)}}$$

$$= \frac{5643,33}{\sqrt{(6480,00)(5147,78)}}$$

$$= \frac{5643,33}{5775,604}$$

$$r_{xy} = 0,97$$

From the data calculation above is gotten r_{xy} = 0,97. This value is consulted by $r_{table\,(45;0,05)}$ =0,294 and the result is 0,97> 0,294, therefore there is correlation between X variable and Y variable. At the conclusion, there is correlation between students' grammar mastery especially at simple simple past tense and their ability in arranging jumbled words into good sentences. Therefore, If $r_{count} > r_{table}$, H_a is accepted. It means there is correlation between students' grammar mastery in particular of simple simple simple past tense and their ability in arranging jumbled words into good sentences at fifth semester in Muhammadiyah University of Metro

Discussion

The researcher finds some difficulties faced by the students fifth semester of English Education Study Program Muhammadiyah University of Metro. Those are below;

1. Students are not mastering grammar mastery especially at simple simple past tense will also find difficulties in arranging jumbledd words into good sentences. Most of them are not mastering it got low score in answering the test. Vise versa.

2. Some student are feeling lazy and just asking their friends about the answer from the test given, from the grammar mastery test, and arranging jumbledd words into good sentences test.

3. The limits time when doing the test, because the time given is 60 minutes should be done.

So far, after doing the correlation test to evidence the hypothesis, so the discussion of the result from this research: there is correlation between students' grammar mastery in particular of simple simple simple past tense and their ability in arranging jumbled words into good sentences at fifth semester in Muhammadiyah University of Metro with high correlation criteria (0.97). So that students master in grammar especially at simple simple past tense, they also have ability in arranging jumbled words into good sentences. Means that students' score of grammar influences their score in arranging jumbled words into good sentences.

5. Conclusion and Remark

Based on the objectives of research, the researcher finds most of English Education Study Program Muhammadiyah University of Metro students at Fifth Semester academic year 2015/2016 are mastering in grammar mastery especially at simple simple past tense, so that for they are able to arrange jumbledd words served into good sentence. So that, it can be concluded that after the researcher finished the research and analyzed the data, the conclusion of this research is, there is correlation between students' grammar mastery especially at simple simple past tense and their ability in arranging jumbled words into good sentences at fifth semester in Muhammadiyah University of Metro academic year 2015/2016, with coefficient correlation 0,97. It is concluded students master in grammar especially at simple simple past tense, they also have ability in arranging jumbled words into good

sentences. Means that students' score of grammar influences their score in arranging jumbled words into good sentences.

The Suggestion of Research

By knowing the result of the research, the English teacher or English lecturer is hoped can give motivation to the students in order they can build their interest in mastering grammar and also their ability in arranging jumbled words into good sentences. In addition, the teacher and lecturer can apply suitable strategy to develop students' capability.

As language learner, the students must learn to master grammar because it can influence their ability in arranging jumbled words into good sentences. All of this aspects correlate each other, so the students are expected to apply it well and make it as one of things which can support them to learn English language well.

This research is expected can contribute to the research education especially to find out the correlation between variables, in this case students' grammar mastery especially at simple simple past tense and their ability in arranging jumbled words into good sentences. This research is hoped to be an adequate previous study which can be used by the other researchers to conduct a further research relating to the correlation between cognitive domain and affective domain.

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THE DEVELOPMENT NATURAL SCIENCES BASED ADOBE FLASH CS3 WITH THE TOPIC SYSTEM OF COORDINATION AND THE SENSES IN HUMANS IN NINTH GRADE JUNIOR HIGH SCHOOL

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Abstract

The purpose of this study was to develop a product in the form of instructional media based integrated natural science adobe flash cs3. This research is the development or R & D by adopting a 4-D model of development, namely, the stage of defining, designing, and development. Samples were students of class IX junior high school. Data was collected using a questionnaire sheet that covers several aspects of the study include: feasibility aspects of the material / content, language, presentation and evaluation. Quality media rated by the media experts, subject matter experts and language and class IX students of junior high school.

Keywords : Natural Science, Media and Adobe Flash

1. Introduction

The problem Arising from the lack of technology utilization as media that can help teachers in learning. Media is a tool that can be used to facilitate learners in the learning process, so that the explanation of the abstract can be imaged by learners through a tool that is used as a medium of learning. However, mostly in schools, the use of technology in learning is still less be applicable. Likewise with the schools we studied, whereas, a computer room complete with a projector is available to support learning. Teachers use media that are more traditional, such as the charta, and torso. Actually, charta and torso can help students understand the material, just not all the material can be understood. System of coordination and the senses, for example, this

matter takes more than just Charta and torso for discussion include processes in organs in the human body.

In this paper we have offered on a media that we studied as a solution to the problem of the teachers to create the ideal learning and can help students understand the material. We create media-based learning adobe flash cs3 then analyze the data obtained from the questionnaire design validation and materials by experts, as well as a questionnaire testing students.

2.   Theoretical Background

Natural Science is a science that studies about life. Humans, animals and plantsarethe discussion of the scope of this science. In humans, the body consists of organs,each of it has a specific function. Those organs can work as well, but it needs necessary coordination. In humans and most animals, the coordination is done by the nerve system, sensory system, and hormonal systems.Field of applied knowledge that is expected to further contribute to the development of education in the country is the field of Educational Technology. The ability to utilize modern technology in the development of educational course very much depends on the number and capacity of experts in the field of Educational Technology (Sadiman, 2011, page. 5).

Science and technology is developing very rapidly all over the world, as well as in Indonesia. Already many modern tools developed by scientists in the world in various fields in order to assist the work of man. One example that is well known by the public is the computer. Similarly, in education, science and technology, also influence and contribute to advancing the educational world. Program software adobe flash cs3 is one of the sciences and technology that can be developed into a medium of learning, especially in this discussion is the instructional media of Natural Science Integrated.

Haryono (2013) argues that "before discussing about how should the process of learning science done, we need to examine some of the problems of science learning

happens on the field today, one of which is the teaching materials provided in schools still feels off the main problems that arise in the community, particularly with regard to technology and the presence of technology products in the midst of society, as well as the consequences. Therefore, the need for businesses to develop and align instructional materials science with the development of local technologies and issues related to the study material listed in the curriculum "(page. 1-2)

This is in line with the observation of the author of the two-week teaching science subjects Integrated in MTs (MTs) Al-Khairiyah in grade IX student that active to participatee is very low in the following study. During the observation process students were passive and did not understand the lesson is in progress. Students do not understand how the stages of the processes that take place every day and even every second in their bodies. This has an impact on the outcome of the midterm students were only 4.5% in the grade IX who successfully pass the minimum completeness criteria hereinafter abbreviated to minimum completeness criteria. While 95.5% did not pass because values are belowminimum completeness criteria. minimum completeness criteriadetermined is 70. The results of author interviews to teachers teaching science in grade IX MTs Integrated Al-Khairiyah city of Jambi, on learning that has not previously been used instructional media, especially Adobe Flash; this is because teachers are concerned only using media that is classical, such as the chartaand torso. Media classical readily available, and its use is practically one of the reasons teachers choose to use the media. Based on the description that has the writer explained above, the author would like to implement instructional media Integrated Sciences based on Adobe Flash in a study entitled "Development of Media Education Natural Sciences Based Integrated Adobe Flash CS3 On Topic Coordination System and Tools Indra In Humans In Class IX MTs Al-Khairiyahof Jambi.

3. Method

Needed Analysis

Research in the Research And Development that the research methods used to produce a particular product, and test the effectiveness of these products (Sugiyono , 2011, page: 407).

Product Evaluation

Product evaluation done in three stages, namely the validity and product trials. Validity test is done by subject matter experts and media experts. While testing of products is done in MTs Al-Khairiyah of Jambi.

Sources of data obtained from the study of this development are:
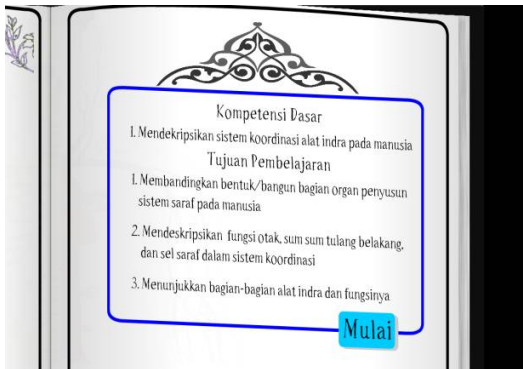
a. Reference of the journal Biology of the development of instructional media junior and senior high school

b. Reference books on the development of instructional media middle and high school Biology

c. References to Adobe Flash

d. Biology teachers of MTs Al-Khairiyah Jambi

e. Students of MTs Al-Khairiyah Jambi

4. Result and Discussion

Instructional media integrated natural science writer developed based on Adobe Flash CS3. The result of the development of instructional media consisted of 25 layers that contain material system of coordination and the senses in humans, starting from the title of the media, the basic competencies and learning objectives, the main menu consists of the nervous system, kinds of motion, senses and evaluation menu.

Starting with the development of instructional media design and produce the cover , competencies and learning objectives , the main menu button , the display of the nerve system , kinds of motion , senses , and evaluation . The design of instructional media ended with designs and produces display evaluation questions are

aligned with the material, attractively packaged like playing games to attract the interest and motivation of students . Here we show a picture of a layer media that we design and we have produced.

Picture	Picture

Pic 1-21 The initial appearance of instructional media, display basic competencies and learning objectives, the main menu key, display materials nerve cells, images of nerve cells neurons, chart nervous system of man, simulation reflex, action simulation usual, sub menu sorts of senses, the material senses of smell, trailer vidio senses of smell, see material auditory, image thumbnails vidio learning, material sense of touch, the picture preview vidio sense of touch, the portions sense of sight, the picture preview vidio sense of sight, the material sense of taste, image thumbnails vidio sense of taste, appearance evaluation questions about brain, appearance evaluation questions about the senses.

Referring to the result of the development of instructional media based integrated natural science adobe flash professional CS3, then obtained some data, namely:the trial results of this study are as follows biology instructional media assessment instruments on the subject of the system of coordination and the senses, and assessment of students to the media assessment instruments that have been developed by distributing questionnaires in class IX MTs Al-Khairiyah.

The Feasibility of Media

Adobe Flash is used as a instructional media biology have been developed, validated by the validator. Validator consists of two lecturers Biology of The State Institut For Islamic Studies Sulthan Thaha Saifuddin Jambi.

Feasibility design of instructional media which has been developed after following the first phase of the validation process by the validator obtained a score of 70.58 % . Then do the repairs and process validation phase II by the validator obtained a score of 75 % . Scores validation stages I and II was then calculated then obtained a score of 72.79 %, which means the media that have been developed fit for use as a media of learning.

Feasibility materials and languageinstructional media that has been developedafter following the first phase of the validation process by the validator obtained a score of 61.66 % . Then do the repairs and process validation phase II by the validator obtained a score of 88.33 % . Scores validation stages I andII was then calculated then obtained a score of 74.99 %, which means that material and language instructional media has developed a decent used in instructional media .

The Effectiveness Of Media

The effectiveness of instructional media that have been developed after following the process efektivitasi by respondents, the percentage obtained by the two categories, the very effective with the percentage of 76.47 % , while the effective category with a percentage of 23.52 % . This value indicates that the media that has been developed effectively used as a instructional media integrated natural science .

As expected the media that we have developed can be a solution to help teachers explain the material to students , so that students more easily understand the lessons delivered . From the data obtained we analyze and get the results that the media have been developed feasible and effective. There is a possibilitythis media becomes ineffective if teachers do not understandhow to operate this media. Therefore we designed a instructional media is very practical to be easily operated by both teachers and students.

5.   Conclusion and Remark

Feasibility design of instructional media which has been developed after following the first phase of the validation process by the validator obtained a score of 70.58 % . Then do the repairs and process validation phase II by the validator obtained a score of 75 % . Scores validation stages I and II was then calculated then obtained mean score of 72.79 %, which means the media that have been developed fit for use as a media of learning. Feasibility materials and language instructional media that has been developed after following the first phase of the validation process by the validator obtained a score of 61.66 % . Then do the repairs and process validation phase II by the validator obtained a score of 88.33 % . Scores validation stages I andII was then calculated then obtained mean score of 74.99 %, which means that material and language instructional media has developed a decent used in instructional media .

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Remark

Thanks to the MTs Alkhairiyah for willingness to provide a time and place for us to do the research development of instructional media integrated natural science. Next to biology education department for their guidance, advice and opportunities so that we can complete this research.

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DEVELOPING ICT-BASED TEACHING MATERIALS OF ENGLISH FOR MATHEMATICS COURSE

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Abstract

The information and communication technology (ICT) has been used as a medium of learning. The conventional method is still monotonous and rigid. Therefore, students and lecturer can take advantage of e-learning in the learning process. Hence, this study in the course of English for Mathematics aims to develop teaching materials with an integration of ICT: online discussions, learning videos, access to online materials, and online quiz. The findings show that the instructional videos that were developed by lecturers were easy to deliver to the students by this e-learning process. The students might watch the video before the class then discuss and share the new knowledge in discussion forum. Furthermore, this ICT based learning facilitated the lecturers to assess students' online activities: like forum discussions, exercises, and developed quiz without being limited by space and time.

Key Words: ICT, English for Mathematics

1. Introduction

Students and lecturer will use a lot of English-language references in learning process at university level. Like in mathematics, there are thousands of text book references and mathematics scientific articles in English written by mathematical scientists and are not translated into Indonesian language. Therefore, inevitably, students should be familiar with mathematics books or articles in English to improve their knowledge.

To answer these challenges, students of mathematics education study program need to take course of English for Mathematics.

The course English for Mathematics is one of the compulsory subjects given to the first semester students of mathematics education with 2 credits. This course aims to provide review and exercises to the students in order to understand the math references in English. The lecturing activities, in general, are reading, understanding, and improving mathematics vocabularies from mathematics-related articles, mathematics textbooks, and mathematics instructional videos. Students also need to exercise to reveal back or communicate the content of their reading or mathematical ideas, both written and oral.

Conventional teaching methods are not enough for the learning process for English of Mathematics course. This course requires learning process not just lecturing and question and answer in the classroom, but also requires access to the material of lectures in English language such as textbooks, international journals of mathematics, and instructional videos on math materials.

Information and communication technologies (ICT) can be used as a means of learning process in this course. ICT expands math that can be taught as well as a medium of learning to help students. Various media that can be used in the learning process are including audio, visual media, and multimedia. Correspondingly, it is possible to integrate ICT in teaching and learning English for Mathematics course. With the integration of ICT into teaching and learning, students can access course materials more efficiently and watch videos English-mathematics learning without bounded by distance and time.

Based on what has been described, the researchers are interested in developing teaching materials for the subject English for Mathematics ICT-based. The researchers chose model of E-Learning with type Blended E-Learning, there are lecture in classroom and also online lecture. The researchers used a MoDELss

application (Moodle E-learning for Sriwijaya Student) which is the application program that includes learning in a web for Unsri student.

2. Theoretical Background

As the media in the learning process, ICT offers E-Learning applications or online learning. English for Mathematics course ICT-based applications can use Moodless application which is media distance learning available for students and lecturer at Sriwijaya University. ICT-based learning tools are including the design of syllabus and lesson plan mapped into Mapping Program, teaching materials, instructional videos, and evaluation: quiz.

There are three Internet-based learning systems in E-Learning (Faridi, 2009):

a. Web Course

is the use of Internet for learning where teaching materials, discussions, consultation, assignments, exercises and exams are via the internet or no classroom lecture in the learning proces, like the process of distance learning; virtual university.

b. Web Centric Course

Web Centric Course emphasizes learning in which the teaching materials, discussion, consultation, assignments, and exercise are via the Internet. Exams, and some consultation, discussion and exercises can be done in classroom, like university off campus.

c. Web Enhanced Course

Is the use of the Internet for learning purposes for which the Internet is only to support learning activities. Classroom lecture is still conducted greater than online course.

ICT in education can be used as a medium that helps facilitating the learning, like video conference that can be used for distance learning (Gage, 2005). Video conference gives students the opportunity to learn by participating in two-way communication. Students can explore, communicate, analyze, share information and ideas relating to mathematics in English language. In addition, e-learning can utilize the internet. Internet can be considered as a laboratory and even more from the library because of the availability Math Forum to communicate. (Sinclair, 2005).

The course English for Mathematics is designed with model of Blended E-Learning, which is is a blend of classroom lectures and online lectures. The understanding of this course will be easier by using multimedia, including video, audio, power point, and so on. Student activities in the course English for Mathematics are divided into four activities: learning activities in classroom, learning activities in e-learning, video conference, and assignment (individual and group).

3. Method

The subject of this study is the first semester student year 2015/2016 who take the course English for Mathematics, Faculty of Teacher Training and Education (FKIP) Sriwijaya University (unsri).

Based on the aim of this study, the type of the research is developmental research which consists of three phases: preparation phase, development phase, and evaluation phase. This study is Blended E-Learning which consists of classroom activities and online activities. The data were collected through evaluation on online

activities and classroom activities along the learning of English of Mathematics Course.

4. Result and Discussion

In preparation phase, the researcher developed lesson plan and syllabus integrated into Program Mapping (blended e-learning), and learned how to use MoDELss. In development phase, the researchers developed ICT-based teaching materials for English for Mathematics course: content, course materials, online assignment, online test, online discussion, and multimedia. In the evaluation phase, the researchers developed test to assess students learning.

a. Content

Content for the course English for Mathematics ICT-based is embedded into MoDELss as a medium of learning form the website or application program. This website lets students get in the classroom to access digital learning materials. Some of the activities undertaken by Moodle learning in this course include discussion forums, assignments, upload assignments, and quizzes.

To log-in into MoDELss, the lecturers and the students must register to create an account in page http://elearning.unsri.ac.id/ then from the lists of courses available in the web page, students and lecture can search and enroll the course English for Mathematics. After the students register and get an account, they can log in to access the e-learning courses anytime and anywhere.

BAHASA INGGRIS UNTUK MATEMATIKA
For teacher enrollment: PUJI ASTUTI, S.Pd., M.Sc .

Matakuliah Bahasa Inggris untuk Matematika bertujuan memberikan latihan agar mahasiswa dapat memahami buku teks referensi, artikel ilmiah, manual, handout, matematika berbahasa Inggris. Mata kuliah ini diharapkan dapat membantu peningkatan kompetensi mahasiswa sebagai guru matematika. Kegiatan perkuliahan berupa latihan memahami dan meningkatkan pengetahuan mengenai istilah dan simbol matematika dalam bahasa Inggris, memahami teks berbahasa Inggris yang berkaitan dengan topik matematika, menonton video pembelajaran matematika berbahasa Inggris, menuliskan kalimat matematika berbahasa Inggris, serta latihan mengungkapkan secara lisan mengenai materi topik matematika dalam bahasa Inggris.

Figure 1. The availability of English for Math course in MoDELss
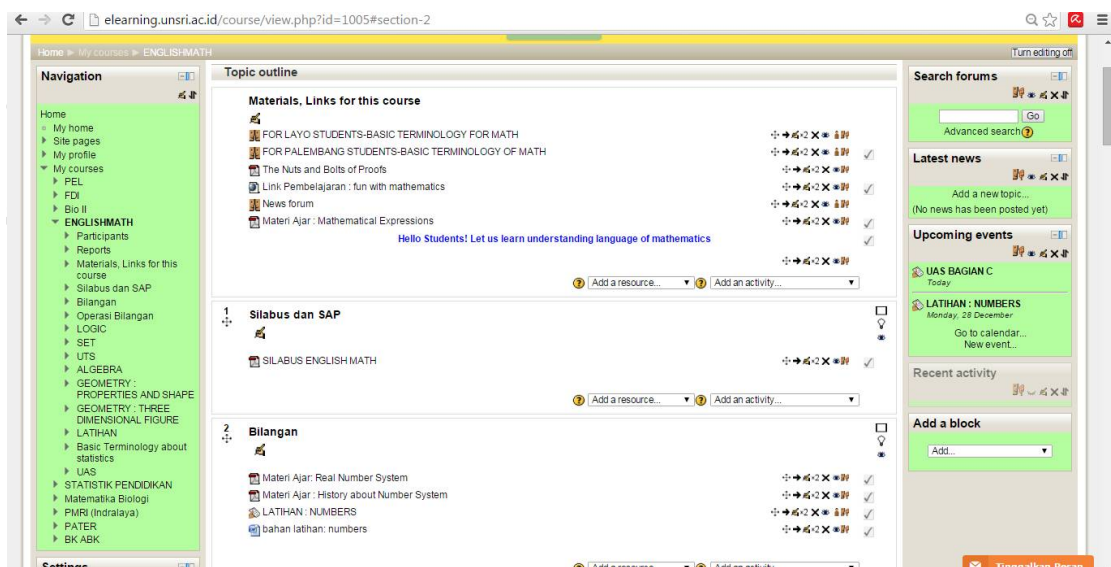
Figure 2. Weekly lecture topics that can be accessed by student
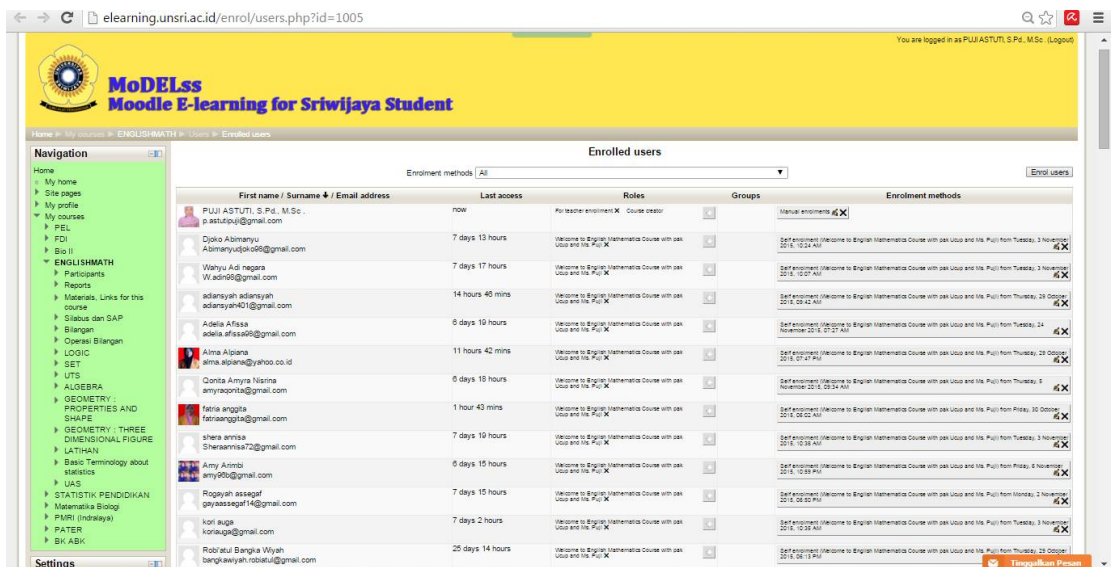
Figure 3. Students enroll in the course

b. Course Materials

Lecture materials designed were for 16 sessions, with 14 lectures, and 2 for online mid test and final test. The teaching materials were uploaded into MoDELss by in the form of word and pdf about mathematics topics in English language. With this e-learning method, the students could easily get into the course by downloading the materials. The students could also be prepared before the lecture in the classroom by reading materials that would be discussed in the class. Meanwhile, for the lecturers themselves, this e-learning activities helped their students better prepared with the materials that will be discussed in class.
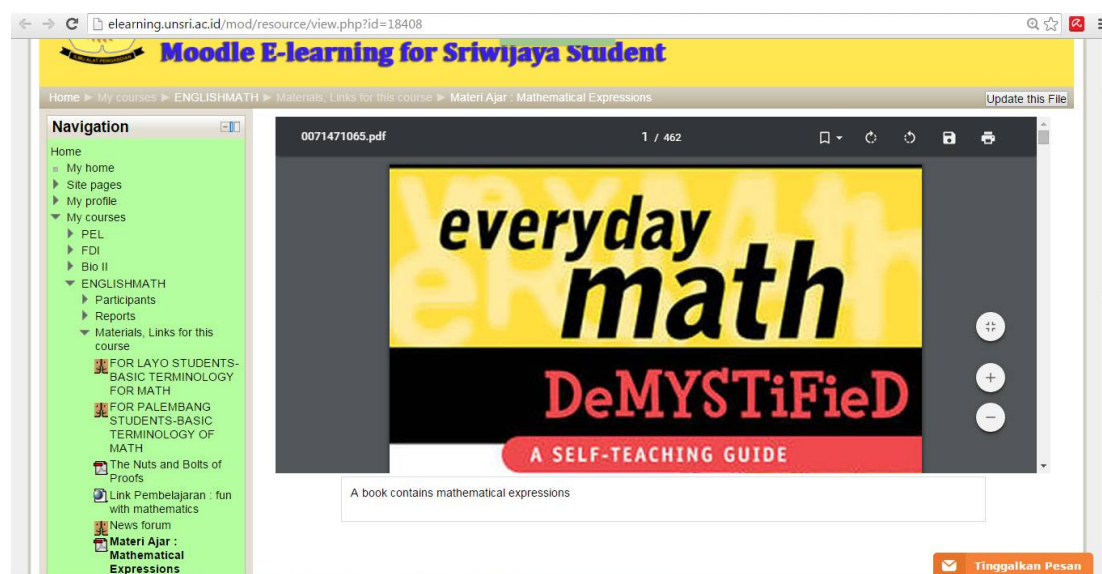
Figure 4. Teaching materials that can be downloaded students
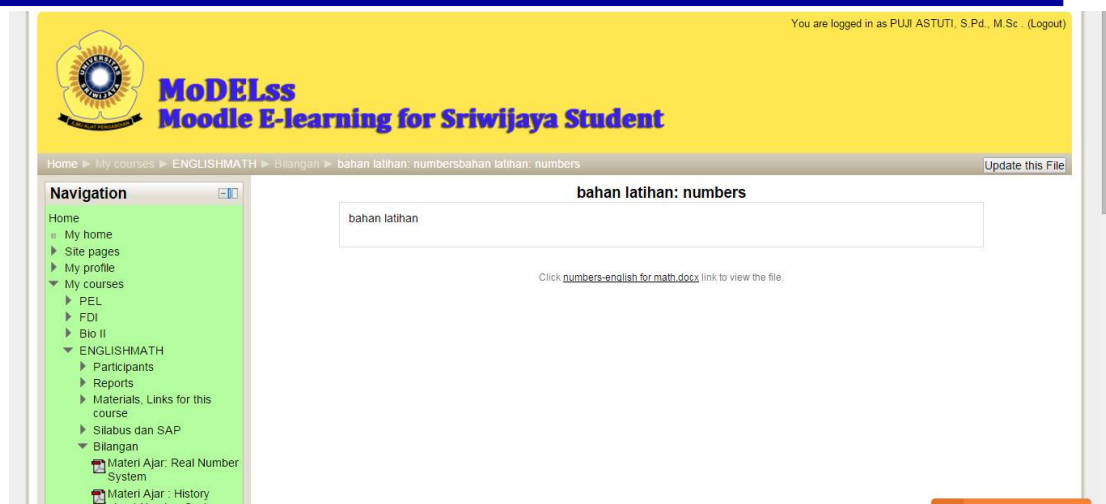
Figure 5. Students could download the materials by clicking on the link provided

c. Online Test

MoDELss also provide sacilities for on-line examination. The examination are available online can be multiple choice, essay, short essay, true/false questions, matching questions, etc. In this research, the researchers made the exam for the course English for Mathematics in the form of true / false questions, short essay, and matching questions. In addition, in MoDELss, attempting time for students to finish the test can also be set by the lecturer.

Figure 6. Students can click on a link to follow UAS quiz
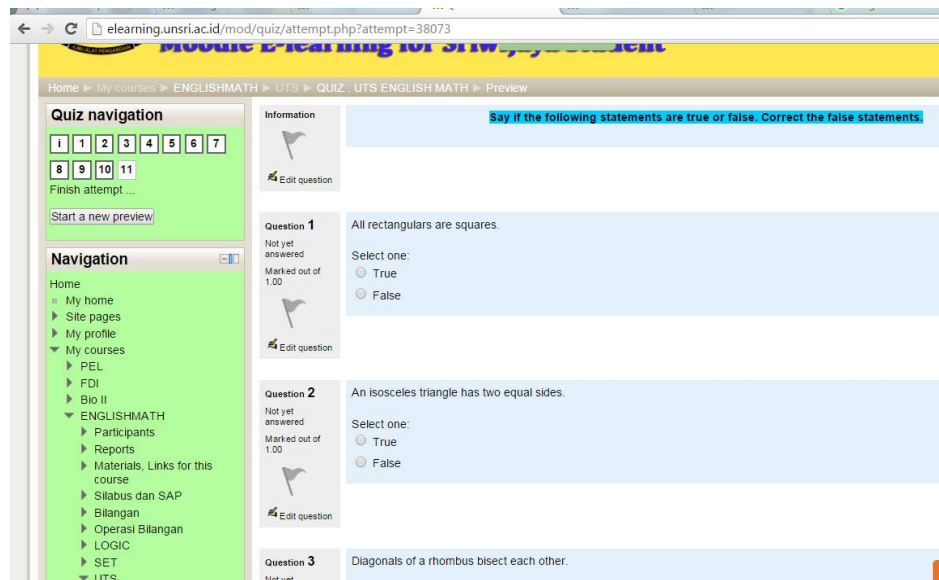
Figure 7. Sample quiz followed by students
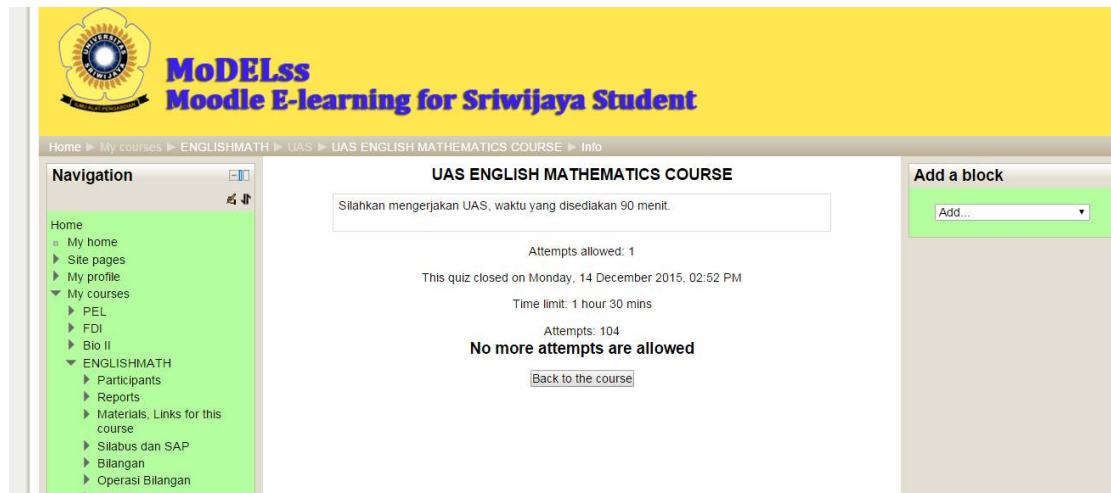
Figure 8. Restricted time to follow the quiz

d. Student Engagement (on-line discussion)

One of the other activities that could support the learning process by MoDELss is an online discussion forum. In this study, researchers made a number of meetings for online discussion forums. The data shows that this online discussion forum could be followed by students and the discussion run well. Students discussed the topic given by the researchers, gave feedback, and asked and answer the questions given by fellow students or the researchers. Here is an example of online discussions undertaken by students on this course.
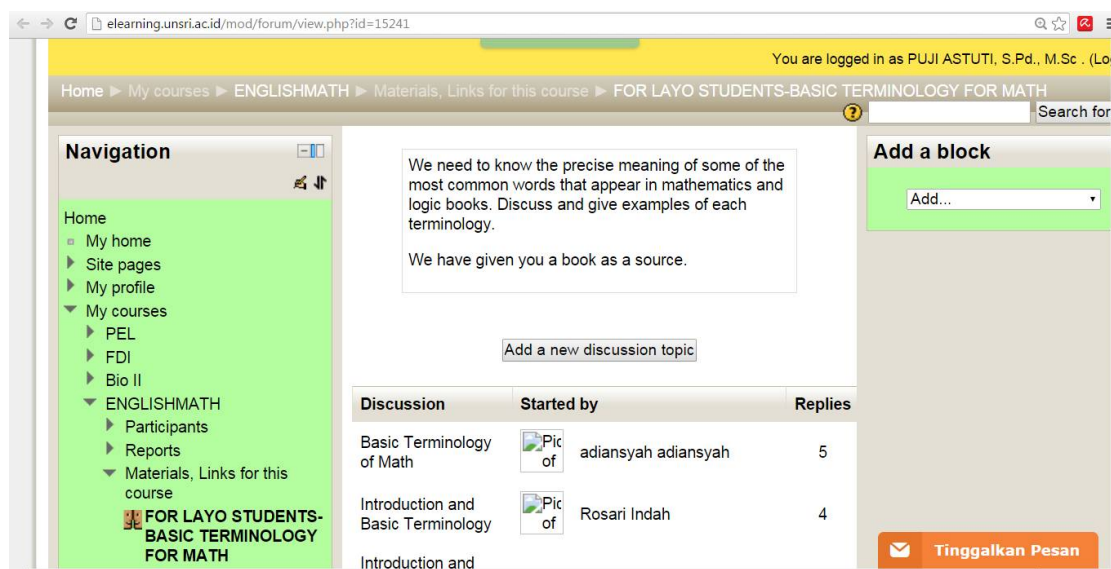
Figure 9. Examples of discussion topics
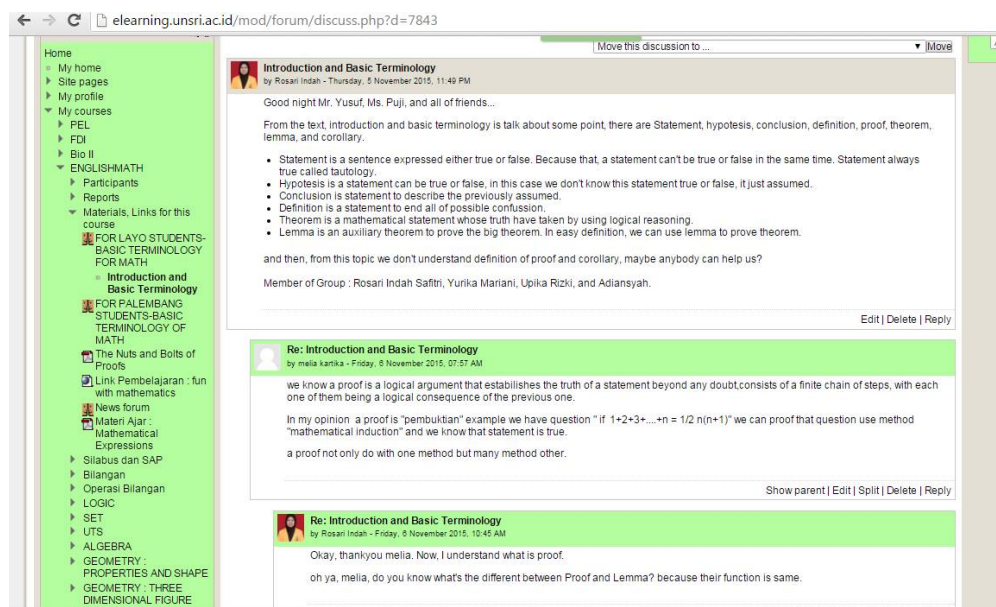
Figure 10. Forum online discussion by students

e. Online Assignment

MoDELss also provides activities for on-line assignment. In this course, online assignment developed were making summaries from reading mathematics articles or from watching videos, and upload the word or pdf file into MoDELss, making online glossary, and answering the questions and then re-uploading the answer in the form of word. Here are examples of activities on-line assignments in this course.
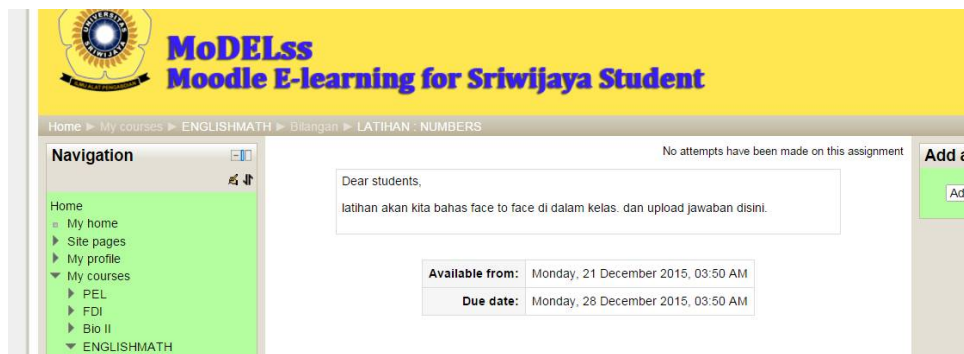
Figure 11. Online assignment
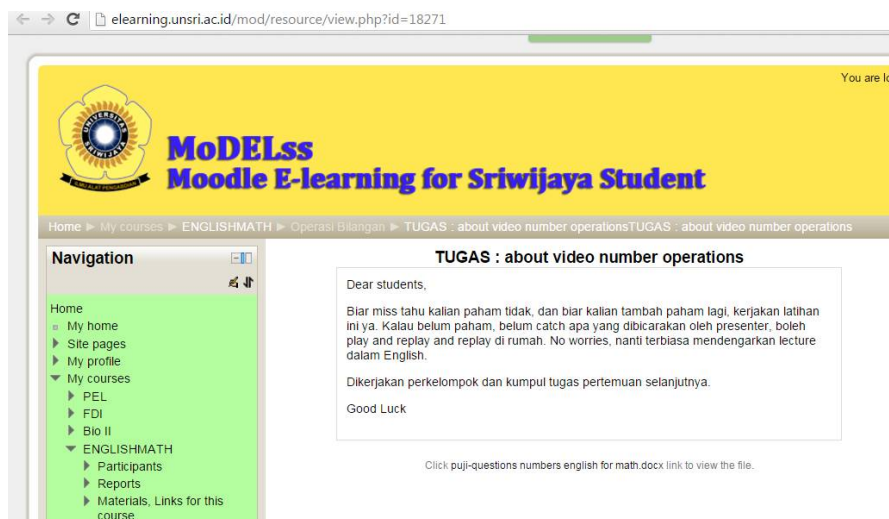
Figure 12. The summary task of learning videos
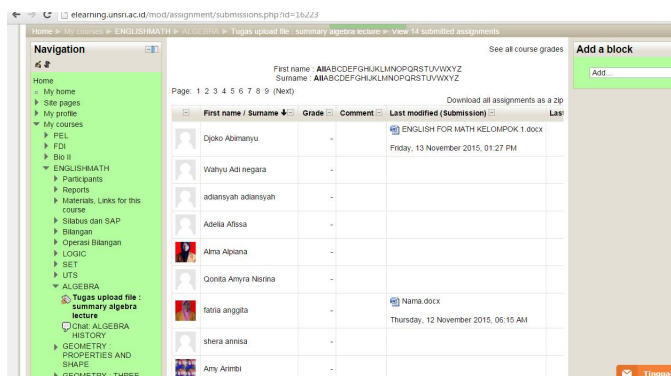
Figure 13. Students submit assignments online in groups

f. Multimedia

This course aims that students understand how mathematics presentation in English. Thus, in the learning process, students were also given some learning videos of mathematics in English. MoDELss provided a platform where researchers could upload videos with long duration. Thus, prior to the classroom activities, students could first download and watch instructional videos to be discussed in the discussion forum and discussed in classroom. Here is multimedia and video in this study.

Table 1
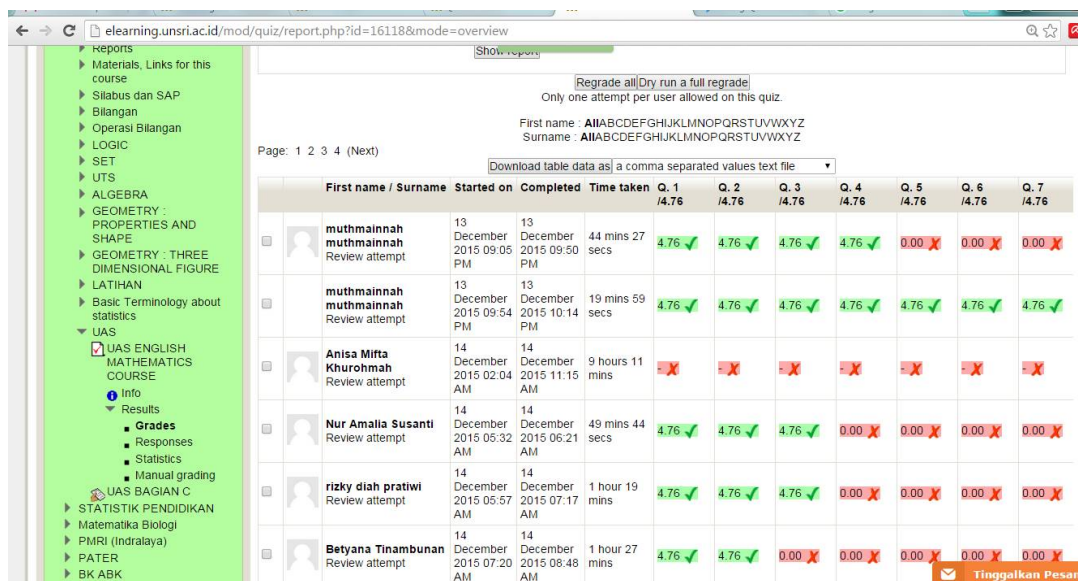
Multimedia and Video

Kode	Judul dan Isi	Durasi
Multimedia #1	Learning Video : Number Operation	± 15 minutes
Multimedia #2	Video conference : logic, algebra, and geometry.	± 15 minutes
Multimedia #3	Video PPt: statistics	± 15 minutes

g. Result of Final Test

Models provide facilities for lecturers in directly assessing students score in examination. Here is exam performed by students.

Figure 14. Scores that can be accessed after students submit exams.

6. Conclusion and Remark

The course ICT-based English for Mathematics can help lecturers to deliver the developed teaching materials quickly and easily accessed by students. The instructional videos that were developed by lecturers were also easy to deliver to the students by this e-learning process. The video might take long duration to be played in the classroom; therefore this ICT method really helped students and lecturers in learning process. The students might watched the video before the class then discuss and share knowledge from what they have watched in the classroom. Furthermore, this ICT based learning facilitated the lecturers to assess students' online activities: like forum discussions, exercises, and developed quiz without being limited by space and time. However, the researchers still have some

problems related online assignment or online examination for pure mathematics topic.

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THE DEVELOPMENT OF ALGEBRA QUESTION BOOK FOR HIGH SCHOOL MATHEMATICS OLYMPIAD TRAINING

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Abstract

The purpose of this research is to produce a Algebra question book for high school mathematics olympiad training that valid. This research is a development research consists of two stages: a preliminary stage includes the analysis and design and formative evaluation in this case just include self- evaluation , expert review, and one - to-one ,that we discuss in this paper. Question book, in the beginning was reviewed by expert in Expert Review stage, and get comment by colleague to see how validity the book is. After that, Question book was revised based on comment and review by validator . In One-to-one stage, Question book tested to two student who have average ability and high ability to know about how usage the question book is. Result of one-to-one stage is student's answer, observation data, and interview response that use to revise Question book. From these results it can be concluded that Algebra Question book for high school mathematics olympiad training that develop is valid.

Keywords *: Question book, Algebra, high school mathematics Olympiad*

1. Introdution

Learning in school especially mathematicematics learning have a purpose for made students who have a form of factual, conceptual, procedural, and metacognitive knowledge in mathematicematics, as well as have the ability to think and follow an effective and creative in the abstract and the concrete in solving problems independently (Kemdikbud, 2013). However, in the implementation of education there are some problems that occur. In fact, the educational objectives can not be

achieved fully. In Olympiad competition that tested the ability of solving the problem, it appears that the ability of Indonesian students is still low. National Science Olympiad (OSN) is one way to improving the quality of compulsory education (basic education), and is an opportunity to find the best student who have achievement in Mathematicematics and Natural Sciences (MIPA) as potential participants in the international Olympiad. (Kemendikbud, 2013). OSN is held every year by Kemendikbud, This is in accordance with the program plan at the same time to improving the quality of education in order to prepare students who have the potential in science to be developed further in order to participate Olympiad in international level.

According to the definition of OSN guidebook published by the Directorate General of Primary Education , OSN is a vehicle for students to develop the academic competition to encourage the spirit of fair competition courage while improving capabilities in science, mathematicematics, and social studies, and in order improve the quality of education (DIKDAS,2013). From the organization of the event OSN, there are difference between the students from Java with other students . It shown in Olympiad, the winner dominated by students from Java (Eddy, 2011). More specifically regarding the lack of problem solving ability of students especially in Sumatra, according to the National Science Olympiad medalist (OSN) 2015 in highschool level inform by the Directorate General of Secondary Education in mathematicematics, there are only three students who came from Sumatera from 30 medalists, one student come from West Sumatera , Aceh and Jambi who won a bronze medal while all the gold medals won by the students who came from Java (Dikmen, 2015).

There are many to students in answer the questions in mathematicematic Olympiad which one is mostly a problem of solving non-routine problems that do tend to be difficult and require the analysis and good understanding about material.

One of the difficulties experienced because there are many students who unfamiliar with Olympiad problem which incidentally is about a problem that involves material enrichment that not every teacher teach (Kusnandi, 2009). In mathematic Olympiads for high school, about being tested is non-routine problem. non-routine problem, is a problem which required to complete further thought because the procedure is not as clear or not the same as the procedures learned in class (Sunarno, 2011). Questions about the Olympiads is the type of problem solving is to test the depth mastery of the students and their problem-solving abilities.

Any comparison between the olympiad problem with routine or usual problem, olympiad problem use any strategies in a problem-solving but ordinary problem whereas no specific strategy used. Problem Olympiad also require modifications in advance to be able to solve problems that required students' thinking and reasoning in changing complicated problems into simpler ones. Problem Olympiad consists of 2 types of questions about the discovery and verification. Coverage of material tested in mathematics Olympiads for high school including Algebra, Geometry, Combinatorics and Number Theory. In mathematic olympiad, Algebra get a dominant content. Algebra also include material that not knowing by student and have many difficult formula and algorithmic.

In preparation for the Olympiads, students should multiply exercises and practice their skills in solving problems. In addition to more exercises in coaching should also be taught the steps in problem solving and problem-solving strategies that can be used along with example problems and exercises. Budhi (2004: 4-54) explains that in solving the problem, there are several strategies completion of which saw patterns, using variables, using the definition or nature, draw a diagram, step back; and counting. Explanation about the settlement measures, problem-solving strategies, example problems and exercises would be even better if not only given through oral but also in writing as outlined in the teaching materials.

In accordance with the definition of instructional materials in the technical guidance curriculum guide (Dikti, 2009), in which teaching materials are all kinds of materials that are used to help teachers / instructors in implementing the teaching and learning activities in the classroom. Teaching materials are good learning tools to be developed because it has a good role and benefits not only for teachers but also for students, with teaching materials to enable students to learn with or without the presence of teachers so that students become more independent. Develop an appropriate teaching materials and the appropriate addition can assist teachers in implementing development activities olympiads would also help a lot and familiarize students with the Olympiads problem because in teaching material ,already there are examples of exercises that can be read by themself if the teacher does not have time to explain.

In preparation for Olympiad, student should have a lot of task, finished more problem and learn formula and more lesson especially for Algebra which often use in many problem in olympiads. Use a question book can training their capability in problem solving and use a question book is nice to do. Based on the explanation above, Develop a Algebra Question book for Mathematic Olympiads training for High School is expected to can improve problem-solving ability of students olympiads.

2. Method

This research is depelopment research that consists of two stages: a preliminary which include analysis and design, while the formative evaluation stage consists of self evaluation, expert reviews, one to one, small group, and a field test. Many Expert give a comment and suggestion for revised Algebra question book that develop. They are Dr. Nila Kesumawati and Dr. Kamid, and also Endro Setyo Cahyo M.Pd, Ismaliani M. Pd, and Jurnaidi M. Pd as colleuge. Subjects in this research are students

from SMA Negeri 1 Gelumbang as one-to-one stage and small group stage subject. Student from SMA Negeri 1 Muara Enim as field test stage subject. To obtain the data carried in expert review stage, this research use walkthrough, in stage one to one use document analysis and observation also in small group stage. This research use tests and interviews in the field test stage. Data results of the expert review stage, one to one and small group stage such as suggestions and comments are used to Question book while in the revision stage of the field test, the data obtained in the form of student answer sheets and then all of data will analyzed with qualitatively .

3. Result and Disussion

Research development consists of two stages: a preliminary stage of the analysis of the design and formative evaluation such as self evaluation, expert review, one-to-one, small group, and a field test stage and revision process based on advice validator and students on a one-to-one and small groups so that the results of this research is form of Algebra Question book for mathematic olympiad traning for high school that valid and practical but in this case, we just discuss about Algebra Question book that valid. Question book validity based on the content, construct, and language.

Question book validity based on the content it shown materials developed in accordance with the Olympiads material where the material development activities for example problems and exercises in the Question book used problem that use in olympiad that held before and some made by researcher which develop with based on problem in olympiad. Expert, Dr. Nila Kesumawati just comment about font and format, the equation and how to representative an equation. About content of Question book, all expert agree if each problem in Question book is suitable with olympiad training. Dr. Kamid just suggest to add more problem, remember if this is a book.

Based constructs developed Question book that is in good order by the characteristics of Question book which Question book complete by description of the material, include example problems, exercises and references in accordance with the criteria Question book so students can use the Question book properly. Dr. Nila suggest if a book must have minimal 40 pages, so as revised researcher add more material, example, and problem also solution in last pages. Also other contents such as introduction, table of content , and reference add to Question book. Dr. Kamid suggest too for add more pages. As prototyping 2, question book was better with have 40 pages without cover and another content.

While based on language, in first prototype, there's so much mistake in font size, font color, and equation in mathematic. Expert give so much suggest about it, to make question book more consistent in font size, font color until equation. After revise, developed Question book have good language and correct where there is no misunderstanding of students and have a double interpretation when they read. It shown when one-to-one stage, student can use question book very well without any problem to understand.

In one-to-one stage, question book given to two student in SMA Negeri 1 Gelumbang who have average ability and high ability to know about how usage the question book is. From one-to-one stage, we can know if student can use and understand even teacher not guide them. In student's answer and interview response that record in video can shown us if student can explore their problem solving ability and make them can solve a problem better than before. Result of one-to-one stage is student's answer, observation data, and interview response that use to revise Question book.

After revise Question book with based on expert suggest, and student's answer, we get Algebra Question book prototype 2 that valid. With the results of the

study, expert review stage and one-to-one stage. it can be concluded that Algebra Question book for mathematic olympiad training for high school was valid .

4. Conlusion and Remark

Through this research , the conclusion was obtained that after the two stage of development research , there are preliminary stage that includes analysis and design prototype and then, formative evaluation includes self- evaluation , expert review, one - to-one , small group , and field test stage . After get result from expert review and one-to-one stage, researcher revise based on suggest from expert and student and get Algebra question book prototype 2 that valid. Algebra Question book for mathematic olympiad training for high school has developed is valid based on content , construct , and language . For other researcher, a good recommendations to develop question book in other content like Geometry, Combinatoric, or Number for mathematic olympiad training for high school.

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ANALYSIS OF STUDENTS' ANSWERS TOWARD SOLVING PISA LIKE TEST WITH INDONESIAN CONTEXTS IN PHYSICS EDUCATION OF FACULTY TEACHER TRAINING AND EDUCATION SRIWIJAYA UNIVERSITY

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Abstract

The aim of research is to describe students' answers toward PISA like tests with Indonesian contexts. The research involved 35 students that consisted of 11 groups. The total of Pisa like tests are five essay items.. The result of research showed that: 1) 54.54% of students's answers related to temperature and dangerous elements in volcano dust toward crop plants; 2) 36% of students' answers related to waves and frequencies to solve question: effects of earthquake that caused differences of level distroys. 3) 27% of students' answers related to kinds of gases that produced in the volcano that reacted with rain water to solve question: effects of earthquake toward acid rain; 4) 27.3% of students' answers related to lack of diversity and poluttion to solve question: effect of vegetation destroys caused of smoke; and 5) only 18.18% of students' answers related to abilities of $CaCl_2$ solution to bond smoke to solve question: function of $CaCl_2$ to reduce smoke. The research was concluded that 67.28% of test items were not answered well based on answer keys.

Key Words: Analyses of Students' Answers, PISA Test, Indonesian Context

1. Introduction

Programme for International Student Assessment (PISA) is an international study that measures the ability of 15-year-old students in reading literacy, mathematics, and science. PISA is a study that is held every three years, starting in 2000, then 2003, 2006, 2009, and the last in 2012. Implementation of PISA is sponsored by the countries who are members of the Organization for Economic Cooperation and Development (OECD), including the one that is the country of Indonesia. PISA is sponsored by OECD, an intergovernmental organization of 30 industrialized

countries based in Paris, France. PISA uses the term literacy in each subject to indicate a focus on the application of knowledge and ability. For the 2003 assessment, scientific literacy is defined as the ability to use scientific knowledge, to identify questions, and to draw conclusions based on the evidence to understand and help make decisions about the nature and the changes made to it through human activity (OECD, 2003).

Associated with this scientific literacy, educators, scientists, and policy makers agree that the development of scientific literacy of students is an important goal in science education. Scientific literacy has been defined in various ways, all of which emphasize the ability of students utilize scientific knowledge in real-world situations (AAS, 1990). Furthermore, it is stated that scientific literacy is one's own scientific knowledge and use that knowledge to identify questions, acquire new knowledge, explain scientific phenomena, and draw conclusions based on the evidence on issues relating to science (OECD, 2012).

The results of an international assessment conducted by OECD, the science competencies Indonesia always below average. In 2000 Indonesia was ranked 38[th] out of 41 participating countries, with a score of 393. The results obtained PISA 2003, Indonesia ranks 38[th] out of 40 countries with a score of 395. In 2006, Indonesia ranks 50[th] out of 57 countries participants with a score of 393. In 2009 Indonesia was ranked 60[th] out of 65 participating countries with a score of 383 (OECD, 2010). PISA results last held in 2012, Indonesia ranked 64[th] out of 65 participating countries with a score of 382 (OECD, 2004; OECD, 2007; OECD, 2010; OECD, 2014).

Achievement of Indonesia is still very alarming, especially in science literacy. The average score was below the average score of OECD member countries (500). From 2003 to 2015 the average score for a science tends to go down, which is very worrying is the implementation of the 2012 PISA science literacy for the state of Indonesia is at the lowest position compared to the previous year, both on the acquisition of a score and ranking among OECD member states.

Based on the analysis of the results of PISA 2009, found that of the six (6) levels of ability are formulated in the study PISA, almost all learners Indonesia was only able to master the lesson to level three (3) only, while the other countries involved in this study much reach level 4 (four), 5 (five), and 6 (six). This is a challenge that must be faced in education in Indonesia, and became one of the factors for the development of the curriculum in 2013 primarily related to the deepening and expansion of the material (Kemendikbud, 2014).

Reflecting on the results obtained in the PISA Indonesia shows science literacy students aged 15 years is still very low. Low ability of scientific literacy is influenced by many factors, among others, students, curriculum, teaching models and methods used by teachers, learning resources, teaching materials, infrastructure and learning facilities, and mastery of materials science by teachers. Learners Indonesia generally less trained in solving problems with characteristics such as PISA questions. That at least can be seen from the examples of learning outcomes assessment instruments. In general, the study presents the results of the assessment instrument which is substantially less associated with the context of the life faced by learners and less facilitating learners in expressing the process of thinking and arguing. This is in contrast to the characteristics of the questions that the substance PISA contextual, demanding reasoning, argumentation, and creativity in the finish (Wardhani and Rumiati, 2011). So, that teachers can train learners in thinking to solve problems and apply in life, then the teacher should be trained. It can be started from the preparation of teacher candidates studying at college.

Physic Education Program Study is part of Department of Mathematics and Natural Science Education. Courses in the group Science (Physics, Chemistry, and Biology) equipped with basic knowledge in the field of science that is basic physics, basic chemistry, and general biology. Basic chemistry course is a compulsory course for students on all three study program. Through this basic chemistry course, students attend lectures using problem-based learning model. Students were trained how to solve the problem through a discourse given in lectures. Lecture began with a group

discussion to solve the problem, then proceed with a class discussion (Zulkardi, *et al*., 2014). Based on the above background, then in this paper presents how the results of the analysis of student answers to questions PISA with the Indonesian context.

2. Theoritical Background

Programme for International Student Assessment (PISA) an international assessment programs on reading literacy, mathematics, and science students 15 years old. 15-year-old learners have to follow the PISA assessment because it is considered to have the literacy skills of science such as analyzing, reasoning and science knowledge and skills to communicate effectively, and be able to solve problems and interpret science in various situations (OECD, 2003). In addition, students at the age of 15 years in most countries is nearing the end of compulsory schooling age that is considered to be a decision (Stacey, 2011).

PISA was organized by the Organisation for economic Co-Operation and Development (OECD). The purpose of PISA is to test and compare the achievements of children 15 years of age worldwide. Various countries participated in this assessment with the aim to determine the level of quality of a country is used as a reference in order to improve the quality and the quality of education in the cognitive domain, including Indonesia.

PISA asseses not only the knowledge that has been learned by the students, but also how students apply knowledge in new situations (OECD, 2013). Assessment PISA measures the extent to which a learner has the scientific knowledge and use that knowledge to identify questions, acquire new knowledge, explain scientific phenomena and draw conclusions based on evidence related sciences, to understand the characteristics of science as a form of human inquiry, showing awareness of science and technological, intellectual and cultural environment, and engage in issues of science and ideas of science as a reflective citizen (Scheicher, 2007).

This international assessment was first held in 2000 and is held every three years with a focus on different assessments of each implementation. In 2000, the main focus on

the PISA reading literacy. In 2003, the main focus on the PISA mathematical literacy. In 2006, the main focus on the PISA science literacy. In 2009, the main focus on the PISA reading literacy. In 2012, the main focus on the PISA mathematical literacy, while in 2015, the main focus on the PISA science literacy.

For assessment purposes, PISA consists of four interrelated aspects: 1) aspect of the context is to recognize real-life situations involving science and technology; 2) the aspect of knowledge is the understanding of nature based on scientific knowledge that includes knowledge about nature, and knowledge about science itself; 3) aspect of competence is demonstrated scientific competencies that include identifying scientific issues, explaining phenomena, scientific, and using scientific evidence; and 4) the aspect of attitude is showing an interest in science, support for scientific inquiry, and motivation to act responsibly towards the environment, for example, natural resources and the environment (OECD, 2012).

3. Method

The research is a descriptive study that revealed about the results of the analysis of student answers to similar questions PISA. The study involved 35 students of physical education class of the academic year 2014/2015 the University of Sriwijaya FKIP that administer basic chemistry courses as a research subject. Data retrieval tool in the form of equivalent PISA matter with the Indonesian context. Problem is accompanied by two discourses, which consists of five questions description. The data obtained were analyzed, presented in table form, described and interpreted.

4. Result and Discussion

In this study, presented two discourse that is the Ring of Fire and Forest Fire. Discourse about the Ring of Fire consists of three questions, while the discourse Forest Fire consists of two questions. Both the discourse presented closely related to the condition of the Indonesian state in the region of islands in the Pacific ring of fire ring. Then in the second discourse was closely related to the condition of Indonesia, especially with the South Sumatra area which has a lot of peat swamp regularly every year there is a fire, especially in 2015 a fire broke out very badly. The first discourse about the Ring of Fire and the accompanying three questions presented in the column below.

Discourse 1:

Ring of Fire

Indonesia is an archipelago located in the Pacific ring of fire ring. Therefore, there is still volcanoes that are still active. One is the mountain Sinabung. Sinabung eruption caused volcanic earthquake and damaging buildings, while the lava and volcanic ash impact on plants and animals in the vicinity. A phenomenon that can be found from the eruption of Mount Sinabung, among others yields declined or failed crops, animals, and plants a lot of dead people around must wear masks. Many people around the mountains is difficult to breathe because less oxygen availability, poisoning gases that are emitted by the mountains and the rain water is acidic.

Problem 1.1: Try to explain the impact of volcanic ash on the plant, so it can reduce result harvest?

Results of student groups to answer questions about the problem 1.1 was analyzed, described and grouped, and the results are presented in Table 1.

Table 1. Distribution of answers student to problem 1.1

No	Student Answer	Percentage
1	Volcanic ash is hot, which can damage and even cause the plant to die as a result of agricultural products declined.	55.54
2	Volcanic ash closes stomata of the leaves, so sunlight and CO_2 can not enter into the leaves that causes the process of photosynthesis is inhibited, resulting in decreased crop production.	45.45
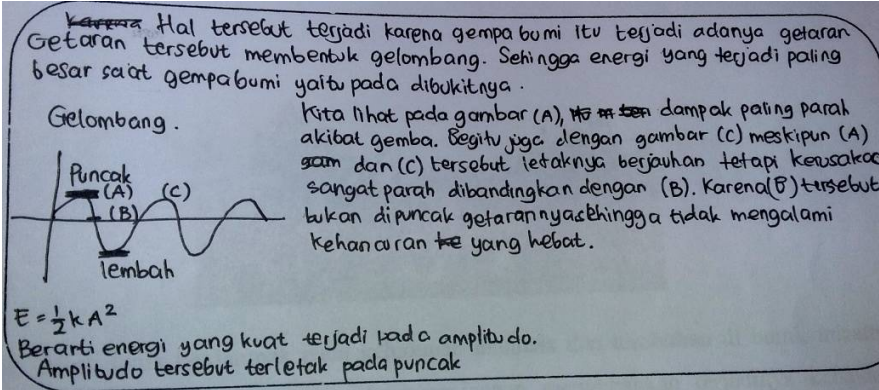
3	The acidity of volcanic ash can increase the pH of the soil, so the plants can not grow properly, resulting in crop production will decline.	27.27
4	Volcanic ash contains harmful substances such as sulfur, gold, silver, phosphorus, copper and quartz. Therefore the existence of these substances will disrupt the process of photosynthesis in plants, so the plants can not grow normally and crop production is not optimal. In addition, due to lack of O_2 and gas poisoning from volcanic causing plants become dead.	18.18
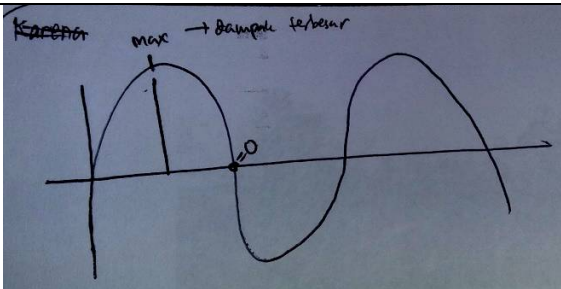
Based on the results presented in Table 1 above it can be seen that most of the group of students responded that crop production decreased due to the death of plants due to the effect of volcanic ash is hot. Plants exposed to the direct influence of volcanic earthquakes and fast process. A total of 45.45% of student groups responded that the ashes of volcanic earthquakes affect the photosynthesis process because the stomata of leaves covered by volcanic ash. Thus the supply of CO_2 for photosynthesis material obstructed and unobstructed sunlight also to reach chlorophyll, the photosynthetic process consequently hampered or even become stalled. This would will result in death of the plant. The rest of the student group answer was that ash from volcanic earthquakes affect the soil where plants grow. Influence of volcanic earthquakes that ash lowers the pH of the soil and make the soil becomes toxic to plant life. It could be resulted in plant death.

Problem 1.2: In the event of an earthquake, there are points that are severely affected by the quake. The impact of such destruction occurs periodically observed, there are areas that are not too far from the epicenter, but suffered great destruction. On the other hand, there are areas quite far from the epicenter, but suffered severe damage. How can these be explained?

The analysis of student answers in solving problem 1.2 are presented in Table 2.

Table 2. Distribution of student answers to problem 1.2

No	Student Answer	Percentage
1	This is caused by the earthquake occurred due to vibration. The vibration wave form. So that the greatest energy that occurs during earthquakes is peak of wave. We see in the picture most severely affected by the earthquake are images A and C. Even though A and C located far apart, but the damage is severe compared to B. This is caused by the region B is not at the peak of vibration so it does not ruin a great experience.	36.38
2	This occurs because the impact of the earthquake damage is influenced by: 1) the depth of the earthquake, 2) the strength of the earthquake, 3) long vibration (earthquake), 4) the structure of the soil (soil conditions), and 5) the condition of the building	18.18
3	Areas bypassed by vibrations when the highest deviation of the wave, has maximum energy, so that the level of damage also reached a maximum. Conversely area traversed deviation 0 vibes have or not have a deviation, the impact of the damage is lower though situated close to the epicenter.	18.18
4	Only answered with image	9.10

Slab of land in areas that the earthquake is not in contact with the area of the earthquake so it does not ruin a great experience. Slab of land in remote areas with seismic regions in contact with the earthquake that suffered severe damage.

5	Blank	18.18

Based on the results of the analysis of the answers in Table 2, it could be seen that there is a 36.36% answer to question problem 1.2 is associated with vibrations that form a wave. Severe damage caused by the earthquake were in areas bypassed by vibrations when the highest deviation from the waves. This was due to the region having the maximum energy, so that the level of damage also reached a maximum. Conversely area traversed deviation 0 vibes have or not have a deviation, the impact of the damage was lower though situated close to the epicenter. To clarify, the student answered with pictures.

There were 18.18% students answered only with images, with no intention of drawing a detailed explanation, however, could be understood from the drawing, the students wrote the greatest impact on the area of the peak of the wave. This showed that the damage was most severe in the area of the peak of the wave (max). Another group of students (18.18%) responded by linking the event of damage to the factors, among others; depth of the earthquake, magnitude, duration of vibrations, and whether or not touched by the earthquake plate.

Problem 1.3: In the volcanic earthquakes were accompanied by rain, rain water is usually acidic. Explain why it can happen?

Results of the analysis of the student group answers to the question to problem 1.3 are presented in Table 3.

Table 3. Distribution of student answer to problem 1.3

No	Student Answer	Percentage
1	Because of the volcanic ash contains chemical composition (SO_2, H_2F, HCl, CO_2, HCl, Cu and Fe), which is acidic, if it reacts with rainwater can cause acid rain	45.45
2	Because volcanic earthquakes generate a lot of gas, namely CO_2, sulfur, and other substances that then react with water molecules in the air so that the formation of acidic rainwater	27.27
3	Blank	18.18
4	Because it contains volcanic ash layers that cause irritation to the lungs, face and skin in both humans and animals. Easy acid leached layer so that rain water can contaminate the water supply of water at the affected locations. Abu acid can also damage the crop failure	9.10

Based on analysis of student answers showed that 45.45% of student groups stated that the volcanic ash is acidic because they contain certain chemicals, if the ash reacts with rainwater, then there was acid rain. A total of 27.27% of student groups to answer the acid rain occurs because the gases emitted from volcanic earthquakes is acidic, and if this gas reacts with rainwater, acid rain is formed. There was one group (9.10%) students who answer were not concerned with questions. The answer is more toward a result of acid rain on the environment. The rest, there were two groups of students (18.18%) did not answer the question. Based on the results of the analysis of the answers the student group could be obtained that only 27.27% of students answered correctly that acid rain was formed due to gas produced from volcanic earthquakes reacts with rainwater.

Discourse 2:

Forest Fire

Climate change impact on human life and plants on earth, for example due to the effects of prolonged drought caused fires such as fire peat swamp and Ogan Ilir people's plantation in South Sumatra. A phenomenon found many students are wearing masks, damage marsh vegetation, smoke causes the eyes become painful, even limiting visibility

Problem 2.1: Describe the impact of the destruction of marsh vegetation on the earth?

Distribution of the results of the analysis of student answer to question 2.1 is presented in Table 4.

Table 4. Distribution of students answer to problem 2.1

No	Student Answer	Percentage
1	Blank	54.5
2	Damage to populations of plants and animals in the swamp, loss of flora and fauna, and pollution	27.3
3	Damage to the swamp vegetation due to burning leads to reduced germplasm, weaken plants against pests and diseases	18.2

Based on the analysis presented in Table 4 it can be seen that the majority (54.5%) students did not answer the question. A total of 27.3% of the students answered the impact of damage to the marsh on earth is the destruction of the population (plants and animals) and pollution.

Problem 2.2: The haze very rapidly lately often causes disruption of aircraft landing at Sultan Mahmud Badarudin Palembang. Ministry of Research and Technology tried to cope with $CaCl_2$ liquid spray into the air, and the results are very significant decrease smog. How is the role of $CaCl_2$ fluid to the reduction of the smog?

Results of the analysis of student answer to problem 2.2 is presented in Table 5

Table 5. Distribution of student answer to problem 2.2

No	Student Answer	Percentage
1	Blank	36,36
2	$CaCl_2$ solution trigger the formation of clouds and rain as $CaCl_2$ solution can bind to CO_2 and water vapor (H_2O) contained in smoke.	36,36
3	Smoke was charged particles, $CaCl_2$ solution was also charged, so will bind, to form a heavier charged particles, because of the influence of Earth's gravity, the particles will fall, and the smoke is reduced.	18,18
4	$CaCl_2$ solution serves as a smoke absorber	09,09

on the results presented in Table 5, it can be seen that as many as 36.36% of the students did not answer questions. A total of 36.36% of the students replied that $CaCl_2$ solution binds to CO_2 and H_2O (g) contained in the smoke. Smoke concept has not been understood by the students, so they declared that water vapor contained in the fumes. Only 18.18% were students who answered according to the desired response pattern, ie $CaCl_2$ solution that would bind to charged particles of smoke, forming charged particles that are larger and because of the influence of Earth's gravity, these particles fall to the earth's surface.

5. Conclusion and Remark

Based on the research that has been done can be concluded that the equivalent of five questions PISA completed by the student, a row of question number one to number five percentage amount that the correct answer is 54.54%, 36.36%, 27.27%, 27.27% and 18.18%. The average percentage of answers that could not be answered correctly and in accordance with the key to the answer is as much as 67.28%.

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THE USE OF VISUAL RESPONSE SYMBOL TO IMPROVE STUDENTS' SPEAKING FLUENCY IN SUMMARIZING READING TEXTS OF INTERMEDIATE 3 CLASS IN LB LIA PALEMBANG

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Abstract

This study describes a group of intermediate three students' experiences in learning to make and share meaning about reading text through the creation of visual representations. This interpretative strategy, known as " visual response symbol," involves learners in creating symbols, pictures, and other non-linguistic signs to signify ideas generated through reading. The focus of the study was to investigate if visual response symbols technique could improve students' fluency in summarizing reading texts. The study supports teaching practices that provide opportunities for students of all ages to make and share meaning through multiple sign systems. The sample was 17 students of IN 3 level of LBPP LIA Palembang in term II/2016. The data were obtained by means of observation, teaching journals and video recordings. Based on the result of the data analysis, it was found out that there was a significant difference of students' fluency in speaking up their summary of the reading texts after implementing the visual response symbols. It was also found out that the samples had positive attitude toward the use of visual response symbols. They also, subconsciously, developed their 4Cs (Critical thinking and Problem solving, Communication, Collaboration, Creativity and Innovation) as they should find any strategy in order to produce words to tell their friend the summary of the reading texts they have read. Despite its satisfied finding, this class action research should be considered a preliminary technique that needs to be furthered by applying methods that are more comprehensive in order to promote students' fluency in speaking as well as develop their 4Cs.

Key Words: Visual response symbols, summary, fluency, reading text, the students of intermediate 3

1. Introduction

Speaking is the process of building and sharing meaning through the use of verbal and non-verbal symbols, in a variety of contexts (Chaney, 1998, p. 13). Speaking is a crucial part of second language learning and teaching. Despite its importance, for many years, teaching speaking has been undervalued and English language teachers have continued to teach speaking just as a repetition of drills or memorization of

dialogues. However, today's world requires that the goal of teaching speaking should improve students' communicative skills, because, only in that way, students can express themselves and learn how to follow the social and cultural rules appropriate in each communicative circumstance. In order to teach second language learners how to speak in the best way possible, some speaking activities are provided below.

Now many linguistics and ESL teachers agree on that students learn to speak in the second language by "interacting". Communicative language teaching and collaborative learning serve best for this aim. Communicative language teaching is based on real-life situations that require communication. By using this method in ESL classes, students will have the opportunity of communicating with each other in the target language. In brief, ESL teachers should create a classroom environment where students have real-life communication, authentic activities, and meaningful tasks that promote oral language. This can occur when students collaborate in groups to achieve a goal or to complete a task.

Teaching an intermediate three class was kind of a gift for me since the students were supposedly already active enough to use English to share their thought orally during the teaching and learning process.In fact, my prediction was incorrect. I just realized it when I came to the first reading text. After giving some activities to help the students comprehend the text, I check their understanding by asking them what the text was about. Then they started to answer my question by copying any single words written down in the reading text. They did not use their own words to summarize the reading text. The others just kept silent. They seemed just let their other friends retell the story. I noticed only some students that answered my questions again and again. I, then, questioned myself why the students did not want to share their ideas, why they just neglected the questions and wished other friends to answer. I wondered why some of them did not use any different words to retell the text and the rest just kept silent. Hence, I thought that I needed something to boost the students' fluency in the speaking skill that is visual response symbols.

Based on this problematic experience, I felt it was very urgent to find the solution for this problem. Then, I came up with this technique, called 'Visual Response Symbols'. This technique was hoped to help the students to improve their fluency in summarizing reading texts. Moreover, I had high expectation that this technique could improve the students' achievement in lessons.

Research Objective

The purpose of this classroom action research was to find out whether the visual response symbol could be used to improve student's speaking fluency in summarizing reading texts.

2. Theoretical Background

Visual Response Symbol

Wileman (1993) defines visual literacy as "the ability to 'read,' interpret, and understand information presented in pictorial or graphic images" (p. 114). Associated with visual literacy is visual thinking, described as "the ability to turn information of all types into pictures, graphics, or forms that help communicate the information" (Wileman, p. 114). A similar definition for visual literacy is "the learned ability to interpret visual messages accurately and to create such messages" (Heinich, Molenda, Russell, & Smaldino, 1999, p. 64). The ERIC definition of visual literacy is "a group of competencies that allows humans to discriminate and interpret the visible action, objects, and/or symbols, natural or constructed, that they encounter in the environment" (http://searcheric.org/). Robinson (as quoted in Sinatra, 1986) describes visual literacy as "an organizing force in promoting understanding, retention, and recall of so many academic concepts with which students must contend" (p. v). And lastly, Sinatra defines visual literacy as "the active reconstruction of past visual experience with incoming visual messages to obtain meaning" (p. 5), with the emphasis on the action by the learner to create recognition. The use and interpretation of images is a specific language in the sense that images are used to communicate messages that must be decoded in order to have meaning (Branton, 1999; Emery &

Flood, 1998). If visual literacy is regarded as a language, then there is a need to know how to communicate using this language, which includes being alert to visual messages and critically reading or viewing images as the language of the messages. Visual literacy, like language literacy, is culturally specific although there are universal symbols or visual images that are globally understood.

Fluency

Nunan (2003) defines fluency as the use of the language quickly and confidently with few unnatural pauses. Fluency means the smoothness or flow with which sounds, syllables, words and phrases are joined together when speaking quickly. Language fluency is the degree to which one is fluent in a language. Someone is said to be fluent if he has a high level of language proficiency, most typically foreign language or another learned language, and more narrowly to denote fluid language use, as opposed to slow, halting use. In this narrow sense, fluency is necessary but not sufficient for language proficiency: fluent language users (particularly uneducated native speakers) may have narrow vocabularies, limited discourse strategies, and inaccurate word use. They may be illiterate, as well. Native language speakers are often incorrectly referred to as fluent. Fluency is basically one's ability to be understood by both native and non-native listeners. A higher level would be bilingual, which indicates one is capable of speaking in two languages, either having learned them simultaneously or one after the other. In the sense of proficiency, "fluency" encompasses a number of related but separable skills. In reading, it means the ability to easily read and understand texts written in the language. In writing, it is defined as the ability to formulate written texts in the language. In speaking, Fluency is the ability to produce speech in the language and be understood by its speakers. While in listening, the ability to follow and understand speech in the language is called fluency.

Summary

A summary is a short retelling of a longer written passage, containing the author's most important ideas. Summarizing helps improve both your reading and writing skills. To summarize, you must read a passage closely, finding the main ideas and supporting ideas. Then you must briefly write down those ideas in a few sentences or a paragraph. It is important to understand the difference between a summary and a paraphrase. A paraphrase is simply a rewriting of a passage in your own words. A summary, on the other hand, contains only the main idea and the supporting ideas of a passage. A summary will be much shorter than a paraphrase.

Reading text

We live in a rapidly changing world, where both the quantity and type of written materials are increasing and where more and more people are expected to use these materials in new and sometimes more complex ways. It is now generally accepted that our understanding of "reading literacy" evolves along with changes in society and culture. The reading literacy skills needed for individual growth, economic participation and citizenship 20 years ago were different from those of today; and it is likely that in 20 years' time they will change further still. Reading requires material for the reader to read. In an assessment, that material – a text (or a set of texts) related to a particular task – must be coherent within itself. That is, the text must be able to stand alone without requiring additional material to make sense to the proficient reader. While it is obvious that there are many different kinds of texts and that any assessment should include a broad range, it is not so obvious that there is an ideal categorisation of kinds of texts. (PISA, 2015)

3. Method

1. Subject of research

The subject used for this classroom action research was Intermediate 3 class, LBPP LIA Palembang term II/2016. The class is consisted of 17 students.

2. Plan of action

This research was conducted in 4 meetings, from May 24 to June 10, 2016. There were some texts I assigned the students to read. For this purpose, 'visual response symbols' technique was executed in some meetings. Here are the steps of applying the technique:

a. Group the students into 4 or 5 groups

b. Apply this technique in whilst stages

c. Distibute each group a text

d. Ask them to read it

e. Assign them to find out pictures that represent the idea in the text (it can be from any sources or they may create it by themselves)

f. Let them practice telling the summary by using pictures

g. Ask them to present the summary with pictures in front of the class.

3. Data collection

a. Class Observation

It was done to observe the students' involvement in every meeting, the activity was videotaped and recorded in teaching journal entry.

b. Video Recording

It was done to see whether or not the students have progress during the intervention observed by the teacher.

4. Data analysis

All data obtained from all instruments to collect the data, which were teaching journal and video tapes were analyzed by using descriptive method.

4. Result And Discussion

Based on the analysis of the data collected, the result was accomplished as follows:

MEETING	DATE	TEACHING JOURNAL
1	May 24	I planned to have a reading text today. I had taught two reading texts in this class before. The results were always the same. Every time I asked them to tell me the summary of those two texts, they would keep silent. Only some of them answered it but they repeated the words from the texts. Today would be a bit different. I put them in groups. Cutting the original text into 4. A student would be responsible for one or two paragraphs. I gave them time to read and tell other members what the paragraph was about. After that, I gave them some questions related to the text and they competed to answer my questions. Finally, I asked them to summarize the story. After minutes, they were ready to tell the class about it. The result was shocking me. Almost everyone copied and pasted any single words from the text. They did not use their own words.
2	May 27	I came to the class with some pictures. I put them on the board and told them the summary of a narrative text (I took it from old version book of elementary 2). After that I assigned them to find out pictures that represented the text they had read. The pictures could be based on their perception since they would be the person who would tell others about it.
3	June 3	When I entered the class, I saw them practicing the picture telling. The class was so crowded. But I was glad because they were so enthusiastic to be in front of the class telling their summary with the pictures. I

		started calling the group one by one to present in front of the class. The result was great. They were able to tell it without seeing any text and they started using their own words in summarizing the text. I could see that the pictures really helped them. The next task was another reading text. I assigned them to summarize the reading text again with the pictures. I just wanted to make sure that this technique worked very well.
4	**June 10**	Today was the show time. They perfectly prepared the pictures in the cartoon. And finally they nailed it. Each group presented the summary well.

As seen from the journal entries, it can be concluded that the students gradually accepted ''visual response symbols" as their routine which encouraged the students to actively and creatively tell the summary with pictures. They might get bored at the beginning but little by little they complained less because they were not confused with the procedure anymore and they could finish it in short time.

Another benefit of applying this technique is that from the observation for the whole session, I noticed that this technique apparently helped my students with the reading text discussed in the class. When they had difficulty in remembering the text, they just needed to see the pictures. Ultimately, the time they spent for doing the exercises was less than before and they independently did their tasks.

5. Conclusion And Remark

Teaching speaking is a very important part of language learning. The ability to communicate in a foreign language clearly and efficiently contributes to the success of the learner in school and success later in every phase of life. Therefore, it is essential that language teachers pay great attention to teaching speaking. Rather than

leading students to pure memorization, providing a rich environment where meaningful communication takes place is desired. With this aim, various speaking activities can contribute a great deal to students in developing basic interactive skills necessary for life. These activities make students more active in the learning process and at the same time make their learning more meaningful and fun for them.

Based on the analysis of the data, the conclusion that can be drawn is that the visual response symbol can be applied to support the students to be active, creative, communicative and fluent in speaking. It is also proven from the result of their test that the students have gained the benefit of this technique by showing their improvement in fluency, vocabulary and sentence structure. In addition, the visual response symbol can also be utilized to help student. Knowing these benefits, for my fellow teachers who are also experiencing this kind of problem, "the Visual Respons Symbol" can be recommended for the alternative activity for providing the information about the text the students need to retell. To make permanent impact for the students and make it as their habit, it is suggested that this technique be done in longer period of time. Hopefully, by making this as their habit, the students can be a self and independent learner.

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PRESPECTIVE OF THEORY OF DIDACTICAL SITUATION TOWARD THE LEARNING OBSTACLE IN LEARNING MATHEMATICS

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Abstract

The learning process of mathematics does not always achieved the expected goals. Various obstacles and difficulties was always coloring process. This is due to various factors that become obstacles in the learning process. Diversity intellectual ability of students in math vary greatly. The attitude and behavior of students vary, as well as interest and emotions. Methods and designed all aspects of teachers, teaching materials, learning resources, media and classroom situations can help give a boost or provide learning obstacle to the students. The learning obstacles are not only experienced by students who are capable below average, but can also be experienced by students at all levels of ability. Brousseau (2002) states that the students' thinking evolved from their natural thinking towards logical thinking, which is associated with mathematical reasoning, accompanied by the construction process, the rejection and the use of a method. In the theory of didactical situations Brousseau was introduced in 1986, the learning obstacles are theoretical foundations, because it is a means to acquire knowledge. Obstacles are part of the knowledge of the students in general to solve certain problems, but when faced with a new problem, the knowledge that has been held is not fully used and are difficult to apply it into new material. In other words, the barriers are one way to find out something (Brown, 2008). Cognitive obstacles helps to identify the difficulties faced by the students in the learning process, and to determine the right strategy for teaching (Cornu 2002: 158). Brousseau what is proposed in line with Piaget that knowledge is constructed in the minds of children. Students begin the learning process when they are in an environment full of difficulties and obstacles as occurs in adults in general. The new knowledge that comes from the ability to adapt to new situations and stimuli and new reactions to these conditions is evidence that learning has occurred. Students know that the "problem had to face was deliberately chosen to make learning and acquiring new knowledge, knowledge that is justified by the logic of the situation" (Spagnolo in Manno, 2006). Cornu explained that planning for teaching math concepts is very important to overcome obstacles that may occur. Furthermore, according to artigue (1994), aims to model the situation didactic teaching situations that can be developed with a controlled stages. Thus, in this didactic situations students are involved in the process of thinking to solve a problem in the learning process. This paper describes how the perspective of theory didactical situation toward the learning obstacle in learning mathematics.

Key Words: learning obstacles, theory of didactical situation, learning mathematics

1. Introduction

According to Piaget, the intellectual development occurs is uncertain and spontaneous. While the children are learning mathematics is flexible, does not depend on age. It is understood that Piaget did not agree if mathematics is seen as a process that is limited, which is more driven towards spontaneity limited to a single problem (stimulus response theory). This is due to the cognitive structure of the child which is a factor that can not be ignored in learning mathematics.

Mathematics as a science that is structured according to the structure should be taught in a systematic way, orderly, logical and appropriate intellectual development of children. By way of this kind of teaching, student learning will be ready to receive lessons in terms of intellectual development. That is why the mathematics content taught to students varies by level of education and intellectual development of children. Students at the elementary education level, grain is concrete, and the higher the level of education the students will increasingly abstract mathematical content.

Diversity intellectual ability of students in math vary greatly. These include the ability to recall, understand, interpret information, abstracting, generalizing, reasoning, problem solving, and many more. The attitude and behavior of students vary, as well as interest and emotions. Methods and designed all aspects of teachers, teaching materials, learning resources, media and classroom situations can help give a boost or provide learning obstacle to students. In fact, every student from a variety of backgrounds naturally have a situation that is called learning obstacle.

According Sunarta (1985) learning difficulties are difficulties encountered by students in their learning activities, resulting in lower academic achievement and behavioral changes that occur are not in accordance with the participation acquired as classmates. Difficulties in psychology is a condition that describes a condition that can interfere with a person in the study. Students who experience these obstacles do not usually have a problem with intelligence. Difficulties experienced by students is associated with cognitive conditions.

According to Cornu (2002: 158), cognitive constraints is the product of a previous student experience and the experience of the process in themselves, occur when students have difficulty in learning. Cognitive barriers helps to identify the difficulties faced by the students in the learning process, and to determine the right strategy for teaching (Cornu 2002: 158). Planning for teaching math concepts is very important to overcome obstacles that may occur. The learning process will go well, if the interaction that exists between the Teacher-Student-Matter can overcome any barriers to learning that occurs.

This situation is difficult to know the teacher, the teacher usually only realized when learners' achievements decline, not the spirit of learning, even grades. If the difficulties experienced by students is allowed to drag on will lead to academic failure, confidence levels are low, the motivation decreases, learning styles unplanned, and poor ability to problem resolution shown by the behavior of withdrawing, malingering, playacting, anxiety dependent on others excessively and ditching (Sandri, 2013).

Teachers have a very important role in overcoming the barriers experienced by students. Teacher in the action concerning the relationship between teachers and students are expected to anticipate all the obstacles that may arise. Suryadi (2013) states that "two fundamental aspects in the process of learning mathematics is the relationship of matter and the student-teacher-student relationship, it can create a didactic or pedagogical situation is not simple and often happen very complex". Thus, a teacher at the time of designing a learning or didactic situations, need to think about how the predictions of a student's response to the situation and the anticipation of all the obstacles that may be experienced by students in order to reach the expected learning objectives.

2.   Theoretical Background

Cornu (2002) classifies the obstacle into several types, namely: genetic and pshycological obstacles, didactical obstacles, and epistemological obstacles. Genetic and psychological barriers occur as a result of the student's personal development. Barriers didactic occur as a result of learning activities that teachers do. This didactic obstacles can be avoided. Avoided through the development of alternative learning approaches. While the epistemological barriers instead, unrelated to teaching approaches used by teachers, but from the nature of the mathematical concept itself.

Brousseau (2002: 82) uses the term obstacles of the theory presented by Bechelard (1938) and Piaget (1975) about the "errors ", that errors and failures play a role that is not simple. This type of error does not know and unpredictable, so-called obstacles . In other words, the obstacles are one way to find out something (Brown, 2008). Brousseau (2002: 86) categorizes barriers didactic three types, namely:

1) Ontogenetic Obstacles, a development obstacle, namely the constraints associated with the stage of mental development of children according to age and biological development. Some children have sometimes lacks the necessary capacity for age-related cognitive purposes. If the deficiencies just because mental development was slow (and not for pathological situation) then it will disappear together with the growth. Based on the results of the study (Sari, 2014), the cause of these difficulties can be seen from many things, among others due to inaccuracy in reading, carelessness in thinking, weakness in the analysis of problems, less persistent. Many students underestimate the problem is that students determine the answer carelessly or randomly select an answer or choose answers, solve problems only technically mere thinking without thought or reason only a small proportion of the problem, then gave up. In addition, because the confidence is low, lack of confidence and attitude of students dare to take risks to solve the problem according to ability and attitude that considers the resolution of

a problem too difficult including part of one form affective that math anxiety.

2) Didactical Obstacles, namely the obstacles that arise as a result of the choice of learning related to the education system. These barriers can be avoided through the development of alternative learning approaches.

3) Epistemological obstacles, barriers yaang emerged from learning approaches derived from the concept itself. Brown (2008) states that "epistemological obstacles can be construed as faulty ways of thinking but such a perspective ignores Reviews their importance, Reviews their developmental necessity, and their productivity in specific settings". Brousseau has explained the relationship between learning and mathematical structure of the learning content (Prediger, 2008). Contrary to the 'barriers didactic', Brousseau has created the idea of 'epistemological obstacle' for the obstacles that are rooted in the structure of self mathematical content itself, in the history and development of the application.

Bachelard (Cornu, 2002: 158, Manno, 2006: 32) states that the epistemological obstacle occurs both in the history of scientific thought and practice of education:

"We have of scientific knowladge think about in terms of obstacles. We are not talking about external obstacles such as the non-lasting character of the phenomenom or Reviews their complexity, nor to think that it is weakness of meaning or of human spirit's fault; is the only and simple act of knowing that brings troubles and unbalance wthin. Is there, where we go slow and back, is there where we find epistemological obstacles ".

According to Bachelard barriers epsitemologis has two important characteristics, namely:

a) Epistemological obstacle unavoidable and significant body of knowledge to be gained.

b) Epistemological obstacle is found, at least partially, in the history of the development of the concept.

Brousseau then bring the idea into a didactic situation theory that the concept of "leap of information" (Brousseau 2002: 98, Moru, 2009: 433). The leap is the acquisition of knowledge of information that is not felt. If the information leap obstacles then there epsitemologi constraints. Barriers epistemology of scientific knowledge can lead to stagnation and even decline in a person's knowledge.

The term didactical situation was introduced in the 1960s, referring to the situation in the teaching of mathematics (Brouseeau and Waefield, 2014: 164). This term is a new concept in teaching mathematics. Didactic, in mainland Europe is seen as a discipline of teaching, whatever the field of science and education levels (Suratno, 2016). Didactic examines the things that teachers do with regard to what the material, how to learn and teach, and how to develop the viewpoint of the content of the lessons. According to the situation didactic, teaching is rebuilding communication formal text in the language of symbols that are not yet understood and expressed by the new formula, metaphorical representation, and the description is ambiguous by the students, in other words, the teacher gives a problem that will be explored students as a learning experience, and will kosep given the fundamental (concept) by the teacher at the end of the lesson (Brouseeau and Waefield, 2014: 164).

Furthermore, the phenomenon of a didactic situation in France developed into a didactic situation theory (Theory of didactical Situation / TDS) introduced by Brousseau in 1986. TDS is based on the principle that a student's behavior can only be understood if the behavior is closely related to the situation in which he observed, where situation and cognitive potential should be characterized by the observed reality (Artigue, 1994). TDS is trying to offer a model that was inspired by mathematical game theory in a scientific way, issues related to the teaching of mathematics and means to improve the teaching of mathematics (Radford, 2008).

Theory of didactic situations developed to design the material conditions and the social contract which framed the action together undergo a didactic situation is

expected especially from the student's perspective (Brousseau, 2002). The theory assumes that the teachings can be modeled in the form of game activity that involves three steps. First, a situation adidaktis are provided for students to practice the rules of the game so that students can play in it. The game in this adidaktis situation has a purpose that is easily recognizable from the student's perspective. Second, the student jointly working to find ways of improving their actions in order to more easily achieve the goal of the game. Third, students are directed to develop consideration to the conclusions they make. At the final stage of this conceptual understanding aligned in accordance with the discipline of science. The third stage is called as the situation of action, formulation and validation.

3. Method

The method used is a theoretical study or literature. Source reference obtained from a variety of scientific work, either in the form of books as well as national and international journals.

4. Result and Discussion

The first step in this theoretical approach is a didactic analysis triangle, known since 1982 and was first raised by Yves Chevallard (Manno, 2006), where the word "knowledge" means the academic knowledge and standards, the object of mathematical discovery.
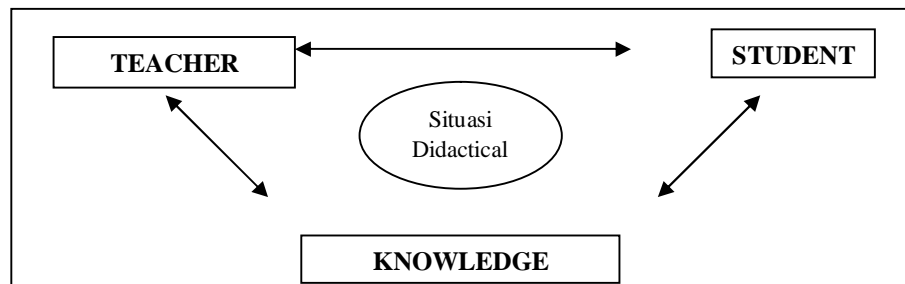
Picture 1. a didactic triangle

The third element in the triangle above have their respective roles. The teacher's role is to enable a didactic transposition; in other words, teachers must change the "knowledge" that comes from the discovery of students into the "knowledge taught" through the lessons that have been designed teachers. Furthermore Artigue (2014: 48) states that the integrated didactic mathematics in his Theory of didactical Situation (TDS), which was adopted from a systemic perspective, which is reflected in the preparation of teaching theory with the idea of the situation. The situation itself is a system. Brousseau (2002) divides the two possible perspectives on this didactic situation, namely; vision as the conditioning of students in an organized manner directed by the teacher; broader vision, including teachers and the education system itself.

The new knowledge that comes from the ability to adapt to new situations and stimuli and new reactions to these conditions is evidence that learning has occurred. Students know that the "problem had to face was deliberately chosen to make learning and acquiring new knowledge, knowledge that is justified by the logic of the situation" (Spagnolo in Manno, 2006).In a didactic situation, students construct their own knowledge not because they were taught, but because of the logic that he found himself pushed through a new situation to a certain understanding. Brousseau reveals new role of teachers in teacher-student relationship. Manno (2006) stated that teachers must build a state that allows students to learn certain at the end of each activity.

Student relationship - the object - the material is an important component in any didactic activities. This situation is built so that students receive a lot of feedback and tried to solve the problem through the effort and errors, as the strategy to be a winner. Students learn to interact with its environment adapting their knowledge to a wide range of possibilities of different strategies without teacher assistance. Didactic actions of a teacher in the learning process will create a situation that can be a starting point for the process of learning (Suryadi, 2013).

The effectiveness of a didactic situation is that students have the responsibility to solve the problem and the teacher gave them the responsibility. Students are given the freedom to build their own knowledge. Brousseau identifies four types of situation, namely action, formulation, validation, and institutionalisation (Artigue, 2014, Brousseau, 2002, Kislenko, 2005, Manno 2006, Wisdom 2014).

1) Action

Each student is faced with a problem. Students interact with other students, teachers, and milieu. Brousseau (2002) defines milieu as everything that affects students' Within a situation of action, everyhing that acts on the student or that she acts on is called "milieu" (Brousseau, 2002: 9). Students develop their own strategies to find a solution.
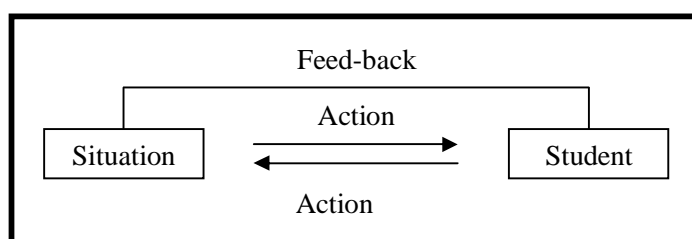

Picture 2. Action

Students make decisions about the process of resolving the problem, the process by which the students formed a strategy for how the method of solving the problem. Students start looking for solutions, generate hypotheses and determine

which strategy is evidenced by new experiences. The interaction between the student and the milieu (the other students, the context of the problem, teachers) are useful for making some of the strategies and the so-called "didactic of action". At this stage, students build models implicitly: a set of rules and relations to take a new decision without being recognized or required to be disclosed explicitly (Manno, 2006). Piaget considers cognitive confusion and contradictions become very important in changing one's mind. Confusion and conflicts occur during a class discussion where the emphasis is on students' thinking and reasoning. This case arose out of ideas or a mixed response filed by children (Wood, 1999).

2.   Formulation
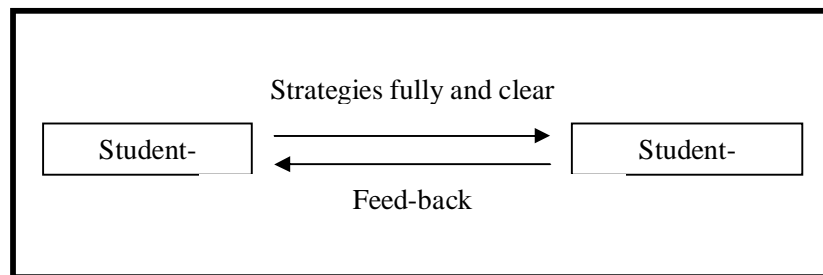
Picture 3. Formulation

This stage gives students the opportunity to create their own models implicitly and reveals a strategy with words that can be understood other students, discussing and arguing that make other students accept his explanation. Two-way communication between students and directing them to a strategy (Manno, 2006). Strategies that they get the agreement of the arguments they put forward in a discussion.

3) Validation

Validation is a process that brings the idea of 'establishment theorem' (Brousseau, 2002: 13). Teachers should start from what is known and ending with knowledge of mathematics through the construction process (Kinsleko, 2005). Students are required to solve the problem and they made a complete explanation of how that has been used to solve the problem. How the completion of a student may be accepted or rejected by the other students. In the group of all students in the class have the same opportunity to discuss their strategies and hypotheses that they agree to be theorem (Manno, 2006). Situation didactic guides them through a process to ensure that they use the right strategies. In this way the fault is the starting point in the process of building knowledge. In this section, the teacher can influence the students (dialectic of validation). Brousseau explains that this stage can serve as a means to communicate explicitly for students and also as a means to learn to build logical reasoning based on evidence. As for the teachers themselves, propose theorems and strategies on the board is one way to demonstrate an understanding of the content of mathematics teachers (Kinslenko, 2005)

4) Institutionalisation

At this stage, the teacher ensure that students have the skills so that knowledge becomes part of the permanent student (Wisdom, 2014: 13). Institutionalization is basically the process that allows students to change their previous knowledge into new knowledge through strengthened by a teacher who gives them the value of truth and allow it to use the new knowledge to solve the next problem (Brousseeau, 2002: 18).

Based on TDS, teachers play a major role in the context of the didactic triangle in creating a didactic situation resulting in a process of learning in students. In other words, a teacher needs to have the ability to create a didactic relationship (didactical relations) between the student and teaching materials so as to create an ideal situation for students didactic. Didactic situations designed by the teacher to

make students learn something. Learning situations created really encourage students active in learning to argue, discuss various strategies, and others so unknowingly students directed a mathematical concepts.

Three characteristics TDSM according Artique (2014: 48-49), namely:

a) Emphasis on math and epistemology.

b) Knowledge of mathematics allows us to act on the environment, but the power of mathematics pragmatic depending on the specific language was created in the form of validation. These characteristics are reflected in three different situations, namely; the situation of action, formulation and validation.

c) Based on the students' cognitive dimension, the merger process of adaptation and acculturation. Brousseau (2002: 30) states that students learn how to adjust to the surroundings which could lead to contradictions, difficulties and balance, as was the case in general in humans. Knowledge is the result of adaptation of students, will form the students establish himself with the response or new insights that give reason for him to learn.

In the TDS there are two very important process which is in the form of an independent adaptation adidactical situation and environment, acculturation in the form of didactic situations and the didactic contract (Artique, 2014: 49). In the contract, there are two rules adidaktis namely devolution and institutionalization (Brousseau, 2002; Perrin-Glorian, 2009; Artique, 2014). Adidactical situation and milieu intertwined with the vision of learning as a process of adaptation and with the aim to optimize the process. Achievement of those goals came from the interaction of students with the milieu. Milieu is a system in which students interact in a didactic situation and also a place for teachers and researchers to play an important role in designing the milieu. This system involves a lot of elements, including a variety of materials, instructional media (calculator, computer, various kinds of electronic items), and those who have their respective roles. The learning process is structured to be a process of adaptation, therefore milieu should be a source of contradiction, imbalance, and build knowledge. Milieu that is designed to be made of students who

initially had a poor strategy, a strategy to become rich because of the opportunities that mncul as a result of the action and feedback of a strategy that enables the establishment of knowledge.

According to Brousseau, in adidactical situation pose a problem to the student teacher can recognize and stimulate students to move, speak, think and develop their own kemauannnya. So that adaptation is going well, in this situation there is no intervention from the teacher, the student is responsible to solve the problem given. In situations adidaktis, students build their own new knowledge with direct involvement in solving problems. In Piaget's theory of cognitive development, equilibrium is an important basis adidaktis adaptation. According to Perrin-Glorian and Laborde (2005), the situation adidaktis designed with didactic intent to minimize the involvement of teachers in the learning process.

The interaction in the learning process involves three elements, namely students, teachers, and milieu. The relationship between teachers and students in a particular situation is one of the important ideas in the TDS. Participation of students is carried out by interaction with teachers and peers. In other words, students need to participate in all stages of learning activities .. Theory of Zone of Proximal Development (ZPD) Vygotsky explained that when children learn to interact with adults (teachers) or in collaboration with his friend, it can form a variety of mental processes on the child and the development of problem-solving skills in students.

The ideal learning allows students to interact with the milieu even without teacher intervention (adidactical situation), so the student activity does not depend on teachers (Miyakawa and Winslow, 2009). In the relationship between teacher and student in the didactic sistuasi no didactic contract (didactical contract). Brousseau (2014) describe a didactic contract as a set of rules that determine the rules of responsibility of students and teachers, that teachers are required to teach and students learn. Didactic contract also defined as the rules of the game and strategy in a didactic situation. Didactic contract also an interpretation of the commitments, expectations, beliefs, facilities, results, and punishment. Broussseau also stated that the didactic

contract refers to the behavior of teachers (especially for the knowledge being taught) are expected by the student and the student's behavior expected by the teacher. Didactic contract is different for each different mathematical concept and also for each student, so it is difficult to describe the didactic contract.

Brosseau (2002) states that the didactical contract is an important thing, in a didactic situation if teachers feel the failure in the learning process, students are not expected to achieve the learning objectives, it is implicit that the teacher can not meet the expectations of students. Students' complaint"because it can not solve the problem given by the teacher. This situation raises a conflict on the teacher, why this could happen. Conflicts experienced by teachers, negotiations, and efforts to seek new contracts will continue its relationship didactic situation through a new didactic situation. In this case, the teacher assumes that prior learning and new conditions take students on new learning possibilities.

Each process contains a series of didactic situations, which every situation contains three types, namely; situation of Devolution, mathematical situation, and the situation Institutionalization. There are two categories in the didactical contract, namely devolution contract and contract institutionalization. In the devolution contract regulates the activities of student mathematics teachers who provide feedback or responses to such activities. While in the institutionalization of the contract, the student who suggested the results they get and teachers provide appropriate referrals to referesensi knowledge (Brousseau et al, 2014; Hersant & Perrin-Glorian, 2005). The process of devolution and subsequent institutionalization introduced to connect the acculturation and adaptation in the world of education is the responsibility of the teacher. Through devolution, the teachers made their students accept responsibility for solving math problems without neglecting the didactic purposes and creates conditions to be a means of learning through the process of adaptation. Through institutionalization, teachers help students to link contextual knowledge that has been built in accordance with the adidactical situation learning objectives to be achieved and the teacher puts the concept of decontextualization and

924

transformation into knowledge. If the teacher directs students about what they should do, then students will not learn. Artique (2014) stated that the devolution process is a process of negotiation with the teacher through didactic contract that whilst there is a transfer of responsibility from teacher to student.

Furthermore, the idea of a didactic contract evolved into some kind of contract. Changes in circumstances allow the modification of contracts in new situations that occur. The level of didactic contract structure proposed by Hersant and Perrin-Glorian (2005) is; macro-contract, meso and micro-contract contract. Macro-contract related to the purpose of teaching, meso contract relating to the realization of an activity, while the micro contract relating to mathematical content unit, eg concrete questions in the exercise.

The structure is a draft contract didactic learning which involves a series of complex processes, quaint and unique. Usually teachers start of a series of curriculum analysis to determine the themes and topics that will be delivered. However, mastery of the material alone is not enough to equip a teacher in arranging meaningful learning activities. Therefore, in depth review of the material required so teachers can find and define the meaning and how to learn the material, especially for himself. Moreover, the process of implementation anaisis and reflection also need to be done by the teacher, so the teacher's task includes the process before, during and after the learning takes place.

5.   Conlusion and Remark

Learning is complicated by the variety of possible obstacles that will occur and the various factors affecting the process. Changes in student achievement and psychological decline, a signal to teachers that there are barriers that occur in students. Barriers to learning faced by students is a challenge for a teacher to be able to design an effective learning, innovative, and quality. Therefore, many aspects such as material and structure of the curriculum, the school and the learning environment, teachers along with the philosophy and approach of teaching, students and ways of

learning and other matters relating to the social, cultural, historical and institusionl, should be a primary consideration for teacher in designing learning.

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STRATEGY PROJECT BASED LEARNING (PjBL) IMPROVING SKILLS OF STUDENTS IN LEARNING FOR THE 21ST CENTURY LEARNING MEDIA COURSE

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Abstract

In 21st Century Learning Skills have 3 skills: (1) life and career skills, (2) learning and innovation skills, and (3) Information media and technology skills. One strategy to achieve the learning skills in the 21st century is with the strategy of Project Based Learning (PjBL). Project Based Learning abbreviated as PjBL is one of learning based on problems using the project / activity as the media, to undertake exploration, appraisal, interpretation, synthesis, and information to produce various forms of learning outcomes. This strategy is very suitable when applied to course learning media, because in this strategy have guidelines step consists of planning (planning), creating (creating or implementation), and processing (processing), which can lead students to produce a project / product. On the subject Media Education, students are required to deliver the products to take advantage of the surrounding environment (contextual) and ICT, which can be used as a media and applied to the learning process.

Key Words: 21st Century Learning, Project Based Learning (PjBL), subject Media Education

1.   Introduction

Nowadyas, education is in the age of knowledge (knowledge age) with the acceleration of incredible knowledge. Acceleration of knowledge is supported by the application of media and digital technology called the information super highway (Gates, 1996). in the 21st century, education is becoming very important to ensure learners have the skills to learn and innovate, skills in using information technology and media, as well as be able to work, and survive by using skills for life (life skills). 21st century skills are (1) life and career skills, (2) learning and innovation skills, and (3) Information media and technology skills. The third skill is summarized in a

scheme called rainbow-knowledge skills 21/21 st century knowledge-century skills rainbow (Trilling and Fadel, 2009).

One of the strategy to achieve the learning skills of the 21st century is with the strategy of Project Based Learning (PjBL). Project Based Learning abbreviated as PjBL is one of learning based on problems using the project / activity as the media, to undertake exploration, appraisal, interpretation, synthesis, and information to produce various forms of learning outcomes. Project-Based Learning uses matter as a first step in collecting and integrating new knowledge based on their experiences in real activity.

Strategy Project Based Learning (PjBL) is very suitable when applied to subjects Learning Media. Learning Media is a course that is required to produce products that can be used as media and applied to the learning process. In this course, students can develop the media, and can choose, design, and produce instructional media by exploiting the environment (contextual) and ICT.

2. Result and Discussion

Three educational concept of the 21st century has presented by Ministry of Education and Culture (2013) Exposure Curriculum Development, 2013 in Jakarta has developed a new curriculum for elementary school (SD), Junior High School (SMP), High School (SMA) and vocational schools (SMK). The third concept is a 21st Century Skills (Trilling and Fadel, 2009), scientific approach (Dyer, et al., 2009) danauthentic assessment (Wiggins and McTighe, 2011); Ormiston, 2011; Aitken and Pungur, 1996: Costa and Kallic, 1992. Furthermore, these three concepts were adapted to develop the education into Indonesian Creative year 2045. This was done to achieve conformity with the concept of their capabilities and competence of teachers and education personnel.

In the 21st century the century skills, translated into life and career skills, (life skills and career) include (a) flexibility and adaptability, (b)Initiative and Self-Direction, (c) social and Cross-cultural interaction, (d) productivity and

Accountability and (e) leadership and responsibility. Learning and inovation skills (skills to learn and innovate) include (a). Critical Thinking and Problem Solving, (b) Communication and Collaboration, (c) Creativity and Innovation. and information media and technology skills (skills of information technology and media) include (a). information literacy, (b) media literacy and (c) Information and Communication Technology literacy. These three concepts will be found in the course of learning by implementing strategies Instructional Media Project Based Learning.

Literally the word media means middle or intermediate media or introduction. Association for Education and Communication Technology (AECT) defines media as all forms that are used to process information distribution, while the National Education Association (NEA) defines media as any objects that can be manipulated, seen, heard, read, or talk along with instruments used to these activities, Arsyad Azhar (2013). So the media is anything that can be used as an intermediary to deliver the message, which can stimulate the thoughts, feelings and desires of students so as to encourage the learning process in itself.

In the lecture Learning Media discussed studies on the definition, types / classification, function, basics of media development, and can choose, design, innovation biology learning common in schools, create and produce innovative media learning biology developed student to use the environment around (contextual) and ICT.

In the study or material on "create and produce innovative media learning biology developed students to take advantage of the surrounding environment (contextual) and ICT", the students demanded to be able to produce media innovation biology learning that can later be applied in microteaching, and therefore could be used in schools where students perform Field Learning Implementation Plan (P3L) and the subsequent teaching. In the study or the material is indispensable strategy capable of guiding students to be able to produce a product / project.

Learning based on project has been associated with the "situated learning" from the perspective of James G. Greeno (2006) and the constructivist theory of Jean

Piaget. A more accurate description of the process provided by the PjBL Blumenfeld et al (1991) says that, "Project-based learning is a comprehensive perspective focuses on teaching to engage students in the inquiry. In this case, students pursuing a solution to the problem is not simple by asking questions and improve them, debate ideas, make predictions, design plans or experiment, collect and analyze data, draw conclusions, communicate their ideas and findings to others, asking questions -This question is new, and create a work in the form of product ".

Project Based Learning (PjBL) is a learning strategy that organizes learning around the project, Thomas (2000). The project is a complex task, based on challenging questions or problems, which involve students in the design, problem solving, decision making, or investigative activities; giving students the opportunity to work relatively autonomously for extended periods of time; and lead to product realistic. Within this project-based learning, students become motivated more involved in learning. Products made of students during the project provide results that are authentic can be measured by the lecturers or instructors in teaching. Therefore, in the Project Based Learning, lecturer or instructor becomes a companion, facilitator, and are required to understand the mind of the student.

When students work in teams, they find the skills to plan, organize, negotiate and build consensus on issues task to be done, who is responsible for each task, and how the information will be collected and presented. Skills that have been identified by the students this is a skill that is essential to the success of his life, and as a candidate for educators is a skill that is important in order to teach. Due to the nature of the project is a collaborative work, the development of these skills takes place among students.

The Examples of project / product development of instructional media innovation biological relative and efficient is media props. These props can be created and produced by utilizing scrap materials (Riastuti, 2015). Learning media in the form of props Biology can be created and developed in accordance with the concepts taught by affordability from simple materials are easily obtained even from the

material used. It only took a whim, skills and innovative ways to develop props Biology, because in essence every individual human being has the potential and the talent in him. Potential and talent can be honed so that it can produce works / products that are useful in the form of props. Props which are generated can be from innovation and creativity used to process a variety of materials such as plastic, bottles, pipettes, cans, glass, and other materials used customized forms and benefits in accordance with the concept and indicators of learning.

Some advantages from Project Basic Learning as follows, (Mahanal, 2009):

1. Set up a student on jobs. Students are prepared through the development of skills and abilities through the broadest possible cooperation / collaboration, project planning, decision-making, and time management.

2. Increasing motivation. With these projects, the students use higher thinking skills and forming relationships in school knowledge and skills used in the real world.

3. Improve collaboration to construct knowledge. Collaborative learning provide opportunities for each student to catapult the idea, expressed opinions of a wider, and negotiate preparing solutions, are all skills needed in employment.

4. Improving social relations and communication skills. The importance of team work in the project is needed for students to developed and practiced the communication skills.

5. Open up the opportunities for students to create and view relationships between disciplines.

6. Provide the opportunities for students to participate in school or in the community.

7. Improve the confident of students to feel proud has created a product that used and helpful in the learning process

8. Provide opportunities for students to develop the ability to learn individually with a variety of learning approaches. Providing a practical experience of the real world and learn how to use technology. Project-based on learning activity provides a framework to students to unlock their creativity using technology to

solve problems such as the use / use computer and internet in the final product research.

9. Improve the skills to manage resources. The PjBL encourages students to become independent learners who are responsible for completing complex tasks. Learning Project implemented berbais well provide the opportunity for students to learn and practice in organizing the project, and management of other resources such as equipment to complete the task.

Projects within a learning model PjBL has five criteria, they are the centrality, driving question, constructive investigation, autonomy and realism, (Thomas,2000). Projects in the Project Based Learning is focused on the questions or problems, which encourages students to undergo the hard work the concepts and principles of the core or the principal of the discipline.

The project involves the students in a constructive investigation, in the form of the design process, decision-making, problem-finding, problem solving, discovery, or the process of model building. However, in order to meet the criteria of a project called Project Based Learning, the main activities of the project should gathered the transformation and construction of knowledge (in the sense: new insights, or new skills). The project encourages students in to a significant level. Projects in the Project Based Learning is not the creation of lecturers, inscribed in the script, or packaging. Projects in the Project Based Learning does not end at a predetermined outcome or take the path (procedure) predetermined. Project Based Learning Project prioritize autonomy, choice, working time is not rigid.

The project is realistic. Characteristics of the project gives the students authetication. These characteristics may include topics, tasks, roles played by students, the context in which the project work is done, the collaborators who work with students in the project, the resulting product, the audience for the products of the project, or the criteria under which the products or performance assessed , Project Based Learning involves real-life challenges, focusing on the question or problem is

authentic (not simulative), and the solution has the potential to be applied in the real field.

Project-based learning can be revolutionary in the issue of renewal of learning. Projects can change the nature of the relationship of faculty and student. Projects may reduce competition in the classroom and direct students work more collaboratively rather than individually. Projects can also shift the focus of learning from considering the facts to the exploration of ideas.

Learning PjBL generally have guidelines steps: planning (planning), creating (creating or implementation), and processing (processing), Mahanal (2009) as follows:

1. Planning

   At this stage the activities carried out are: a) designing the entire project, the activities in this step are: preparing the project, in more detail include: the provision of information learning objectives, lecturers deliver real phenomenon as the source of the problem, motivating to raise issues and making proposals, b) organizing the work, activities in this step are: planning the project in more detail include: organizing cooperation, choose a topic, choose a project related information, make predictions, and make the design of the investigation.

2. Creating

   In this stage the students develop project ideas, combining the ideas that come in groups, and build the project. The second stage includes the development and documentation activities. At this stage, students also produce a product (artifact), which will be presented in the classroom.

3. Processing

   This phase includes the presentation of the project and evaluation. At the presentation of the project will occur in the actual creation of communication or to the findings of the investigation group, while in the phase of the evaluation will be conducted reflection.

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THE IMPLEMENTATION OF EDUCATIONAL TECHNOLOGY IN LEARNING PROCESS

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Abstract

Science is a human endeavor to understand the symptoms and the facts of nature, and preserves such knowledge conceptually and systematically. While the technology is man's attempt to take advantage of that knowledge for the benefit and well-being. Educational technology is designed to solve the problems of education, as well as to provide the benefit in improving the quality of learning process. Various forms of learning experience, both of which can be accomplished either in the classroom or outside the classroom, and messages can be packaged by observing the rules and principles of educational technology. The new paradigm of education favor of the election of the quality of education with emphasis on the principles and practice of autonomy, accountability, accreditation and evaluation to achieve such quality with no other implements appropriate educational technology. Educational technology as a form of software (software technology) in the form of systematic ways is used to solve the problem of increasingly sophisticated learning process and get a place widely in education. Thus, the practical implementation of educational technology in problem solving learning process that has a concrete form with the learning resources that facilitate learners to learn.

Keywords: Educational Technology, Learning Process

1.   Introduction

Entering the 21st century, the national education system faces complex challenges in preparing the quality of Human Resources (HR) which is able to compete in the global era. Appropriate measures to prepare the human resources (HR) quality and the only container that can be seen and should serve as a tool for building high-quality human resources is education. To achieve the goal of national education, the government has organized improvement of education quality improvement at the various types and levels. And along with the development of the following educational technology in supporting infrastructure, improving the quality of

education can be done through the implementation and use of educational technology in the learning activities. Educational technology is a system that can facilitate educators and learners to learn a broader, more numerous and too varied. Through the facilities provided by the system, students can learn independently, anytime and anywhere without being confined by space and time.

Technology, as a structure, process, and artifact, is an imperative feature of future development of society. Given that the technology has been developed and it is integral in all areas of life, then the technology in the field of education must also be developed, controlled, and utilized in order to help the realization of the mandate of the 1945 national life. The development of educational technology study produces a wide range of concepts and practice of education that many use the media as a learning resource. Therefore, there is a perception that education technology together with the media, even though the position of the media serves as a means to facilitate the delivery of information or learning materials.

In terms of the education system, the position of education technology serves to strengthen the development of the curriculum, especially in the design and development, and its implementation, even there is an assumption that the curriculum deals with "what", while educational technology examines "how". In relation to learning, strengthen education technology in manipulating various ways and techniques ranging from the design stage, developing, exploiting a variety of learning resources, implementation, and evaluation of programs and learning outcomes.

2. Theoretical and Background

A. Concept Technology

Educational technology as arable fields involved in the preparation of human learning facilities via search, development, organization and systematic use of all the resources of learning; and management of this whole process. In general, technology is defined as, " technology is, simply, the of knowledge to solve

problems or invent useful tools'. The concept of technology has certainly played a major role towards the concept of educational technology. In this case, technology is specifically defined, i.e not just a hardware or gadgets as we meet today, but also the role of the technology itself to humans.

Technological concepts formulated by Finn, Saettler, and Henich, et al., Finn (1960 cited by Gentry) said, 'apart is defined as the machine, the technology could include a process, system, management, and monitoring mechanisms; either the man himself or not, as well as extensively, perspectives on the following issues in scope, level of difficulty, feasibility studies, as well as how to solve the problem technically and economically. 'The concept of technology can be concluded that (1) the technology related to the nature of rational and scientific, (2) technology refers to a science, expertise, be it art or craft, (3) technology can be translated as techniques or practices, (4) an activity, or as a process, (5) refers to the use of machine technology machinery and hardware.

B. Development of Educational Technology Concepts

Understanding educational technology is inseparable from the notion of technology in general. Definition of the main technologies are processes that increase added value. The process of using and or produce a particular product. The products are used or produced inseparable from other products that already exist, and therefore an integral part of a system. So in general terms of technology, equipment or new facilities specifically are required not an absolute requirement should exist, because the means that have been there before.

In the field of learning, technology must also meet these three conditions: processes, products, and systems. Unless qualified general technology, educational technology must also prove itself as a field of study or a scientific discipline of its own. A formal object of educational technology is " learning " in humans as a person and who are members of the organization. Educational technology has a characteristic in determining the logic. In addition to concentrating on learners, how to think systemically is a framework of educational technology. The result of

systemic thinking can touch all aspects of teaching and learning. Adapting the educational technology concept system approach as a frame of mind. Work order system approach is used to examine the problems of education or learning from different angles until last alternative. There are so many factors that can inhibit and support the learning process. Efforts are concrete educational technology which is the creation or design of learning environments, or often referred to as external factors studied. The design of learning activities and teachers are commonly encountered environmental everyday and is considered to have greatly affected the learning process.

C. Role of Technology Education in problem solving solution

Educational technology consists of theories and the study results, the educational technology can be assumed as a frame of mind that underlie aspects of the application. The theory and the results of the study determine the limits of educational technology movement. Humans in order to meet their needs very well need to learn. Meanwhile, in order to learn effectively and efficiently needs to utilize various learning resources. Educational technology seeks to design, develop, and utilize a variety of learning resources that enable and facilitate a person to learn. In turn opens an opportunity to learn throughout life, anywhere, anytime and by anyone. With the tools and resources to learn what is in accordance with the conditions and needs. Therefore, educational technology is needed to be able to reach learners wherever they are.

Moreover, to serve the large number of those who have the opportunity to learn, meet the learning needs to be able to keep abreast of, and improve the efficiency, effectiveness in learning, the learning process itself cored learning activities, in the sense that the learning process should be able to seek how students learn. Since the core of the learning process is student learning, then its effectiveness depends heavily on the effectiveness of student learning. Thus the importance of learning activities, so Muhibbin Shah argued that without learning

without learning there not be education because the biggest part of the education process is geared towards the achievement of the process of change in human beings.

The effectiveness of the learning process emphasizes on an undertaking which will bear an effective learning activities. Effective learning is basically an activity optimum learning on students. Application of teaching and learning strategies that emphasize the effectiveness of student learning, will lead the students can use the whole basis of its ability to perform a variety of learning activities required. To support effective learning process then technology education is necessary for the practice of educational technology have major stakes in the world of modern learning, with regard to the above principle underlying educational technology in the learning process are at least 5, namely (1) educational technology as a business obtaining behavior, (2) learning is characterized by a change in behavior as a whole, (3) learning is a process, (4) the learning process occurs because of an impulse and objectives to be achieved, (5) learning is a form of experience.

From the description above, in a good learning in the context of educational technology, media or learning tools have value for teachers and students as it is quite effective and efficient in achieving the expected competencies. Media or learning tools such as radio, television, laptop, internet, LCD and others both simple and modern are very helpful effectiveness of the learning process. Educational technology-based learning will be very effective if teachers use student-centered learning model. In the process/concept of educational technology, work media or tool is not just a communicating connection between the source (teacher) and the receiver (the students), but rather it is an integral part and each have a linkage between the components with each other, each other interact and influence each other.

D. Implementation of Educational Technology in Education

Educational technology is a discipline of applied meaning that it develops for their needs in the field, namely the need to learn more effectively, more efficiently, more comprehensive, faster and so on. The development of the application of educational technology may be said to come from the United States. In the early development of about a hundred years ago known educational technology as a way to teach using homemade props result by teachers at school. In Indonesia, educational technology implementation is not much different with the development as well as in the United States, within a long time. The most fundamental implementation of educational technology is to provide and implement solutions to provide the possibility of learning. Solving this form of learning resources, the resource is either purposely designed or chosen and then used.

Educational technology applications will directly influence the decisions about the specific learning process. The most important key education issues in Indonesia are about: improving the quality, equal access, and relevance of education to national development. So broad and far range to be achieved by the development of our educational program, whereas on the other hand the resources available are limited and rare increases. The application of learning technologies in the educational system, techniques and tools to facilitate the learning process so that students are expected to understand the educational material with the help of learning technology.

The facts presented above show that solving educational problems needs other alternatives besides ways conventional settlement is known so far. Various potential of educational technology then allows it proposed as an alternative to solve these problems. In general, the implementation of technology in education will be able to:

1. Spread the information widely, uniformly and quickly.
2. Assist, equip and (in some cases) replace the task of the teacher.

3. Conduct instructional activities, either directly or as a byproduct.

4. Support community learning and invites public participation.

5. Add to the diversity of resources and learning opportunities.

6. Add to the appeal for learning.

7. Help change the attitude of the wearer.

8. Influence user view towards materials and processes.

9. get the advantage of cost-effectiveness ratio, compared to traditional systems. (Miarso, 1981).

Educational technology (in a very limited sense) is seen only act at the level of implementation of the curriculum in the classroom, a new conception of educational technology requires as input even at the planning stage of the curriculum. Thus the planning of curriculum should also be assessed and determined as forms of educational technology to be applied. Selection of educational technology will open the possibility for the birth of various alternative forms of new institutional providing learning facilities, in addition to serve any form of educational institutions that already exist, for example the possibility for some form of open school facilities and planning study different from conventional school, but the results (output) are the same. A series of criteria for the use of technology in education, such as: to be kept for compliance (compatibility) with the tools and technologies that already exist, can stimulate the development of technology and science, and to spur efforts to improve the quality of education itself.

Thus, the implementation of educational technology will very likely happen massive change in the interaction between the learning resources with the actors. One possibility is the application of these changes and changes in information technology in education. According to Miarso there are some general guidelines for the application of educational technology and the implementation:

1. Integrating various approaches from the fields of psychology, communication, management, engineering and others.

2. Solving problems thoroughly studied in humans, by observing and reviewing all of the conditions and the mutual relation between them.

3. Used as process and product technology to help solve the problem of learning.

4. The growing power folding or synergistic effect, where mergers and approaches or elements have values more than just a sum. Similarly, solving comprehensively and simultaneously will have more value than solve the problem separately (Miarso: 2007, 78).

3. Conclusion and Remark

Educational technology is the study and practice to assist the process of learning and improve performance by creating, using, and managing processes and adequate technology. Educational technology experts found a major part of educational technology is to help improve overall efficiency in the learning process. Prospects of educational technology in the learning process is very broad, given the nature of education as a science technology that shade their field. The implementation of educational technology in the functioning of the learning process is that the application to help solving problems in the learning process. The presence of educational technology in problem-solving efforts include education and learning to integrate various approaches to solve the problem of learning and use of technology.

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USING MULTIFUNCTIONAL FOLKLORE CARD TO ENHANCE NARRATIVE READING ACHIEVEMENT OF THE TENTH GRADERS

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Abstract

The objectives of this study were (1) to find out whether or not there was a significant difference in students' narrative reading achievement before and after they were taught by using multifunctional folklore card and Paragraph Shrinking strategy and (2) to find out whether or not there was a significant difference in students' narrative reading achievement between those who were taught by using multifunctional folklore card and Paragraph Shrinking strategy and those who were not. This study was conducted by using quasi experimental and non-equivalent control group design was applied. The population were the tenth graders of MAN Sakatiga Indralaya and the sample of this study was 82 students of two classes, which were divided into control group and experimental group. The data were collected using a set of reading test which consist of 30 multiple choice questions for pretest and posttest. The data obtained were analyzed by using t-test: paired sample t-test and independent sample t-test. The result of paired sample t-test showed the mean score of pretest in experimental group was 53.70 and the mean score of posttest was 74.70 (mean diff=21.00 and ρ.value=.000), it means that there was a significant different in narrative reading achievement before and after they were taught by using multifunctional folklore card and paragraph shrinking strategy. Furthermore, based on the result of independent sample t-test, it revealed that the result of posttest control was 49.34 and experimental group was 74.70 (mean diff=25.36, and ρ .value=.000), so there was a significant difference in reading achievement between the students who were taught by using MFC and paragraph shrinking strategy and those who were not. In conclusion, there was an enhancement of students' narrative reading achievement by using multifunctional folklore card and paragraph shrinking strategy.

Keywords: Multifunctional Folklore Card, Paragraph Shrinking, Reading Achievement

1. Introduction

Moast (1999, p.5) says that reading is fundamental skill upon which all formal education depends. According to Grabe and Stoller (2001, p.187), many have argued that in the past 15 years reading was the most important academic language

skill for second language students. In short, reading is a part of process that can be separated from education system.

The main purpose of reading is to be able to comprehend the text; it is called reading comprehension. Furthermore, based on the Indonesian National Standard Curriculum of Education, senior high school students are expected to be able to comprehend 13 types of text, one of them is narrative text. Curriculum 2013 further explains that the aims of reading for senior high school students is to enable them to understand, apply and analyze the factual, conceptual, procedural and metacognitive information or knowledge related to science, technology, arts and culture (*Kemendikbud*, 2013). According to Anderson & Anderson (1997), narrative text is English text type that has a purpose to entertain the reader or listener. Therefore, the writer selects folklore text as the material of the study that have had transferred in the form of multifunctional folklore card.

Nowadays, problems in reading are still faces by the student. Thus, some fact showed that reading achievement in English is still low. As pointed out by Sukyadi and Hasanah (2012), *Media Indonesia* reported that sixty nine percent (69%) of 15-year-old Indonesian students have internationally worst reading performance. In addition, *Kompas*, reported that around 37.6% of 15-year-old students are merely able to read the texts without understanding the meaning of the text, only 24.8% out of them are able to correlate the texts with their prior knowledge (Sukyadi & Hasanah, 2012). Similarly, in Palembang, reading comprehension of students in Senior High School is still far below the standard of Indonesian National Education, 75 (Diem, 2012). In addition, Diem (2012) found that reading achievement of students in Palembang of school accredited A was 61.16, school accredited B was 39.53 and school accredited C was 42.84. Furthermore, based on the interview with the English teacher of the tenth graders at MAN Sakatiga Indralaya, the writer found out that their reading achievement of the students still needs improvement. Moreover, most of the students are lack of vocabulary and pronunciations. They could not also understand the generic structure and content

of the text. They always look up the dictionary during their reading to get the meaning of the whole text. Besides, the writer also did the observation before doing the research and found that the students' situation in learning were very enthusiastic. Furthermore, they were brave to answer some of the teacher question although by looked up their dictionary. However, unfortunately the result of students score in English were still below the expectation, most of student cannot reach the KKM (*Kriteria Ketuntasan Minimal*) which is 76.

 In this study, the writer concerned on the use of Multifunctional Folklore Card as the media and the Paragraph Shrinking as the reading strategy. This strategy is the part of peer assisted learning strategy (PALS). Fuchs, Fuchs, Mathes and Simmons (1997) found that teaching students to summarize narrative and expository texts using the Paragraph Shrinking strategy was an effective tactic to boost student engagement and reading comprehension. Furthermore, MFC which is stands for multifunctional folklore card was used as the media. MFC contains of three stages of card games; those are sequence match, character match and vocabulary-matches. Thus, the problem of this study were formulated as follows (1)Was there any significant difference in narrative reading achievement of the tenth graders of MAN Sakatiga Indralaya before and after they were taught by using multifunctional folklore card through Paragraph Shrinking strategy? (2) Was there any significant difference in narrative reading achievement of the tenth graders of MAN Sakatiga Indralaya between those who were taught by using multifunctional folklore card through Paragraph Shrinking strategy and those who were not?

2. Theoretical Background

Reading is the activity when the reader is supposed to understand the idea, concept or image from the set of word in the printed page. Besides, reading is not only getting information from the printed idea but also correlate them with the prior knowledge, experience and other information. Likewise, Harmer, (2007 p. 177) states that the main condition to achieve the successful of reading is to understand

about the reading material. In reading the readers will get some information about main idea, inference, cause and effect, detail and many others.

According to Hornby (2005 p. 177), narrative text is story or tale, orderly account of events composition that consists of storytelling, literature, stories and novels that describe events well". In addition, Porter (2002) defines that narrative as the representation of an events or a series of events. Moreover, Meyers (2005, p. 52) states narrative is one of the best way to communicate with people. In other words, narrative is important text to be learned by the students in mastering English by fun.

Media is one of the important aspect in delivering the lesson to the students, Heinich, Robert, Molenda, Michael, & Ruchel (1993) mention that the role of media in instructional atmosphere is for supplement of the "live" instruction in the classroom. In addition, according to Dale (1969) there are several things instructional media can do in the teaching process such as a) heighten motivation for learning; b) provide freshness and variety; c) appeal the students of varied abilities; d) encourage active participation; e) give reinforcement. In general there are three kinds of media in learning process: visual aid, audio aid and audio- visual aid. Visual aid is one of interesting media that can be used in learning process especially reading due to the fact that visual media can deliver the message unconsciously through the use of picture.

Moreover, this media had already been created in computer- game version and manual game board version. MFC as the pictures series media contain of a series of pictures that reflected the events in the story (picture – sequence match), the character from the story (character- match) and the series of vocabulary that exist in the story (vocabulary-match). Besides, there are also lucky card and challenge card for the player. Lucky card is given for those players who orderly can pass the challenge in the game. They will get some advantages to pass the punishment in challenge card. Meanwhile, the challenge card contains of those question that should be overcome by the player to get points.

The term multifunctional in this media refers to its functions to be applied for improving students' vocabulary, writing and reading skill. To put it another way, multifunctional folklore card has features to help students improving their English skills. The features are character- match card, sequence card, and vocabulary card. Moreover, Folklore in MFC refers to the main materials used in this media which is traditional story taken from local and international folktales. The chosen stories applied in MFC are divided into several sequence and categorized for its features. In addition, Card is used in the term of MFC functions as the means to transfer the folklore text into pictures, sequence and vocabulary of the folktale in the form of card. The story used in the media is folklore, due to the fact that it has interesting content of story that makes the reader are easily achieves the message of the story. Collie and Slater (as cited in Noviantri, 2014) state folklore can be used as the independent teaching unit as supportive material for motivation, and as recreational material in reading or language arts classes.

However, Fuchs *et al.* (1997) state that Paragraph Shrinking strategy was developed as one the Peer Assisted Learning Strategies. In this study the writer use the strategy with the multifunctional folklore card as the media. Here are some steps in applying the multifunctional folklore card and paragraph shrinking.

1. The students are asked to make a group consist of 4-5 students
2. The students mentioned the generic structure of the folklore card
3. The students mentioned the features in folklore card
4. The students played Multifunctional Folklore Card
5. Each student in the group answered the question in the character card about whom or what in the story.
6. Each student in the group answered the question in the sequence card and telling the most important about the character in the story.
7. Each student in the group answered the question in the vocabulary card.
8. The students were asked to be a coach and a player in each group

9. The students as the player were asked by the coach with some question in the sequences and character card

10. Each player in the group was given 2 minutes before the turn is changed

11. Each students took turn orderly

12. As the player, the students stated the main idea of the folklore text in the card within10-15 words.

13. As the coach the students were checked and calculated the times.

14. The students with the faster times calculated to get the plus score.

3. Method

This study belonged to experimental method and used quasi experimental design. This design consisted of two groups, and they were control and experimental groups. The population of this study was 282 of tenth graders of MAN SAKATIGA Indralaya and the sample was 82 tenth grade students, in which each group had 41 students.

The technique used to choose the sample was purposive sampling, in which the writer had some criterion to select the sample for the specific purpose. In this study, the criteria of the sample were; first, the students who were taught by the same English teacher second, the students had the same reading level. To do the purposive sampling, the writer did the reading level for both classes sample of the study by using Roe and Burns reading test. After calculated the data, the result showed that they were in level 4.

Between the two groups, only experimental group (X1) was given treatment while the control group (X2) was not. During the treatment, the experimental group have had multifunctional folklore card through paragraph shrinking strategy in classroom. Multifunctional folklore card and paragraph shrinking strategy was done in small group consisting of 4-5 students, each group was given the different card and they had to summarize in turn after finished the game.

The procedure of the study

To collect the data, both experimental and control groups were assigned a reading test. The test was constructed based on content validity and the test content was also consulted with expert who was the English education lecturer of Sriwijaya University. To check the validity, the writer also did the try out to the non sample of the study in the same grade at MAN SAKATIGA Indralaya. The test was tried out to 40 non-sample students who were in MIA 1 class. The validity of the test was measured by using Corrected–Item Total Correlation. After the result of the test was obtained, there were thirty questions which were valid. It means that twenty were invalid, those twenty invalid questions were directly discarded. The result of the try out was also used to measure the reliability of the test. In order to know the reliability of the test, as Tavakol and Dennick (2011) states that the test will be reliable if the reliability coefficient is 0.70 and preferably higher. Then, the writer checked the reliability of the test by using Cronbach's Alpha in SPSS version 22 for windows. Based on the calculation, the reliability coefficient was 0.83, and it means that the test was considered strongly reliable. Thus, there were 30 items for reading test to be given to the samples of this study.

After collecting the data, the data were analyzed by using paired sample t test and independent sample t test. Paired sample t-test was used to analyze data gathered from pretest and posttest of experimental group, whereas independent sample t-test was used to analyze data gathered from experimental group and control group.

From paired sample t-test and independent sample t-test analyses, ρ value, the degree of freedom and the significance level (in two-tailed test) were found.

4. Result and Discussion

Result

The Distribution of the Reading Achievement Score

The results of the reading test of the experimental group and the control group were distributed based on five categories: Excellent, Good, Average, Low, and Failed. The range of score is between 1-100.

Table 1
The Score Distribution of the Pretest and Posttest of the Experimental Group (N=82)

Score Interval	Category	Pretest		Posttest	
		N	%	N	%
86-100	Excellent	-	0	9	21.951
71-85	Good	6	14.635	13	31.707
56-70	Average	14	34.146	18	43.903
41-55	Poor	14	34.146	1	2.439
< 40	Failed	7	17.073	-	0
Total		41	100	41	100

Based on the table 1 above, in the pretest, 7 students (17.073%) were in failed category 14 students (34.146%) were in poor category; 14 students (34.146%) were in average category; 6 students (14.635%) was in good category; and no student (0%) was in excellent category. Meanwhile, in the posttest, there was no student (0%) in failed category and only 1 student (2.439%) in poor category; 18 students (43.903%) were in average category; 13 students (31.707%) were in good category; and 9 students (21.951%) were in excellent category. It could be seen that there was an improvement in each category. In excellent category, the percentage of posttest increased 21.951%. It increased from 0% to 21.951%. Good category also increased 17.072%, from 14.635% to 31.707%). In average category the percentage increased 9.757, it increased from 34.146% to 43.903%, and in poor category, the percentage decreased from 34.146%   to

2.439%. Last, in the failed category, the percentage also decreased from 17.073% to 0%, which meant no students belong to that category anymore.

However, in the control group, in the pretest, 11 students (26.829%) was in failed category; 15 students (36.586%) were in poor category; 14 students (34.146) were in average category; 1 student (2.439 %) in good category and there was no student (0%) excellent category. Meanwhile, in the posttest, 16 students (39.025) in failed category; 13 students (31.707%) were in poor category; 5 students (12.195%) were in average category; 6 students (14.634%) were in good category; and 1 student (2.439%) was in excellent category. The result can be viewed in the table 2 below

Table 2
The Score Distribution of the Pretest and Posttest of the Control Group

Score Interval	Category	Pretest		Posttest	
		N	%	N	%
86-100	**Excellent**	-	0	1	2.439
71-85	**Good**	1	2.439	6	14.634
56-70	**Average**	14	34.146	5	12.195
41-55	**Poor**	15	36.586	13	31.707
< 40	**Failed**	11	26.829	16	39.025
Total		41	100	41	100

The Results of the Statistical Analysis

Table 3
The Result of Normality of the Data (N=82)

Group	Pre-test				Post-test			
	Mean	Std. dev	Sig-p	KSZ	Mean	Std. dev	Sig-p	KSZ
Exp. Group	53.70	16.586	.200	.089	74.65	10.648	.068	.133
Control Group	50.17	11.558	.200	.104	49.34	16.483	.148	.119

The data were also analyzed statistically by using paired sample t test and independent sample t test. Before doing a statistical analysis, the normality of the data distribution needs to be checked. Each of the data from the pretest and post test from experimental and control group was analyzed. It was analyzed by using One-Sample Kolmogorov-Smirnov test. Based on table 3 showed the results of reading test the significance value in two tailed testing gained from pretest and post test of experimental group were 0.200 and 0.089, while from pretest and posttest of control group the value were 0.200 and 0.104. It can be concluded that the data obtained were considered normal.

Homogeneity tests were done to know whether the sample groups from the population had similar variances. The writer used Levene's test to know the homogeneity in groups (experimental and control groups).The data were homogeneous if the significant value was >0.05. The results of the significance of the pre-test and post-test in the experimental group was (.104>0.05) and the results of the significance of the pre-test and post-test in the control group was (.114 >0.05), the results of the significance of the pre-test in the experimental and

control groups was (.179>0.05), and the results of the significance of the post-test and post-test in the experimental and control groups was (.229>0.05). Therefore, it could be concluded that the data in control and experimental group were homogeneous.

After the normality of the data distribution was ensured, t-test can be applied. In this study, the writer used paired sample t-test and independent sample t-test. Paired sample t-test was used to analyze data gained from pretest and posttest of experimental group, while independent sample t-test was used to analyze the significant improvement. The result of paired sample t-test can be viewed in table 4.

Table 4.

The result of experimental and control group by using Paired Sample T-Test

Group	Test	Mean	Mean Diff.	Std Deviation	t	Df	Sig.(2-tailed)
Experimental	Post-test	74.70	21.00	14.104	9.533	40	.000
	Pre-test	53.70					
Control	Post-test	49.34	.83	14.615	-.363	40	.718
	Pre-test	50.17					

The analysis of paired sample test of the experimental group showed that the mean of the pretest was 53.70 and standard deviation was 14.104, on the other hand, the mean of the posttest was 74.70 and standard deviation was 14.615. It also showed the mean difference was 21.00, with p-value .000. Since the significance (2-tailed) was lower than 0.05, the null hypothesis (H_01) was rejected, and the alternative hypothesis (H_11) was accepted. Therefore, it could be stated that there was a significant difference in narrative reading achievement of students achievement

before and after they were taught by using multifunctional folklore card through paragraph shrinking strategy.

Then, the analysis of paired sample test of the control group showed that the mean of the pretest was 49.34 and standard deviation was 14.615. On the other hand, the mean of the posttest was 59.17 and standard deviation was 14.615. It also showed the mean difference was 0.83, with p-value 0.718. Since the significance (2-tailed) was greater than 0.05, the null hypothesis (H_01) was accepted, and the alternative hypothesis (H_11) was rejected. Meanwhile, it could be concluded that there was no significant difference in narrative reading achievement of students achievement before and after they were taught by using multifunctional folklore card through paragraph shrinking strategy.

To see the difference between pretest and post test score of both experimental and control group, independent sample t test was done. The result of independent sample t-test of posttest of both groups is presented in Table 5

Table 5
The Results of Independent Sample *T*-Test

Group	N	Mean	Mean Diff.	T	df	Sig.(2-tailed)
Experimental	41	74.65		-8261	80	.000
Control	41	49.34	25.31	-8261	68.434	.000

The analysis of the independent sample t-test of the posttest in the experimental and control groups showed that the the mean difference of the post-test scores of the control group and the experimental group (25.31). For the significance value was 0.000. Since the significance (2-tailed) was less than 0.05 (0.000<0.05). It could be stated that the null hypothesis (H_02) was rejected and the

alternative hypothesis *(H₁2)* was confirmed. In could be stated that there was a significant difference in narrative reading achievement between the students who were taught using multifunctional folklore card through paragraph shrinking strategy and those who were not. It means that multifunctional folklore card and paragraph shrinking strategy was effective for students.

4.   Result and Discussion

On the basis of the above mentioned findings, some interpretations could be drawn. First, In experimental group one, there was significant progress made by the students, it means that the multifunctional folklore card through paragraph shrinking strategy is effective to enhance narrative reading achievement The data analysis showed that the mean score of pre-test and post-test of experimental group increased, and the *p*-value of paired sample t-test was less than 0.05. Moreover, during the treatment, the writer found some facts that the students were interested in participating in the reading process by using MFC, they could remember the detail and moral value from the story during the sequence- match stage in folklore card. Another fact is that they enjoyed to recall the vocabulary during the vocabulary-match challenge. This is in line with Heinich, Robert, Molenda, Michael, & Ruchel (1993) statement that claims the role of media in instructional atmosphere is for supplement of the "live" instruction in the classroom and also with Kasihani, (1995) statement that visual media are very useful because there are many differences between a foreign language and a native language. Besides, Setyowati 2010) with her research claims that the use of quartet card improved understanding of simple noun phrase of the seventh grade students at MTs Nahdlatusy Syubban Sayung Demak in the Academic Year of 2009/2010.

Second, the writer also calculated the total of the mean difference in both experimental and control group to determine which group had significantly improved in reading achievement. It was revealed that the students reading achievement in experimental group improved more significant than those in the

control group. This is due to the fact that the students in experimental group got the treatment for a month using multifunctional folklore card through paragraph shrinking strategy while those in control group did not get any treatment. During the reading activity with the use of folklore card, the students feel that they were not learning at all but they played but instead of just play the game, they got much information about the lesson like the sequence in the story, vocabulary, the characters and the moral value. Then, the students also excited for having the paragraph shrinking challenge when they come forward and stated the main idea in a very good way although some of them were afraid and shy to show up. The other is that some students and also they had learned many good manners from the folklore that is part of literature. It was strengthened with what Archer, Gleason, & Vachon, (2003) that state paragraph shrinking strategy is the activity that builds the fluency and reading comprehension also with Inderawati (2009) that claims reading literature is not only entertaining, but also provides moral values that can refine manners and support the formation of character and personality. This is also relevant with study done by Estebo (2012) that found Paragraph Shrinking can be used with a small group of below average readers and it gave positive effect in students' reading achievement, also similar study by Pertiwi (2008) revealed that paragraph shrinking help improved reading comprehension achievement of the eleventh grade students of SMA Negeri 3 Palembang.

Then, it could be concluded that multifunctional folklore card (MFC) as the media and paragraph shrinking as the strategy were effective to enhance the narrative reading achievement of the tenth graders of MAN SAKATIGA Indralaya.

5. Conclusion and Remark

Two conclusions are drawn based on the finding of the study. First, there was significant difference in narrative reading achievement of the tenth graders of MAN SAKATIGA Indralaya after they were taught by using multifunctional folklore card through paragraph shrinking strategy. Second, there was a significant difference in narrative reading achievement of the tenth graders of MAN SAKATIGA Indralaya who were taught by using multifunctional folklore card through paragraph shrinking strategy than that of those who were not. In other words, using MFC through paragraph shrinking strategy as a means of teaching narrative reading was an effective way to improve narrative reading achievement of the students in experimental group which was from one of the tenth graders of MAN SAKATIGA Indralaya.

Referring to the conclusion above, the writer proposes some suggestions for the betterment of teaching English especially reading. First, for the English teachers, the teacher should consider the condition of the students and the class environment. Moreover, the teacher needs to create the best preparation for the learning process such as, lesson plan, media and strategy that fixed to the students' ability and prior knowledge. Second, for the students who took a big part during the teaching process, some suggestion for these young generations are having more exercise in answering different kind of text. The most important thing for the student to be improved is the awareness of their ability in English. As English is hard to be mastered, they need a brave to show, to ask and to share any information that they curious to in order to achieve the goal of the lesson, In the other word, for the students do not hesitate to try every skill in English because as the proverb says practice make perfect, especially for the inactive students. Third, the school that administered and facilitated the students, needs to support the good facilitations and program that can help the students during the school work. Last, for the future researcher who interested in doing some research related to English subject especially reading provides the method and strategy which can collaborate

with the MFC. Otherwise, the researcher can also has the future study by using MFC as the media for the other different skill in English for instance writing.

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CORRELATION BETWEEN SELF-REGULATED LEARNING AND ACADEMIC ACHIEVEMENT OF CHEMISTRY EDUCATION STUDENTS OF FKIP SRIWIJAYA UNIVERSITY

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Abstract

The objectives of this research are to identify the self-regulated learning, academic achivement, the mostly used aspects of self-regulated learning, and the correlaction between the self-regulated learning and academic achievement of chemistry education students of FKIP Unsri. This research is acorrelational study. The sample of this research is the 72 students of chemistry education chosen randomly. The data were gathered by using questionnaire and documentation. The results of this research showed that the chemistry education students had high self-regulated learning, highly satisfied GPA and mostly used 5 out of 7 aspects of self-regulated learning. The statistical analysis showed that there was no significant correlation between self-regulated learning and academic achievement of chemistry education students. However, one out of the 7 aspects of self-regulated learning—evaluting the effectiveness--correlated significantly to the students' academic achievement.

Key words: correlation, self-regulated learning, academic achievement

1. Introduction

The rapid developement of science and technology has given a huge impact on many aspects of human life. Therefore, the ability to use their potential, appropriate strategies, and control their emotion will become one of important factors in supporting someone's success including in their academic life.

Self regulated learning is someone ability to control all aspects of learning capacity starting from planning to evaluating the result of their learning (Bruning et al, 2004, p. 117). Zimmerman (1990) in Bruning et al, 2004, p. 117) adds that

the theory of self-regulated learning consists of three main components, they are metacognitive awareness, the use of strategies, and motivation control. In addition, Bruning et al (2004, p. 117) add that metacognition includes knowledge and regulation about thinking capacity atau cognition. These two capacity allow a person to choose the best strategy and monitor its effectiveness with high accuracy. Another important part of the metacognition awareness is planning where students could determine the goals, planning on how to reach the goals, and evaluate the resuls periodically. Students who involve in effective planning usually have more opportunities to be successful (Pintrich, 2000; Zimmerman, 2000 dalam Bruning, 2004, p. 117).

Strategy is an important part of self-regulation learning because it provides clues on how someone identify, represent, and remember information. Students who are good at choosing the strategies effectively and monitoring the effectiveness during the learning process will learn better (Zimmerman & Martinez-Pons, 1990 dalam Bruning, 2004, p. 118). In addition, strategies will also help students to use the limited facilities efficiently.

Motivation control is an ability to determine the goals, evoke positif beliefs about someone's capacity and performance, and adjust themselves emotionally to their learning requirements. The skillful learrners understand the effort and strategies in learning. On the other hand, the unskillful learners perceive the bad learning achievement as a result of the uncontrol factors, such as ability and luck. The skillful learners are also able to put aside the things which can deteriorate concentration during their learning (Presley et al, 1987 dalam Bruning, 2004, p. 118).

The results of some previous research showed that self-regulated learning is very important in academic achievement. Zimmerman & Martinez-Pons (1986) report that there is correlation between learning stratgies of the high school students and their academic achievement. This is inline with Harris et al in Zimmerman (1990) who found that training on self-regulated learning not only

help to improve learning achievement but also improve their self-efficacy. Kosnin (2007) found that there is significant correlation between self-regulated learning of 460 engineering students at University of Technology Malaysia. Furthermore, Pintrich and De Groot (1990) also found that self-efficacy and intrinsic value correlated significantly with cognition and someone's performance. In addition, the regression analysis results also showed that self-regulation, self-efficacy, and test anxiety are the best predictors for someone's performance.

Although the results of some researches showed that self-regulated learning is one of the predictors of someone's academic achievement, the students' achievement especially in science, still showed the unexpected results. The results of PISA test (Program for International Students Assessment) in 2015 showed that among the 76 participating countries, Indonesia is among the countries with the lowest achievement especially in reading, science, and mathematics—rank 69th especially in science. Therefore, this research will identify the self-regulated learning in relation to the academic achievement of the chemistry education students of FKIP Unsri by focusing on the following research questions: how is the students' self-regulated learning, how is the students' academic achievement, which aspect of self-regulated learning mostly used by the students, and is there any significant correlation between self-regulated learning and academic achievement of the chemistry education students of FKIP Unsri.

2. Theoritical Background

2.1. Self-regulated learning

Zimmerman (1990) states that "the definition of students' self-regulated learning involves features such as their use of self-regulated learning strategies, their responsiveness to self-oriented feedback about learning effectiveness, and their interdependent motivational process" (p. 6-7). In other words, self-regulated learning is not a one mental state but it involves several ways of thinking which

can help the learners to be more effective in their learning, such as learning strategies, self-oriented feedback, and motivation.

Furthermore, Zimmerman (1990) describe self-regulated learners as those who have these three distinctive characteristics, such as 1) involving in metacognitive process, e.g., planning, setting goals, organizing, self-monitoring, and self-evaluating, 2) having high motivation in terms of self-efficacy, self-attributions, and intrinsic task interest, and 3) showing positive behaviour as they select, structure, and create environments that optimize their learning. During the metacognitive process, the students involve in the series of self-regulated activities which help them to focus their attention toward the ways to optimize their learning. Self-regulated learners also have good control over their motivation as they have good perception toward themselves, know how to deal with problems, and intrinsically motivated in doing many things. And the last, self-regulated learners are the learners who know what they want as well as what they need in order to make themselves learn as they find a good place to read or do their tasks comfortably. In other words, self-regulated learners are those who have good learning strategies, good motivation, and good behaviour as well.

The students with these characters might be able to involve in an ongoing learning process either in academic or in non academic life as they are able to focus their attention in achieving something, show persistence as they face the challenges they have, and know themselves well. In addition, they tend to be positive in almost anything they do as it is reflected in the productive behaviour they produce. Therefore, it is important that learning process help the students to develop this character as this will help the students to learn better and be a better person in the future.

2.2. Proces of Metacognition

Metacogntion process is one of the important aspects in self-regulated learning. According to Newell (1990) in Hatie (2009:188), metacognition is related with high level of thinking process involving active control over thinking in learning ." specifically, Brown (1980, 1987) in Brunning (2009: 81) divided metacognition into two dimension: knowledge of cognition and regulation Secara lebih rinci, Brown (1980, 1987) dalam Bruning (2009: 81) membagi metakognisi ke dalam dua dimensi, yaitu: pengetahuan tentang kognisi dan regulasi of cognition. Knowledge of cognition is divided into three components: knowledge of declarative, procedures, and conditional (Brown, 1987; Jacobs & Paris, 1987) in Bruning (2009:81).

Declarative knowledge is related with someone's ability in identifying the factors which influence his or her ability. In this case, his or her academic achievement. The nest one is knowledge of procedures. This component is related with the cognition strategy. An adult usually has basic skill in some strategies for reading, such as taking note, read slowly when they find important information, doing speed reading for the unimportant information, doing visualisation, summarizing main ideas, and doing an independent test periodically. The last one is related with when and why people have to use certain strategy.

The second dimension is related with the regulation of cognition which include three components, such as planning, regulating, and evaluating (Jacobs & Paris, 1987; Kluwe, 1987 in Bruning, 2009:82). Planning coverrs activities in choosing the appropriate strategies and allocate the resources. Sometimes, planning involves activities related with determining the objectives, reminding the past, and calculating the time required. In the nest step, regulating component requires activities related with monitoring and skills for doing an independent evaluation to control the process of their learning process. This activities also involve activities, such as predicting, atau stopping while reading, determining the specific objective, and chosing the appropriate strategies. The last component is evaluation which

refers to product evaluating process and learrning regulating process. Related activities with this component is reviewing the objectives, revising the prediction, and consolidating the intelectual achievement.

2.3. The Role of Self-regulated learning in Improving Academic Achievement

Among the variables which is predicted as the predictors of academic achievement, self-regulated learning is one of the variables which plays a significant role in someone's success. The research done by Kosnin (2007) showed that there is significant correlation between self-regulated learning and academic achievement of the 460 students of the engineering faculty of University of Technology Malaysia. In addition, Pintrich dan De Groot (1990) also showed that self-efficacy and intrinsic value are correlated with someone's performance. The regression analysis showed that self-regulation, self-efficacy, dan test anxiety are the best predictors of someone's performance.

The results of research done by Haller et al (1998) in Hattie (2009:189) showed that there is signifikan influence of learrning strategies and reading ability where metacognitive strategy is the most effective in relation to the awareness of texts inconsistencies and the use of self-questionning. In relation to that, the results of researches done by Hattie et al (1996) and Rosenshine (1996) in Bruning (2009:85) showed that the use of learning strategies systematicaly is more successful than the unorganized use of it.

Based on those previous related studies, it can be concluded that self-regulated learning is very important factor as a predictor of successful academic achievement. This research focuses on identifying the correlation between self-regulated learning and academic achievement of chemistry education study program of FKIP Unsri. Self-regulated learning is the ability in controling all learning variables. This research will operationalize the definition of self-regulated learning into seven dimensions, they are: 1) ability to receive relevan information, (2) ability to evaluate information and compare it with the existing regulation, (3)

ability to change, (4) ability to find other option, (5) ability to formulate the planning, (6) ability to implement the planning, and (7) ability to evaluate the effectiveness of the planning.

3. Method

This research applied correlational method. The sample of this study was the 76 chemistry education students out of 234 students of the whole population. The sample was chosen randomly. The data were gathered by using questionnaire of self-regulated learning and documentation of students' GPA. The questionnaire of self- learning consists of 63 items before the try out resulting 25 items left as the valid items after the try out. The reliability was checked by using cronbachs alpha method. The instrument was considered reliable as the cronbachs alpha coefficient (.545) was higher than the r-table (0.227) at the significant value of 0.05. The normality test using Kosmolgorov smirnov test was also conducted to check the normality of the data. The normality test result showed that the Z score was 0.662 with the significant value of 0.773. Since the significant value was higher than 0.05, the data was considered normal.

To find the students' self-regulated learning ability, the data from the questionnaire was analyzed and classified into 5 categories ranging from very low to very high level of self-regulated learning ability. The students' GPA was also classfied into 3 categories ranging from low to very high achievement. The data from the questionnaire were also analyzed by using Pearson Product Moment method in order to see the correlation between the students' self-regulated learning and their GPA as well as to see the correlation between each aspect of self-regulated learning and the GPA.

4. Results and Discussion

The data from the questionnare showed that the students' score of self-regulated learning range from 76 to 105; 69 students (90.7%) had high level of self-regulated learning and 7 students (9.2%) had very high level of self-regulated learning. In other words, most of the students were in high category of self-regulated learning. The description of the students' self-regulated learning score can be seen in the following table.

Table 1

Description of Students' Self-regulated Learning

Scale	Category	Total	Percentage
0—25	Very low	0	0
26—50	Low	0	0
51—75	Mediocre	0	0
76—100	High	69	90.7
101—125	Very high	7	9.2

For the GPA, the students score ranged from 2.70 to 3.68. They were distributed into 3 categories; low achievement (2.63%), mediocre (89.4%), and high (7.89%). In other words, most of the students were in the mediocre level as described in the following table.

Table 2

The Description of Students's GPA

Scale	Category	Total	Percentage
< 2.75	Low	2	2.63
2.76—3.5	Mediocre	68	89.4
3.51—4.00	High	6	7.89

Pearson Product Moment statistical analysis was applied to find the correlation between students' self-regulated learning and their GPA. The results showed that the correlation coefficient between self-regulated learning -0.13 with the significant value of .910. The significant value was higher than .000, the correlation was not significant. The correlation analysis was also done to see the correlation between each aspects of self-regulated learning and the students' GPA. The results showed that among the 7 aspects, only one aspect--SRL7 (measuring the effectiveness) correlated significantly with the students' GPA. The results of the correlation between each aspects of self-regulated learning and GPA also reveal some important information that among the 7 aspects, 5 aspects (SLR1, SRL3, SRL4, SRL5, and SRL7) correlated significantly to the total score of self-regulated learning as a whole. The description of the correlational results can be seen in the following table.

Table 3.

The Statistical Analysis on the Correlation between self-regulated learning and GPA

		GPA	SRLtot	SRL 1	SRL 2	SRL 3	SRL 4	SRL 5	SRL 6	SRL 7
GPA	Pearson Correlation	1	-0.13	-.216	.085	-.041	-.011	.046	-.091	.271*
	Sig. (2-tailed)		.910	.061	.467	.727	.924	.691	.423	.018
	N	76	76	76	76	76	76	76	76	76
SRLtot	Pearson Correlation	-0.13	1	.469**	-.198	.583**	.631**	.499**	.189	.557**
	Sig. (2-tailed)	.910		.000	.087	.000	.000	.000	.103	.000
	N	76		76	76	76	76	76	76	76
	Mean	3.23	93.105	9.9	15.3	14.76	16.6	18	3.39	16
	SD	0.22	5.45	1.1	1.73	1.9	1.63	1.58	0.75	1.5

*Correlation is significant at the 0.005 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

SRL1 Accepting relevant information
SRL2 Evaluating information and comparing with the norms
SRL3 Initiating changes
SRL4 Finding other alternatives
SRL5 Making plan
SRL6 Implementing the plan
   SRL7 Measuring the effectiveness

Based on the findings, we can see that most chemistry education students of FKIP Unsri had high level of self-regulated learning and were at mediocre level of academic achievement. The result of the statistical analysis revealed that there was a negative correlation between self-regulated learning and GPA of the chemistry education students of FKIP Unsri but the correlation was not significant. The significant correlation only existed between one aspect of self-regulated learning (SRL7) and the students' GPA. In addition, 5 out of 7 aspects of self-regulated learning showed significant correlation with self-regulated learning as a whole.

Based on those findings, some interpretations can be drawn. First, although the correlation was not significant, the result still give us some important information regarding the role of self-regulated learning in students' learning. Based on the data, we can see that most of the students had high level of self-regulated learning, however their academic achievement was just at the mediocre level. In other words, their bility in self-regulating themselves in learning did not give a lot contribution on their learning achievement. The results of the analysis on each aspects of self-regulated learning showed that among the 7 aspects only one aspect which is correlated significantly with GPA. In addition, the findings also revealed that there were 2 aspects (SRL2 and SRL6) which were not significantly correlated with self-regulated as a whole. One of the 2 aspects is related with the ability to implement the plan (SRL6). Based on the findings, the mean score for this aspect is the lowest among all aspects. In other words, we can say that students are not really good at putting their thought into action or they are very

weak in implementation. Implementation is very important as it shows the reality of a plan. Unfortunately, it is not easy to execute a plan as it needs a lot of effort, courage, and high committment. Therefore, students still need to improve their self-regulated learning ability in order to help them learn and achieve better.

5. Conclusion and Remark

Based on the findings, it was found that most of the students had high level of self-regulated learning but mediocre level of academic achievement. Despite of the importance of self-regulated learning in academic achievement, the result of this study showed that there was negative correlation between self-regulated learning and academic achievement. However, the correlation was not significant. The correlation analysis was also conducted between each aspect of self-regulated learning and academic achievement. There was only one aspect (SRL7) which was significantly correlated with students' academic achievement. However, other 5 aspects (SLR1, SRL3, SRL4, SRL5, and SRL7) of self-regulated learning also showed significant correlation with self-regulated learning as a whole. This implied that students might oftenly do and apply those 5 aspects self-regulated learning in their learning activities. However, they still need to improve their ability in doing self-regulated learning as they are still very weak in implementing their plan (SLR6 is not significantly correlated with self-regulated learning as a whole).

Regarding the importance of self-regulated learning in supporting someone's success in learning, it is very important for teachers to encourage the developement of self-regulated learning of their students. Therefore, it is expected that teachers provide some activities during the teaching and learning process which can encourage the students to apply the aspects of self-regulated learning in their learning activities.

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TEACHERS' PROBLEMS AND SOLUTIONS IN ASSESSING STUDENTS' WRITING IN SENIOR HIGH SCHOOL LEVEL: AUTHENTIC ASSESSMENT OR TRADITIONAL ASSESSMENT

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Abstract

English is one of the core subjects at junior and senior high school in Indonesia. Writing as the productive skill of learning English claims that the teachers have to involve in designing the writing task or assignment and designing or adapting the scoring rubric. Assessing students' writing is nota simple task. The following research studies about the teachers' problems in assessing students' writing at the senior high school level. The research was conducted for the reason to investigate a further information about teachers' problemsand explore the solutions in assessing the students' writing. The research was undertaken at a well-known public senior high school in West Java, Indonesia. This research employs a qualitative research. A semi structured interview was used to collect the data by interviewing the English teachers in the school. The data in the form of extended text were analyzed and interpreted to get the final results. Assessing writing is a complex task for teachers. It was found that there are some problems faced by the teachers in assessing students' writing. One of which is that teachers doesn't have sufficient time to correct the students' writing. Therefore, the authentic assessment is difficult to be implemented. It is recommended that teachers have to be aware of these problems because teachers' judgement on students' writing can become a crucial feedback for students to know how well they can do on writing.

Keywords: *Assessing writing, authentic assessment, teachers' problem, traditional assessment*

1. Introduction

The ability to write a second or foreign language is recognized as an important skill for educational, business and personal reasons (Weigle: 2009). In addition, other cited studies show that writing assignments can enhance students'critical thinking skills (Grauerholz 1999; Malcom 2006), help them to reflect on the origin of their beliefs (Hudd and Bronson 2007), and foster their "sociological imagination" (Edwards, 2002; Roberts, 1993). In line with these ideas, the ability to write is an important part in our community for both academic field and daily

life. The best way to test students' writing ability is to get them to write by considering at least two basic components: instructions that tell test takers what to write as well as assessment to evaluate the writing samples produced by the test takers (Hughes, 1989:75).The most appropriate way to assess writing proficiency is to have people write one or more texts (Huot, 1990).

Writing can be time consuming and difficult to teach, many teachers may not feel qualified and less of confidence in their teaching of writing and they often avoid teaching writing skills, because they do not feel comfortable with writing (Shin, 2003). Both teaching and assessing writing are difficult. The assessment of writing is no simple task as the raters (teachers) need to consider students' writing ability and what is to test: hand writing ability, correct spelling, correct grammatical sentence, paragraph construction or logical development of a main idea? (Brown, 2010).All these measurement factors will cause text quality between one student is different with other students. Besides that teacher has to be aware of the way they assess students' writing. Heterogeneity of items such as spelling, writing speed, capitalization, punctuation, and writing quality also can present a special challenge in determining a scale's dimensionality (Erford et al. ; 2001).

There are three types of rating scales in assessing writing that can be developed by teachers as judgements of their scoring criteris: primary trait scales, holistic scales, and analytic scales (Weigle, 2009). The first, primary trait scoring, in Primary trait scoring, the rating scale is defined with respect to the specific writing assignment and essays are judged according to the degree of success with which the writer has carried out the assignment. The example of primary trait scoring guide in is shown in figure 1. The second, holistic scoring, different from primary trait scoring, holistic scoring is the assigning of a single score to a script based on the overall impression of the script. Holistic scoring has been widely used in assessing writing because of its practicality. Other advantage of holistic scoring is the writers are rewarded for what they do well (White in Weigle, 2009). A well-known example of a holistic scoring rubric in ESL is the scale used for the

TOEFL Writing Test (see figure 2). The third, analytic scoring, in analytic scoring, scripts or students' writing are rated on several aspects of writing or criteria, such as content, organization, cohesion, register, vocabulary, grammar or mechanics rather than given a single score. Analytical scoring schemes provide more detailed information about a test taker's performance in different aspect of writing and are for this reason raters / teachers prefer using holistic scoring. One of the best known and most widely used analytical scales was created by Jacobs et al. (1981) (see figure 3).

These three types of rating scale can be used in assessing students' writing both in classroom assessment and large – scale assessment. In contrast, classroom teachers tend to be more concerned with other aspects of test usefulness: namely, construct validity, authenticity, instructiveness, and impact. Before designing writing assessment task or scoring procedures, we need to consider a number of key questions (Weigle, 2009). These key questions are: (1) What are we trying to test? (2) Why do we want to test writing ability? (3) Who are our test takers? (4) ho will score the tests, and what criteria or standards will be used? (5) who will use the information that our test provides? (6) What kind of information we can collect about test takers' writing ability? (7) What do we need to know about testing to make our test valid and reliable? Weigle also proposed that scoring procedures for writing assessment are critical because the score is ultimately what will be used in making decisions and inferences about writers.

Scoring criteria channels the way in which raters perceive and evaluate concrete samples of langauge performance,and finally, come to assign scores to examinees (McNamara, 1996). After designing the scoring rubric, raters also need to make writing scale descriptors. The descriptors for the various levels of the scale itself can be written. But the potential problem by using scale descriptors tends to make imprecise distinction between the levels ('exellent', 'very good', 'good', and so on). The final task in scoring procedures for writing assessment is calculating total scores. If the total score will be derived from individual raters'

score, it is assumed that two raters will read and score each script independently of each other. When two raters are in agreement, the reported score can be the sum of the average of the two raters' score. But, rating scales commonly used in assessing writing have been criticized for a number of reasons. The first criticism is that they are usually intuitively designed and therefore often do not closely enough represent the features of candidate discourse. The criteria uses impressionistic terminology brings both subjective interpretations and less precise descriptions of the nature of performance at each level (Brindley, 1998).

Figure 1. Primary Trait Scoring Guide (Lloyd-Jones, 1977)
Directions: Look carefully at the picture. These kids are having fun jumping on the overtuned boat. Imagine you are one of the children in the picture. Or if you wish, imagine that you are someone standing nearby watching the children. Tell what is going on he or she would tell it. Write as if you were telling this to a good friend, in a way that expresses strong feelings. Help your friend FEEL the experience too. Space is provided on the next three pages.

NAEP Scroing: Children on Boat

Background
Primary Trait. Imaginative Expression of Feeling through Inventive Ellaboration of a point of view.
Final Scoring Guide
ENTIRE EXERCISE
    0   No response, sentence fragment
    1   Scorable
    2   Illegible or illiterate
    3   Does not refer to the picture at all
    4   I don't know
USE OF DIALOGUE
    0   Does not use dialogue in the story
    1   Direct quote from one person in the story. The one person may talk more than once.When in doubt whether two statements are made by thesame person or different of people, code 1. A direct quote of a thought also counts. Can be in hypothetical tense.
    2   Direct quote from two or more persons in the story
POINT OF VIEW
    0   Point of view cannot be determined, or does not control point of view.
    1   Point of view is consistently one of the five children. Include "If I were one of the children..." and recalling participation as one of the children.
    2   Point of view is consistently one of an observer. When an observer joins the children in the play, the point of view is still "2" because the observer makes a sixth person playing. Include papers with minimal evidence even ehen difficult to tell which point of view is being taken.
TENSE
    0   cannot determine time, or does not control tense. (One wrong tense places the paper in this category, except drowned in the present.)
    1   Present tense – past tense may also be present if not part of the "main line" of the story.
    2   Past tense – If a past tense description is acceptable brought up to present, code as "past." Sometimes the present is used to create a frame for past events. Code this as past, since the actual description is, in the past.
    3   Hypothetical time – Papers written entirely in the "If I were on the boat" or "If I were there, I would." These papers often include future references such as "when I got on the boat I will." If part is hypothetical and rest past or present and tense is controlled, code present or past. If the introduction, up totwo sentences, is only part in past or present then code hypothetical.

Figure 2. TOEFL writing Scoring Guide

6. An essay at this level:
- Effectively addresses the writing task
- Is well organized andwell developed
- Uses clearly appropriate details to support a thesis or illustrate ideas
- Displays consistent facility in use of language
- Demonstrates syntactic variety and appropriate word choice thought it may have occasional errors

5. An essay at this level:
- May addresses some parts of the task more effectively than others
- Is generally well organized and developed
- Uses details to support a thesis or illustrate an idea
- Displays facility in the use of language
- Demonstrates some syntatic variety and range of vocabulary, though it will probably have occasional errors

4. An essay at this level:
- Addresses the writing topic adequately but may slight part of the task
- Is adequately organized and developed
- Uses some details to support a thesis or illustrate an idea
- Demonstrates adequate but possibly inconsistent facility with syntax and usage
- May contain some errors that occasionally obscure meaning

3 An essay at this level may revealone or more of the following weakness:
- Inadequate organization or development
- Inappropriate or insufficient details to support or illustrate generalizations
- A noticeably inappropriate choice of words or word forms
- An accumulation of errors is sentence structure and or usage

2. An essay at this levelis seriously flawed by oneor more of the following weakness:
- Serious disorganization or undevelopment
- Little or no detail, or irrelevant spesifics
- Serious and frequent errors in sentence structure or usage
- Serious problems with focus

1 An essay at this level:
- May be incoherent
- May be undeveloped
- May contain severe and persistent writing errors

0 A paper is rated 0 if it contains no response, merely copies the topic, is off-topic, is written in foreign language, or consists of only keystroke characters.

Figure 3. Jacobs et al.'s (1981) scoring profile

STUDENT	DATE	TOPIC
SCORE	LEVEL	CRITERIA
CONTENT	30-27 26-22 21-17 16-13	EXCELLENT TO VERY GOOD: knowledgeable • substantive • thorough development of thesis • relevant to assigned topi GOOD TO AVERAGE: some knowledge of subject • adequate range •limited development of thesis • mostly relevant to topic, but lacks detail FAIR TO POOR: limited knowledge of subject • little substance • inadequate development of topic VERY POOR: does not show knowledge of subject • non-substantive • not pertinent • OR not enough to evaluate
ORGANIZATION	20-18 17-14 13-10 9-7	EXCELLENT TO VERY GOOD: fluent expression • ideas clearly stated/supported • succinct • well-organized • logical sequencing • cohesive GOOD TO AVERAGE: somewhat choppy • loosely organized but main ideas stand out • limited support • logical but incomplete sequencing FAIR TO POOR: non-fluent • ideas confused or disconnected • lacks logical sequencing and development VERY POOR: does not communicate • no organization • OR not enough to evaluate
VOCABULARY	20-18 17-14 13-10 9-7	EXCELLENT TO VERY GOOD: sophisticated range • effective word/idiom choice and usage • word from mastery • appropiate register GOOD TO AVERAGE: adequate range • occasional errors of word/idiom form, choice, usage but not obscured FAIR TO POOR: limited range • frequent errors of word/idiom form, choice, usage • meaning confused or obscured VERY POOR: essentially translation • little knowledge of english vocabulary, idioms, word form • OR not enough to evaluate
LANGUAGE USE	25-22 21-18 17-11 10-8	EXCELLENT TO VERY GOOD: effective complex construction • few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions GOOD TO AVERAGE: effective but simple constructions • minor problems in complex constructions • several errors of agreement, tense,number, word order/function, articles, pronouns, prepositions butmeaning seldom obscured FAIR TO POOR: major problems in simple/complex constructions • frequent errors of neagtion, agreement, tense, number, word order/function, articles, pronouns, prepositions and or fragments, run-ons, deletions • meaning confused or obscured VERY POOR: virtually no mastery of sentence construction rules • dominated by errors • does not communicate • OR not enough to evaluate
MECHANICS	5 4 3 2	EXCELLENT TO VERY GOOD: demonstrates mastery of conventions • few errors of spelling, punctuation, capitalization, paragraphing GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalization, paragraphing but meaning not obscured FAIR TO POOR: occasional errors of spelling, punctuation, capitalization, paragraphing • poor handwriting • meaning confused or obscured VERY POOR: no mastery of conventions • dominated by errors of spelling, punctuation, capitalization, paragraphing • handwriting illegible • OR not enough to evaluate
TOTAL SCORE:	COMMENTS:	

Scoring criteria channels the way in which raters perceive and evaluate concrete samples of langauge performance,and finally, come to assign scores to

examinees (McNamara, 1996). After designing the scoring rubric, raters also need to make writing scale descriptors.The descriptors for the various levels of the scale itself can be written. But the potential problem by using scale descriptors tends to make imprecise distinction between the levels ('exellent', 'very good', 'good', and so on). The final task in scoring procedures for writing assessment is calculating total scores. If the total score will be derived from individual raters' score, it is assumed that two raters will read and score each script independently of each other. When two raters are in agreement, the reported score can be the sum of the average of the two raters' score. But, rating scales commonly used in assessing writing have been criticized for a number of reasons. The first criticism is that they are usually intuitively designed and therefore often do not closely enough represent the features of candidate discourse. The criteria using impressionistic terminology brings both subjective interpretations and less precise descriptions of the nature of performance at each level (Brindley, 1998).

In writing assessment, different sources of variability like tasks, raters, and rating scales contribute to the score variance (Cooper 1984). Different rates will give different judgment for students' writing. Several studies have also examined differences between particular groups of rater in the perception and use of criteria, especially differences between experienced or expert raters and inexperienced or untrained raters (Brown *at al*., 2010). Unskilled writer are less likely to revise their spelling, punctuation, grammar, or text ideas, resulting in poorly written text (Graham & Harris, 1997; Hooper at al., 1994). There are three possible reasons why unskilled writers have shorter writing. Firstly, because students who struggle with writing terminate their writing process too soon. Secondly, Graham and Harris (1997) suggested that unskilled writers may produce shorter essays when compared to a skilled writers due to poorly developed mechanical skills. Finally, the possible reason is not related to writing skills but related to topic knowledge and interest.

There are at least three types of problematic scripts stated by (Weigle, 2009:132):

... scripts that are complete but do not address the intended task or fail to address parts of the task, scripts that have clearly been written from memory rather than in response to the prompt, and incomplete scripts – that is scripts in which the writer has demonstrated an understanding of the important features of the task but was unable to complete the task in the allotted time (for example, the conclusion may be missing.

After having a short conversation with some English teachers, they find that assessing writing is more difficult than assessing other skills. A study conducted by Cresswell (2000) found that one of the potential problems faced by the teachers regarding to assessing students' writing is when students focus on language structure rather than focus on ideas or content that make their

composition effective. The study was conducted in the area of English a first language. On the other hand, Gebril (2009), in the area of English as a second language also found the inherent problem is that if students are assigned to write a given topic without sufficient background knowledge, this variable will arise problem for the teacher to mark the students' writing because of construct - irrelevant variance. For this reason, teachers are suggested to give a source text for students such as text - based before writing that would provide them with a common platform. In line with these problems, this study aims to investigate further information about what teachers' problems are in assessing students' writing and what teachers do to enhance these kinds of problems in the area of English as a foreign language in Indonesia in Senior High School level.

Therefore, the research question of the study is what are teachers' problem in assessing students' writing? The purpose of the study is to investigate further what teachers' problems in assessing students' writingat the senior high school level. Because it is very important for students to know how far their writing ability. As McNamara stated that it involves not merely the test taker and the test,

but the test taker, the prompt or task, the written text itself, the rate(s) and the rating scale (McNamara in Weigle, 2009:108).

2. Method

Because the purposes of the study are to investigate the teachers' problems in assessing writing, the study employs qualitative research. This type of research has a greater emphasis on holistic description – that describe what all goes on in a particular activity or situation (Fraenkel e*t al.*, 2011). The research was undertaken at one of public schools (Senior High School) in Karawang, West Java in 5th and 12th December 2012. The participants of the study are two English teachers at the school. The reasons for choosing these two teachers as the participants of the research is based on the consideration that the teachers have taught English including writing for more than 10 years.

The data was collected by using interview because it is the most important data collection tecnique in qualitative research to find out what is on the interviewees' minds – what they think or how they feel about something (Fetterman & Patton in Fraenkel e*t al.*, 2011). Theaudio recorder was used to record the interview session because recording device is an indispensable part of qualitative researcher's equipment (Fraenkel e*t al.*, 2011). The data obtained from interview were then transcribed and finally analyzed descriptively.

3. Result and Discussion

The collected data were analyzed by using Miles and Huberman qualitative data analysis. It consists of data reduction that refers to the process of selecting, focusing, simplifying the data in written up field notes or transcription. Then the data are displayed in the form of extended text and the last the data are concluded and verified (Miles & Huberman, 1994).

From the transcribed interview it was found that (one respondent) one of teacher's problems in assessing students' writing is when students' writing is not related to the topic given by the teacher.

Respondent 1: Kadang-kadang ada juga siswa yang disuruhnya apa, dijawabnya apa.Masih ada ya satu dua orang yang seperti itu. Kadang terulang lagu-terulang lagi, iya mutar-mutar disitu, nggak pernah sampai ke tujuan. Ada yang begitu juga. Awalnya ngerjain apa, itu yang dibahas lagi.

Teachers also found that some students' writing are unclear and difficult to read.

Respondent 1: Kesusulitannya, ketika bentuknya tulisan anak, sulitnya membaca kalimat mereka. Itu dibutuhkan waktu ekstra.

Respondent 2: Ya,paling kendala untuk menilai writing itu, adalah tulisan. Kenapa ya sekarang anak-anak sekarang itu tulisannya pada jelek. Anak-anak nulisnya pada kemana weh. Aduh, pas saya misalnya memeriksa malam-malam, pas pake pensil lagi udah gk kebaca.

In addition, teachers are lack of time in scoring the students' writing as they have to mark a large number of students.

Respondent 1: Terus terang ya,saya kerepotan. Saya itu kan menangani hampir 500 yang saya ajar. Di satu pihak guru wajib 24 jam, kemudian Bahasa Inggris itu Cuma 2 jam, sehingga untuk mencapai 24 jam, saya harus ngajar 24 kelas. 1 kelas rata-rata 40. 40 siswa dikali 12 kelas ya 480. Jadi untuk mencapai sempurna yang idealis yg diterapkan di rubrik terus terang, jujur tidak bisa tercover. Kecuali jika kita hanya mengajar sekian kelas, siswanya 20. Untuk menggarapnya tidakmaksimal karena jumlah siswa yang terlalu banyak, otomatis tidak bisa idealis, dan tidak bisa benar-benar memantau sejauh mana kemampuan siswanya.

Respondent 2: Terlalu banyak yang harus diperiksa. Kali berapa orang per kelas, per itemnya berapa. Kalo misalkan menilai berapa anak, kapan ngerjainnya. Udah kendalanya di tulisan anak,makan waktu. Makan waktu kan itu mriksanya.

Sometimes students make a very short writing because they are lack of vocabularies.

Respondent 1: Kadang juga siswa menulis hanya sedikit. Tapi walau pun idenya pendek, kalau apa yang diminta sudah tercover, itu sudah dianggap betul. Yang penting dia sudah memenuhi kriteria. Generic structure nya sudah terjawab mulai dari orientation sampai resolution misalnya dalam teks naratif.

Respondent 2: Anak juga kadang menulisnya dikit bangat. Kang-kadang and-and. Kata sambung itu kan banyak bukan and-and aja, then-then aja juga. Penggunaan kata kerja (yang regular-irregular verb). Itu seperti dilupakan anak.jadi klo sudah disuruh ngarang teh, kemana weh kata kerjanya teh. Padahal dimana-mana ngarang vocabulary penting. Klo gk ada vocabulary, mau ngarang apa pun gk bisa,mau ngomong juga gak bisa karena vocabnya terbatas.

Teacher do not have a certain rubric to assess student's writing (they assess only mark according to their holistic, overall and intuitive response to the students' writing).

Respondent 1: Apakah yang mereka tulis sesuai thema, nyambung nggak. Baru lihat isinya (content), baru kemudian dilihat structure nya, baru lihat tanda bacanya, huruf besar dan kecilnya, kesesuaian antar paragraf, itu bisa kita lihat.

Respondent 2: Kalau rubrik sendiri saya tidak ada, overall aja. Kalo rubrik enggak sih ya. saya lihat dari singkatnya dulu. Dari apa susunan kata, keluesan vocabnya, ada yang gak match itu kan. Atau meaningnya gitu, yang advance dengan ini kan bisa, kita bisa melihat.

There are some problems faced by the teachers in assessing students' writing. It was found that one of teacher's problems in assessing students' writing is that students' writing is not related to the topic given by the teacher.It is related to the study conducted by Cresswell (2000) when students focus on language structure rather than focus on ideas or content that make their composition effective. Teachers also found that some students' writing are unclear and difficult to read. It is still found students at this level (grade 1 of senior high school) have difficulty in their handwriting.In line with (Brown, 2010) stated that assessing writing is no simple task as the raters (teachers) need to consider students' writing ability and

what is to test like paragraph construction or logical development of a main idea? Besides teachers have to be aware of text construction, logical development, teachers also have to pay attention on students' writing.

In addition, teachers are lasck of time in scoring the students' writing as they have to mark a large number of students since they have to teach 24 hours in a week (Permendikbud Nomor 62 Tahun 2013 Tentang Sertifikasi Guru dalam Jabatan Dalam Rangka Penataan dan Pemerataan Guru).Besides that, one teacher assess not only students' writing skill, buat also other skills and assess about 500 students. Therefore, teacher will not be able to make an ideal judgement on students' writing.

Other teachers' problem is that students are lack of vocabularies. Sometimes students focus on the grammatical order in the text rather than the content of the text itself. As Graham & Harris in Hooper said that students who are lack of vocabularies tend to write shorter than the students who have more vocabularies. It shows that some are more skillful than others that it may be caused by students' are still too soon to write, students have poor mechanical skill in writing or what teachers ask the students to write does not reflect the students' interest.

Transcribed interview also showed that teachers do not use a spesific criteria or develop the existing scoring scales in assessing the students' writing for some reasons. Firstly, one of the teacher is not familiar with the writing scoring rubrics from some expert in writing. Secondly, it is a time consuming task to do since the teachers have to assess a large number of students. However, scoring criteria play a crucial role in rating students' writing performance. This is particularly in the case of primary trait or analytic scoring methods where assessment are made in relation to each of a number or criteria design represent central features of the language performance under consideration. Scoring criteria channels the way in which raters perceive and evaluate concrete samples of

langauge performance,and finally, come to assign scores to examinees (McNamara, 1996).

Teachers do not have a particular scoring rubric in assessing the students' wriitng even holistic scoring rubric (figure 2). As White in Weigle, 2009 mentioned that holistic scoring has been widely used in assessing writing because of its practicality. The teachers are usually interested in how they can meet writing goals of the course, how they design writing activity that will make students interested in rather than meet students' needs for further writing goals.They usually use score the students' writing by intuition and their general judgement.). In addition, Weigle (2009) proposed that there are three types of rating scalesthat can be used in assessing students' writing both in classroom assessment and large – scale assessment. But, the teachers did not use one of these scales for the reason that they are familiar with these writing rubrics, therefore they assess the students' writing based on their general judgement. Scoring criteria channels the way in which raters perceive and evaluate concrete samples of langauge performance,and finally, come to assign scores to examinees (McNamara, 1996).

4. Conclusion and Remark

From the discussion above it is concluded that teachers found some problems in assessing students' writing. Teachers found that students' writing is not related to the topic given by the teacher. Teacher also found that it is difficult to check the students' handwriting. In addition, teachers are also lack of time in assessing student's writing since one tecaher have to score for about 500 students' writing. Besides that, it also difficult for teachers to assess the students' writing when students come to write a very simple text because students are lack of vocabularies. In addition, teachers do not have a certain or developed scoring rubric to assess students' wriitng that can give judgement on students'writing in the form of final score.

Based on the problems above, it can be recommended that (1) Teacher has to be aware regarding to the problems they find in assessing students' writing, and (2) Teacher needs to have a certain or developed scoring rubric to assess students' writing because it can help them to give judgement on students' writing and students can know how well they do on writing.

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STUDY CASE OF TEMATIK LEARNING IN KINDERGARTEN CHILDREN AGES 4-6 YEARS WITH SCIENTIFIC APPROACH IN KINDERGARTEN KARTIKA IV PALEMBANG

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Abstract

A study entitled Thematic Study case Learning Kindergarten (TK) by Using Scientific Approach has been conducted in Children Ages 4-6 Years in TK Kartika IV Palembang B. The aim of the study is to determine the planning, implementation, and evaluation, as well as the perception of teachers, and parents, principals of the thematic learning by using a scientific approach. The method used is descriptive qualitative method. Research conducted at TK Kartika IV Palembang. Subject of the study consisted of two kindergarten teachers in the class B and 4-6 year olds amounted to 32, Headmaster, and parents . Technique to collection the data is made by triangulation technique / combination of observation/participant observation, interviews and documentation. The questionnaire was also used to collect data from students's parents. The results showed both the teacher is only one teacher who made learning plan in the form of Daily Activity Plan. Daily Activity Plan had been created using thematic learning by using a scientific approach. Implementation of thematic learning by using a scientific approach in both Class B, have not been implemented optimally. Both teachers surveyed did not carry out an evaluation at the end of the lesson. Each teacher has a positive perception of the thematic learning by using a scientific approach, but still find it difficult to carry it out is not maximized. The school principal has to supervise the learning in several ways (observation, supervision and coaching). While parents do not feel satisfied with the result.

Keywords: Study Case, Thematic Learning, Scientific Approach

1. Introduction

Given the importance of pre-school education, especially in kindergarten there are consequences that have arisen, including the government strives to improve the quality and relevance of basic education as through several ways, including through the development of curriculum. Examples of curriculum development such as the development of kindergarten curriculum in 2004, and then refined through the rules of government 58 of 2009 which is still in use. Entering the year 2013 in the TK Kartika IV

had tried using thematic learning with a scientific approach in the implementation of learning, but not optimal. As said by Prastowo (2013: 14) imposed a thematic learning especially for students ranging from pre-school and lower primary school classes. While the "thematic integrative learning is a learning approach that integrates various core competencies of the various fields of basic capabilities or any subjects into various themes. Themes knit meaning of various basic concepts so that students do not learn the basic concepts partially. Thus, learning gives full meaning to the students as reflected in various themes available ". Kemendikbud (2013: 134)

In addition Kemendikbud (2013) developed by perfecting the mindset of passive learning into active learning mindset by looking through a scientific approach . The process of learning to use a scientific approach is intended to provide insight to students in identifying , understanding the various materials using a scientific approach that information can come from anywhere , at any time , do not rely on the information in the direction of the teacher . Therefore , the expected learning conditions created directed to encourage students to find out from various sources of observation and not notified.

Scientific approach in an integrated thematic learning will be even better when done naturally , just flows , contextual , and related to the daily life experience of learners . Steps in the scientific approach as described above of course must be inspired by the behavior (honest , discipline , responsibility , caring , polite , friendly environment , help each other , cooperation , peace-loving , responsive and proactive) and displayed as part of the solution the various problems encountered daily in the estuary will have an impact in the life of the nation in interacting effectively with the social and natural environment as well as in placing itself as a reflection of the nation in the association world.

Presented by Peters cited by Prastowo (2013 : 22) that "the process and student learning outcomes depend on teachers' competencies and skills of teaching. " The quality of education is dependent on the awareness, understanding, commitment, and participation as well as the dedication of the teachers and education personnel, especially the teacher as the spearhead that directly faced learners. If teachers can create a learning process that can change the learning outcomes of students , to increase the motivation to learn , to improve self-esteem of learners , can increase self-esteem by implementing various strategies and learning models , the vision and mission of teachers as learners may be said to be successful ,

Based on observations , researchers get some phenomena that can be used as a case or problem in this study .In terms of lesson planning, as Permendikbud No. 81A in 2013 stated that the lesson plan is a lesson plan that was developed in detail on a particular theme or subject matter which refers to the syllabus. Researchers get second grade teacher and has been using the syllabus and thematic but between RKH RKH made by teachers with the learning process that not yet the same.

Teachers have been carrying out and try to implement the curriculum in 2009 in accordance with The rules of government 58 but not yet fully using the scientific approach in the learning process. It is evident from the learning process by both teachers still conventional and students still always received the knowledge of the teacher is not looking for his own knowledge, and the use of learning media is still lacking by teachers, and the learning process that is not shown on the steps of learning scientific such as: children less trained a lot of observing, less spur to frequently asked questions, reasoning, and rarely do the experiment, and also less trained to form networks or disseminating her results to her friend. In addition, the study evaluation meeting held every day at the end of learning is not implemented. For affective and psychomotor assessment has not done well, is visible from many formats assessment has not been filled by the teacher.

Based on the results of interviews with the teacher in class B. The researchers defined a statement that teachers can not fully carry out the study with scientific approach because too many number of students in one class, facilities and infrastructure that do not support such a special space to conduct experiments in groups, tools the incomplete experiment use by students, there is no projector to display the video-learning, etc. In addition, teachers are also constrained by the number of students that a lot is between 15 to 18 people in one class, and the students' thinking skills that are still difficult to be invited to think scientifically and connect their own knowledge will be learned through stories her teacher. For the evaluation, the teacher admitted that he was difficult to carry out an assessment in accordance with the assessment format. because the format is so much judgment and difficult to be implemented as a whole given the number of students that much.

Based on the above , the researchers wanted to know how the actual implementation of thematic learning process by using a scientific approach in the classroom and kindergarten Kartika IV Palembang and what is the cause of all the problems that arise . Therefore , researchers

interested in conducting research with the title " Learning Case Studies Thematic kindergartens with Scientific Approach Using On Childhood 4-6Tahun Class B in Kingdegarden Kartika IV Palembang " .

This study aims to determine the planning , implementation, evaluation , and teachers' perceptions and opinions of parents , principals regarding thematic learning by using a scientific approach in the kingdegarden Kartika IV Palembang .

2. Theoritical Background

Learning

Learning is the effort made by teachers (educators) to give learning to the students through the process of interaction between students , teachers and learning resources in a learning environment for a process of learning in children.

Thematic learning

Learning is one of the thematic integrated learning model which is based on a particular theme that is contextual to the world of children so that children either individually or in groups , actively explore and discover concepts and scientific principles in a holistic , meaningful , and authentic .Rusman (2013 : 258) states the following thematic learning characteristics ." As a model of learning in the kingdgarden, thematic learning has the following characteristics : a) Based on students ; b) Provide direct experience ; c) Separation of subjects is not so clear ; d) Presenting the concept of various subjects ; e) Characteristically flexible ; f) Learning outcomes in accordance with the interests and needs of students ; g) Using the principle of learning through play and fun " .

Scientific approach

Scientific approach is the basic concept that embodies, inspire, strengthen, and underlying thoughts about how the learning method applied by certain theories which consists of activities to observe , to question , to reason , to try and communicate .

Learning the scientific method has the following characteristics :

1) centered on the students.

2) involves the science process skills in constructing the concept , law or principle .

3) involves the cognitive processes of potential in stimulating the development of the intellect , especially high- level thinking skills in students.

4) can develop students' character .

The learning process in a scientific approach to touch three areas , namely : attitude , knowledge , and skills , as in Fig.1 below:

Gambar 1. Proses dan Hasil Pembelajaran Pendekatan *Scientific*
Sumber: Buku Diklat Kurikulum 2013

For all five (5) the development of basic capabilities that exist in early childhood , materials , or certain situations , it may be a scientific approach is not always appropriately applied procedurally. Learning steps with a scientific approach presented in Fig.2 as follows .

Gambar 2. Langkah Pembelajaran Pendekatan *Scientific*
Sumber: Buku Diklat Kurikulum 2013

3. Method

This research was conducted in TK Kartika IV Palembang, located on Jl . Basuki Rahmat Sekip Edge Kemuning Palembang. While the implementation of the research conducted on the class B1 and Class B2 .

Participants of this study were teachers class B totaling 2 ,; average child aged 4-6 years in the B1 class numbered 18 people and B2 class of 15, and the head of the kindergarten Kartika IV Palembang.

The method used in this research is Descriptive Qualitative Research Methods. As pointed out Sanjaya (2013: 47) that "research is descriptive qualitative research method that aims to describe fully the depth of the social reality and the various phenomena that occur in the community that is the subject of research so indescribable traits, character, nature, and models of the phenomenon. The shape of this qualitative descriptive study can be seen from the format of the conduct of research in the form of case studies. Descriptive research case study, trying to obtain a complete picture and details about events and phenomena in a particular object or subject that have specificity. Thus the conduct of research using the case study method is to dig as much information and profuse then describe in narrative form so as to give the full picture of the phenomenon that occurs

Komariah Satori and Aan (2011: 82-83) describes the operational procedures of qualitative research pragmentaris can be illustrated in the following figure.

Gambar 3. Langkah-langkah Penelitian Kualitatif
Sumber : Djam'an Satori dan Aan Komariah (2011:83)
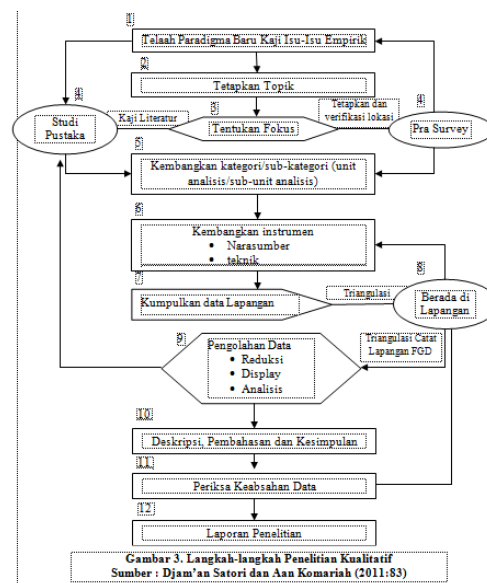
The data collection techniques used in this study is a triangulation technique / combination of observation or observation , interviews , and documentation .Miles and Huberman dikuip by Sugiyono (2011 : 246) suggests that activity in the qualitative data analysis performed interactively and runs continuously until complete , so that the data is

already saturated . Activities in the analysis of the data , that is data reduction, data display, and conclusion drawing / verification . Analysis steps shown in the following Picture 4.
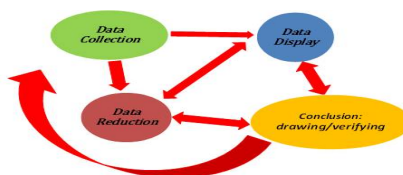
Gambar 4. Komponen dalam analisis data (*interactive model*)
Sumber : Sugiyono (2011:247)

4. Result and Discussion

Planning Learning

Both teachers have not had an operational reference to implement the learning process. Planning made by one of the teachers in the form of class B Learning Implementation Plan (RKH) has been strung in thematic learning by using a scientific approach but it RKH made somewhat differently than the implementation of the learning that takes place. Besides not equipped with the question, answer key and scoring guidelines.Of the two teachers who become the subject of research, they do not use RKH when teaching. When asked, there is only one teacher who has made RKH is Mrs. NTA as a classroom teacher RKH B but has not been printed at the time of the learning takes place. Rusman (2012: 5). "Every teacher in the educational unit is obliged to write lesson plans or plan daily activities in a complete and systematic manner that learning takes place in an interactive, inspiring, fun, challenging, motivating students to actively participate and provide enough space to divide initiative, creativity, and independence according to their talents, interests, and physical development, as well as psychological. "

Learning Implementation

Both teachers do not convey the purpose and activities of a lesson at the beginning. Supposedly it is done at the beginning of activities in order to create the atmosphere of the beginning of learning to encourage students and devote herself to be able to follow the learning process well. Both teachers at the beginning of the activities did not inform the learning objectives or competencies to be achieved in learning activities. In addition, teachers are not delivering learning steps that will be implemented. So that the initial activities undertaken less motivating students to learn. While Djamarah (2010: 331). "Motivation is very strategic initial phase of all the learning phase. Phase motivation is the opening phase. Failures in this phase becomes the root cause of the failure to move on to the next phase. Therefore, the first task should teachers do when opening a lesson is how to raise the motivation of the students in learning so that students ready to pay attention to the concentration of relatively old when he received a lesson ".

Teachers should make better use of the time allotted at the beginning of activities to motivate students with a prior knowledge of one of them informs objectives and competencies to be achieved , as well as learning steps that will be implemented to the students more interested in learning . In addition Rusman (2012 : 112) states that " if students know the purpose of learning that they were following , then they would be compelled to carry out such activities actively " .

At its core activities, teachers have directed planning created by one of the teachers in the form of class B Learning Implementation Plan (RKH) has been strung in thematic learning by using a scientific approach but it RKH made somewhat differently than the implementation of the learning that takes place. Besides not equipped with the question, answer key, and guidance towards score of learning thematic learning by using a scientific approach, although not yet fully learning that takes place in accordance with the learning objectives to be achieved.At the end of the activity, only Mrs. ST that summarizes the learning activities that have been implemented, while the mother NTA does not summarize the learning outcomes that have been implemented.

But both teachers like did not carry out oral and written assessment to measure the ability of students.Between Plan Daily Activities made by Ms. NTA with the implementation of learning that there is not yet appropriate implementation of such non-performance of cooperation activities for the students they work individually, in addition to the closing activity no activity concludes the study as written in RKH.

At the end of the activity, the teacher does not conclude with the students about the things that they got during the learning process.

In addition, teachers are not doing evaluation. Components shut lesson is said Rusman (2012: 92) is preferably; a) review the mastery of the subject matter to summarize or conclude the learning outcomes; b) To evaluate among others by demonstrating skills, apply new ideas to other situations, exploring what students themselves, and leave the question as feedback before ending learning ".Therefore, it should be a teacher conducting learning shut properly because Rusman (2012: 92) states "this activity is intended to provide a comprehensive picture of what has been learned by the students, determine the level of student achievement and success rates of teachers in the learning process".

We recommend the use of instructional media should be optimized so that children can use the instructional media to support the learning process by using a thematic scientific approach. With the variety of media, students can construct their own learning experience so that the learning becomes more meaningful and knowledge gained is more inherent in students' memories. Because Rusman (2012: 274) argues that, "In the thematic learning activities should also be noted regarding the optimal use of various learning media. Without the implementation of the media varied thematic learning activities will not work effectively. Instructional media should be used as an integral part of other learning components, in a sense does not stand alone, but interconnected with other components in order to create meaningful learning situations ".

Evaluation of Learning

Both teachers do not do written and oral evaluation at the end of the lesson, but only provide appropriate training course Sheets.When asked about the assessment of the implementation of Curriculum 2009 and the rules of government 58 with the adoption of a scientific approach, Ms. ST replied that he only has the judgment format only and has not been made since last semester raport children according to Competency-based curriculum and have not had a mother NTA while answered during the interview that attitudes and skills assessment in children should not be done every day but may be 1 or 2 months and learning on that day he has not made an assessment other than the value of the Student Activity Sheet (LKS) children according to the handbook in kingdegarden Kartika IV.

Based on the value LKS children, it appears that the results have been quite good. Teachers should carry out tests at the end of the lesson, which includes the study which has been carried out either by means of written and verbal to determine and measure the ability of kindergarten children in the learning so that teachers can determine the ability of the child after the teacher teaches. We recommend that classroom teachers should carry out a series of evaluation of learning as best as possible so that teachers can know the extent of learning has been carried out and what needs to be repaired. Sanjaya (2013: 61) states "Evaluation is the final component in the system learning process. Evaluate not only serves to see the success of students in the learning process, but also serves as a feedback to teachers on their performance in the management of learning. Through the evaluation can see the flaws in the utilization of the various components of the learning system ".

Perception of teachers, students and Principal Regarding the Thematic Learning by Using Scientific Approach

Teachers already have a positive perception of the thematic learning by using a scientific approach. But in practice, teachers still find it difficult due to several things, namely: the child has not dared to express an opinion, only a few students who are active, when it made the group only active students who do the work while others passively, infrastructure is incomplete as yet No projector, laptop, labroratorium, the number of students is too much in one class, learning materials contained in the complete lack of student worksheets, children are less responsive because teachers do not understand the instructions, the ability of teachers is not maximized. Besides the two teachers that use of the scientific approach is still difficult because they have not been used to carry it out.

Thus, the assessment of the scientific approach, carried out continuously during and after the learning process and student character development more priority than academic coaching.Because teachers do not carry out the evaluation of learning the results of scientific learning that produce students productive, creative, innovative and affective can not be seen.

Based on the results of interviews with two teachers as study participants, it can be concluded that the thematic learning by using approach scientific It was difficult, because it has not been used to implement optimally and completely caused by several things: the ability of mastering teaching materials complete lack of teachers in kindergarten

Kartka IV and facilities and infrastructure are less supportive, the ability of different students. While the principals stated one of the barriers to the implementation of thematic learning by using a scientific approach that limited the ability of teachers, teacher training and seminars on scientific approach is limited because teachers have to spend their own expense. Sanjaya (2010: 52) states, "The teacher in the learning process holds a very important role. The role of teachers, especially for early childhood education at pre-school can not be replaced by other devices, such as televisions, radios, computers and so forth.

Therefore, early childhood is a developing organism that requires the guidance and assistance of an adult ".To overcome the above problems, the researchers advise teachers to keep using and supporting books and often read a lot of books that fit the theme and sub themes coupled with other learning resources in delivering learning materials for children to get more knowledge. In addition, should the teacher teach children learn to understand the characteristics of concrete, intergratif, so that children easier and interested to gain knowledge and actively participate in learning. Prastowo (2013: 153) states. "Thematic learning requires reading materials or sources of information are many and varied, and supported also by the internet facility. All this will support, enrich, and simplify the development of insight. If these suggestions are not met, then the application of thematic learning will be hampered". The school principal has been supervising the implementation of thematic learning by using a scientific approach by way of supervision, observation, and coaching. The school principal said one implementation barriers that limited the ability of teachers. The principal will continue to implement, evaluate, and improve the learning process that takes place because he considers thematic learning by using a scientific approach is quite effective when applied to the maximum or completely. This needs to be supported by various parties such as foundations, teachers, students, and parents.It is possible the results of interviews with children and a questionnaire distributed to parents, a conclusion still more children who like hands-on learning during the learning takes place. Kids find it difficult to learn on their own, because teachers use only learning from books thematic students. In addition, students are still unfamiliar with thematic learning that sometimes children are still confused in learning.

5. Conclusion and Remark

Based on the results of research and discussion that has been Described, it can be summed up as follows.

1) From both a kindergarten teacher in Class B at kingdegarten Kartika IV Palembang there is only one teacher stated already made RKH thematic using a scientific approach is Mrs. NTA B2 class teacher but his RKH unprinted and not taken the time to teach.

2) The teacher has Carried out thematic learning but for gymnastics lessons are still taught separately. A learning activity using scientific approaches have been implemented but the activities that the average dominant Appears that Observe, ask, and it presents. The learning activities are Carried out by the three teachers on average have not fully Correspond to the learning objectives that should be achieved.

3) Evaluation of learning taken from the practice kindergarten children. However there are some learning objectives are not Achieved. For affective and psychomotor assessment has not been carried out by the teacher.

4) Teachers already have a pretty good understanding of the thematic learning by using a scientific approach. But teachers found it difficult, to carry it out to the fullest. Nearly half the students already likes of thematic learning but there are still more students who love learning Directly using the thematic curriculum of 2004. The principal has to supervise learning by way of supervision, observation and coaching. Principals stated one reason not maximal learning that takes place due to the limited ability of teachers.

SUGGESTION

Related to the research findings, the researchers gave suggestions and expectations, namely:

1)For Teachers

Planning needs to be made in the form of a weekly Daily Activity Plan form RKH regularly and systematically in order to be used by teachers as an operational reference in implementing the learning activities so that the goal of learning can be achieved with good. In addition, the findings of this study are expected teachers can improve their performance as a professional teacher to carry out thematic learning by using measures fully scientific approach.

2)For Schools

Improve supervision and evaluation of teachers' performance more often. This needs to be done by the principal for the implementation of thematic learning activities using scientific approachesintact

3)For Institutions

Provide, facilitate and support the learning process that goes through the things that are needed such as providing facilities and infrastructure complete, regularly and alternately send teachers for training related to thematic learning and scientific approach. So the thematic learning activities using scientific approaches in TK Kartika IV can be done well.

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THE LEARNING MODEL ANALOGY IN IMPROVING THE MULTICULTURAL WRITING CREATIVITY

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ABSTRACT

The learning model analogy in linguistics was the similarities between the forms which became the basis of other forms. Analogy was one of the morphology processes, where there was a formulation of the new words from the existed word. Analogy was done because from something that has been compared and its comparation has the same function and role. By doing analogy, a person could explain something which was abstract or complicated to be something that easy to be understood (inductive and logic analogy). Multicultural was a term that used to describe someone's point of view about the life on this earth, or the policy which focused on different culture acceptance, citizen, system, culture, customs, and politics they have. At least, main thing that need to be planted by them was done by teacher or lecturer, will be disturb by the literature management, finding information, practice the dialogue, and create a creative outside and multicultural. This study was qualitative research, which had to test the language learning model affectivity. The objective of this study was to create creative multicultural learning method. In order to reach the objective, the method used in this study was research and development system from Gall and Borg (2003). The specific target of this research was the learning method, analogy. For all the students of Bahasa Indonesia study program in some university in Palembang with this specification : (1) the objective of learning based on curriculum 2013; (2). Could be done with or without the lecturer; and (3) could develop creative learning for students. Based on the method , (1) teaching and learning observation in quasy experiment classroom. (2) selecting short story to be a material for teaching; (3). Learning model composition; (4) learning models tested; (5). Result evaluation; and (6). Learning model revision.

Keywords: Model, Analogy, Creativity Innovative, Writing, Multicultural

1. Introduction

The analogy learning model in linguistics has the similarities between the forms which becomes the basis of other forms. Analogy is one of the morphology processes, where it has a formulation of the new words from the existed word.

Analogy was done because from something that has been compared and its comparative has the same function and role. Through the analogy, a person can explain something which is abstract or complicated to be something that easy to be understood (inductive and logical analogy).

Multicultural is a term that used to describe someone's point of view about the life on this earth, or the policy which focuses on different culture acceptance, citizen, system, culture, customs, and politics they have.

Writing skill is one of the aspects that needs to be owned by the students to pour out the ideas and helps to train them to be smarter, brave, critical and creative in facing the problem. Writing skill can help the learners to reveal their various kinds of writing. It is in line with Yunus (2009:29), who stated that writing can help in improving the intelligence, and the willingness in finding the information.

The teaching of writing in the last ten years was still oriented on the conventional learning. Its application was mostly dominated by lecturers. Writing was to express the idea in the mind and feeling through the language. Practice to write continuously was an intense exercise to create the language that used as a medium of literature. The activity of language creation (writing) was not completely bias, but needed to be continuously and intensively (Heru, 2012:12).

Such a condition less support the improvement of the quality of education especially in the quality of the Indonesian language teaching in higher education. One of the lecturers efforts to achieve success in the teaching and learning process is the selection of the appropriate method. in line with this opinion, Sagala (2005:174)

stated that teachers must be able to use the models and teaching approaches that can guarantee learning successfully as planned. Teaching methods can function optimally, if in tandem with learning materials, students the purpose of the teaching as well as the skills to use it.

The development of creativity dimension in the process of language teaching is very important. It can be implemented through various language activities. Creativity is important and becomes one of the characteristics of a qualified man. Munandar (2009:17) stated that creativity helps people to improve the quality of life. in order to achieve this goal, the creativity needs to be had since early. Improving the creativity is an integral part of various activities for gifted children. Creativity should be implemented in the entire curriculum and classroom climate through some factors such as the attitude of receiving the individual uniqueness, the open ended questions and the possibility of a choice. An interesting approach in developing the creativity has been designed by Gordon with the name of the "analogy".

2. The discussion

The analogy learning model in linguistics has the similarities between the forms which becomes the basis of other forms. Analogy is one of the morphology processes, where it has a formulation of the new words from the existed word. Analogy was done because from something that has been compared and its comparative has the same function and role. Through the analogy, a person can

explain something which is abstract or complicated to be something that easy to be understood (inductive and logical analogy).

. Multicultural is a term that used to describe someone's point of view about the life on this earth, or the policy which focuses on different culture acceptance, citizen, system, culture, customs, and politics they have.

Writing is a process of creating a text that contains ideas. Some people do it spontaneously and others do corrections and rewriting. A creation, in this case an article can be written in one hour, or even in many days. (Komaidi, 2007:6). Writing is an activity that requires some processes those are the steps that needed in finishing.

Generally, the writing steps were divided into three stages. Such as; planning, draft writing, and draft revision. Each step can be explained into the more specific one. Planning what to write includes the discussed topic, the objective, the outlines, and the material. Draft writing includes the topic explanation into paragraphs. Moreover, draft revision includes the process of revision to make the writing better.

Alwasilah (2005:138) stated that the process of writing involves the literacy principles such as building the field of knowledge, modeling of text, joint construction and independent learning. The learning writing approach can be considered as a modern approach which was relevant to the role of writing in the academic context.

The implementation offered some alternative activities such as conferencing, peer teaching, multiple draft, and collaboration. The process approach of writing learning referred to the five writing process (Graves, 1991), such as topics selecting,

drafting, revising, correcting, and publishing. Here are the recipe given by Cooper (1993:415-427) about implementation.

(1)Topic Selection Stage *:* Students should be convinced that he is really able to select the topic. There are some steps that could help the students in this stage. First, invite the students to register their topics. Second, provide the chance for all the students to add the list of their wanted topic. Third, provide the chance to the students to choose one of the topics for their first writing

(2) Drafting Stage: there are two steps in drafting stage such are planning and essay development. The learning model can be designed as follows. First, provide the examples of essay, objective, and who the readers are. Second, after students complete their work, give the understanding that what they have done was the initial plan in writing.

(3) Revision Stage: The lecturers' role is helping students to appreciate the importance of systematic revision. After the revised instructions obtained, students start to revise his writings, check for each of the points listed on the revision cheklist, discuss the issue and find the solution. Students were invited to try expressing their ideas better.

(4) Editing Stage: this stage takes place after the students worked. At this stage students check the sentence structure, spelling written and punctuation. Instructions can be developed in the form of check list.

(5) Displaying Stage: in the professional context, it is called publishing. At this stage the final writing or essay that has been edited was selected together to be displayed on the wall magazine or displays in the classroom.

The explanation above showed that the explained steps were almost the same. The difference was only the order in which they used after conducted the observation and studied about the read authors' material. The most relevant steps were explained by Alwasilah (2005) and Cooper (1993).

The writing learning included in the ability aspect in using the language. The objective was to make the students to (1) be able to deliver the information orally and in writing in accordance with the context and circumstances; (2) be able to reveal the idea, opinions, experience, and message orally and written; (3) be able to express their feelings orally and written clearly; (4) be sensitive with the environment and be able to express them in the term of good prose and poetry; and (5) have writing as hobby to improve the knowledge and use them in their daily activities. The objective was expected to improve the ability to think, reasoned, and broaden.

According to Joyce, Weil, and Calhoun (2000:135) all teaching model contains the elements of these following model: (1) syntax, (2) social system, (3) principle of reaction, (4) support system, and (5) instructional and nurturant effect.

For this reason, the analogy learning model should also include all the elements. Basically, the teaching model was the pattern or plan that could be used to form a curriculum in selecting the teaching material and guiding the teachers'

activities in the classroom. In line with Joyce, Weil and Calhoum (2000) stated, "a pattern or plan, which can be used to shaper a curriculum or courseto select intructional naterials, and to guide teacher's actions." These formulations showed that there was a presence of the elements of the model builder as the characteristics of each teaching model. They were: 1) the model orientation, 2). teaching model, and 3). model application.

The analogy learning model was used as a learning model in developing the students' ability to think creatively. This model did not require tools, except paper or the blackboard to record those ideas. The first step in formulating the problem was written on the blackboard so all the students could see it. The next activity in class was led by the lecturer or in small groups that was led by a student.

Generally, there were three types of the analogy as a basis to increase the creativity of cultural writing, namely: (1) personal analogy, (2) direct analogy, and (3) compressed conflict. There were three types of the analogy that were used to increase the creativity of cultural writing based on synectics. They were the fantasy analogy, direct analogy, and personal analogy (Munandar, 2002: 284). The most commonly used was the fantasy analogy. In the fantasy analogy, the students searched for the ideal solution for a problem, included the strange or unusual solutions. The lecturer could ask the students to think how to move the heavy thing in the school yard. Students could imagine that the analogy like; the small creatures lift the thing, using elephants or giant balloons. As the contribution, all ideas were accepted, no one got

criticized, and students could continue with the idea of another student. After producing a number of fantasy idea, lecturers invited the students to do the practical evaluation and analyzing the idea to determine which could be applied practically.

The form of another analogy was direct analogy. In this analogy, the students were asked to find the situation of the problem in the real life, for example how to move heavy thing in the classroom. The problem could be reconciled with how animals bring their sons in real life . The main difference between the fantasy analogy and direct analogy was that the fantasy analogy could be entirely fictitious, while in direct analogy problem was associated with the real life. In addition, in direct analogy all the idea of students were accepted then were reviewed to be applied in the practice.

Personal analogy required the students to place himself in the role of the problem. For example, "If I were a swing in a playground and wanted to move to another place, what should I do? I should swing far and high until I could reach the high tree branches, then I took out the swing by shaking tree branches (like Tarzan) to the place that I wanted."

This process was developed based on the psychology creativity assumption. This was in line with the views of Gordon (1961: 1-6, in Joyce and Weil, 1996:17), i.e. "The specific patterns of sinectics acres developed from a set of assumptions about the psychology of creativity". There were three assumptions psychology creativity as follows.

(a) Raising the creative process toward public awareness and developing it significantly to help creativity, to increase the capacity of creative individuals or groups could not be directly. (b) emotional component was more important than the intellectual components, creativity was the development of a new mental pattern. (c) emotional elements and irrasional element must be understood by the lecturer to increase the possibility of success in the troubleshooting situation.

There were two strategies in this learning model. They were learning strategy to create a new thing and teaching strategies for making the strange familiar.

The Literature Workshop strategy I: Creating something new. First stage: Describing the real condition at that time. Lecturers expected students to be able to describe the situation or topics as seen at that time. The Second stage: direct analogy, students asked the direct analogy, selected one , and explained more information. The third stage: direct analogy, students did the analogy as they selected in the second stage. The fourth Stage: students created the descriptions based on the stage I and II, then developed the fourth conflict, and chose one. In the fifth stage, direct analogy, students developed and qualified the analogy of others directly. The sixth stage: the tried out the original lecturers' task and asked the students to review it by using the last analogy or multicultural writing experience.

The Literature Workshop strategy II: Making something strange became familiar. The First stage: The Lecturers' Substantive Input gave the information about new topic. The Second stage: direct analogy, lecturer asked direct analogy and asked

the students to describe it. The Third stag*e:* Personal Analogy, lecturer asked the students to make personal analogy. The fourth stage: Comparing the analogy, students identified and explained the similar point among the discussed material and the direct analogy. The fifth stage: Explaining the differences, students explained the wrong or different analogies. The Sixth stage: students' exploring, students explained the original topics according to their own language. The Seventh stage: creating a new analogy, students provided their own analogy and explained which one the was similar or different.

Based on the two strategies above, this research used the second strategy. This strategy was a good idea to develop creative ability in writing.

Joyce & Weil (1996:257) proposed that there were seven stages in this strategy, namely: (1) substantive input, (2) direct analogy, (3)personal analogy, (4) compare the analogies, (5) explain various differences, (6) exploration, and (7) create the new analogy. The implementation of learning strategies on the analogy in learning couls be described as follows:

The first stage: Substantive Input. The lecturer showed a picture to the students and they were given a few minutes to understand the picture. The second stage: Direct analogy. The lecturer explained and asked questions to the students to motivate them to express their ideas in writing. Students wrote their ideas as many as they could in their own note. The third stage :   Personal analogy. The students created their own paper based on a picture. The fourth stage : Comparing the analogy.

The students brought the concept of the beginning of them to the class and formed a small group discussions. In the fifth stage :explaining the differences. The students held a class discussion, they read the writing of each group, then provide feedback. The sixth stage : Exploration. After feedback got to the concept of the beginning of them, the students would be ready to write the script of the end, with attention to the instructions for the revision. *Ketu*juh stage: Pops up a new analogy. After the end of the script is complete and revised the students work in pairs in pairs for editing their work.

As the impact of learning literature workshop, there were two kinds of the direct impacts of learning (instructional effects), such as; improve the ability of creativity in general and in the subjects. The impact of the entourage learning (nurturant effect is to increase the mastery of learning materials and the quality of the group become more productive and cohesive manner (Joyce & Weil, 2000:257).

In the following section was presented the diagram Workshop model literature and conventional model diagram as its comparative . Furthermore, the difference of both models more would be clarified more as presented in the following table.

The Asumsion The Writing Skill could be enhanced

The orientation of the direct essay writing

The purpose of improving the creativity of the multicultural Writing

The analogy of the learning model in improving the creativity of the multicultural Writing

* Phase I   : Substantive Input
* Stage II   : the direct analogy
* Stage III   : the personal analogy
* Stage IV   :Compare Analogy
* Stage V   :Explain Various
                    differences.
* Stage VI   : Exploration
* Stage VII: Pops up the new analogy

Students* Response* Imagination* Experience

Facilitator lecturer

The ability to write Bahasa Indonesia

The diagram 1: The Analogy Learning Model in improving the creativity of the multicultural writing

The assumption

Students have an ability to write - Students are not to be through the development process

The orientation of the direct essay writing

The analogy of the learning strategies
* Phase I   : Lecturers give the topic
* Stage II   : Students Write
* Stage III   : students submit
                  Essay Results
* Stage IV   : Lecturers assess the essay
                  results without   any
                  student writing standards

ORIENTATION Write the Essay directly

STUDENTS as an object of learning

LECTURER DIRECTOR

Students' Essay

The diagram 2:The Conventional Models in the Multicultural Writing Learning

Instructional impact from this model was to facilitate the student in the

formation of the concept that students' writing skills could be developed. This could happen because the analogy of emphasizing on the process. The impact of the early onset of this model was a student could be able to think logically, included his feelings, connected new experiences with personal, proposed response and work together.

The difference with conventional Model Analogy Model could be explained as follows.

The difference with conventional Model Analogy Model

Conventional Model	The analogy Model
Conventional Model	**The analogy Model**
1. Centered on the lecturers (*Lecture Oriented*).	1. The lecturer as a facilitator.
2. As a student learning objects.	2. As the subject of student learning.
3. Learning activities occur on the place and a certain time.	3. The lecture takes place where only.
4. Students learn more individually with receive, notes, and memorize the lecture materials.	4. Students learn through group activities such as group work, discussion, receive, and give.
5. The ability obtained through exercises.	5. The ability based on the experience to develop the creativity of the students.
6. The creativity of the possessed only certain people.	6. Each individual can develop creativity
7. The lecture is theoretical and abstract.	7. Learning is associated with the real life.
8. The final destination is mastering the lecture.	8. The final goal is the ability to think through the process of connecting between the experience with reality to enhance the creativity.
9. The success of the lecture usually only measured from the results of the test.	9. Criteria for success is determined by the process and the results of lectures.
10. The lecturer is defining the way the lecture	10. Students are responsible to monitor and develop their respective lecture.

3. The Laboratory Method

This research used the methods of research and development or *Research and Development (RD)* from Gall and Borg (2003). Three phases that were undertaken by the researchers, namely: 1) literature study and field study results as a basis for planning the development of the model, 2) development model through the trial was limited and the results of the model enhancements done trial that more widely in the form of repetitive cycle, and 3) validation test model to identify the benefits of the model of the results of the development of using the design of the experiment.

The research method used to test the end product from a more nuanced model quantitative using the design of quasi-experiment. The design that used was *The Match Only Pretest-Postest Control Group* (Fraenkel & Wallen, 1993:243). The design of this research was described Fraenkel & Wallen as the following diagram.

Treatment Group	O M XA O
Control Group	O M XB O
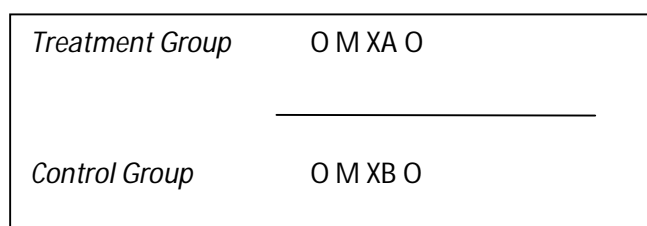
Description:

O = The measurement of the early (pretest) and the measurement of the end (Postest)

M = Match subjects to control classes and class experiment

XA = The treatment of teaching in the classroom experiment

XB = The treatment of teaching in control classes

According to the opinion of Fraenkel and Wallen (1993:243) *the match subjects* was the subject of this research that was not specified in random order but with how to match the subject in the group experiment with control groups on the research variables. The matching was done to assure that both groups equivalent and homogeneous in the variable. Members of each pair of matched and then assigned to the group of the experiment and control by mechanical. In other words, the group of the experiment and control groups obtained after the students are given the treatment of the pre-test related to the dependent variables. The following was presented test results homogenitas both groups based on their pre-test score, where based on the test without that two homogenous group until the level of 0.029, which means that both groups were homogeneous with the level of trust a resounding 97.1%. This means that both groups could be the control group and the group of experiments on research with the level of trust in the 95%.

Test of Homogeneity of Variances

Skor Prates Kedua Kelompok

Levene Statistic	df1	df2	Sig.
4.962	1	66	.029

4. Data Collection

The data that used in this research, namely (1) students' beginning capability data, (2) the implementation of the treatment data, and (3) student learning

achievements data. The students' beginning capability data included writing abilities and knowledge to write. The data collection technique was done with the pre-test. An instrument to collect data the ability to write the reality in the form of the command to essay writing based on reading material, while an instrument to collect data knowledge of writing the substance of the questions objective test which measures cognitive aspects. The initial capability data was monitored as the variables controlled, useful to see the extent to which the knowledge and the ability to write the experiment group and the control group before the given treatment.

The Early Ability instrument Students

This instrument was divided into two namely the instrument capabilities of early writing skills (The Instrument 1) and the instrument Early Ability knowledge of writing (the instrument 2).

Questions about the knowledge of the writing consisted of two parts, namely; the instructions and answer sheet. On the written instructions of time provided to write and the aspects that must be noted in writing. The aspects of this writing covered the types, contents, organising the use of spelling and punctuation. On the answer sheet, besides provided room for writing, it also provided filling column student personal data such as the full name, faculty, and the date on the right side of the above.

For the instrument 2, each bullet item trialled before made as an instrument of research.

An instrument of the implementation of the Treatment

This instrument is divided into two namely the instrument 7 and 5. 7 instrument used to monitor the implementation of the treatment. The instrument developed in the form of observation sheet using the *rating scale installation design*. This instrument consisted of two parts namely; descriptor column activities and scale of quality. In the column descriptor refers to the flow of writing learning model with the model of teaching the analogy; and quality scale column consisted of numbers 1 - 5 that showed the quality of the implementation.

The instrument 5 in the form of questionnaires of self assessment was used to complement the data on an instrument of the implementation of the treatment.

Treatment instrument

The implementation stages of learning to write with the analogy of the Learning Model

The first stage of :   Lecturers showed some pictures to all the students and they were given a few minutes to understand the picture.

The second stage :   Explained the lecturer and asked questions to the students who could grow student motivation for expressing their ideas in writing. Students wrote as much as possible ideas on the book its notation of each.

The third stage : The students created their own paper based on a picture. The students wrote down the ideas that have collected quickly.

The fourth stage :The students brought the concept of the beginning of them and formed a small group discussions. Each student read the writing of each group and provide feedback to the writings of.

In the fifth stage : The students held a class discussion, they read the writing of each group and provided feedback to the writings of.

The sixth stage : After got feedback to the concept of the beginning of them, the students were ready to write the script of the end, with attention to the instructions for the revision.

The seventh stage : After the end of the script was completed and revised the students work in pairs in pairs for editing their work.

4. Result and Discussion

a. Differences in the ability to write the students in the Classroom experiment and control classes

Differences in the ability to write Palembang Muhammadiyah University students between groups of the experiment and control groups was significant.) is based on the results of the tests t that indicates that there is a difference between the ability to write between the class implementing the Learning Model the analogy with the class implementing the conventional learning model. Thus it can be concluded that the model of teaching the analogy can develop writing skills students.

The difference of writing capability could be known based on the results of the measurement of the ability of the beginning students to writing, i.e. the average 61,74 become 75,41 after the treatment model of teaching the analogy. Therefore, it could be said that the ability to write before the treatment model of teaching low analogy, while writing abilities after Learning Model treatment increased analogy. Increasing the ability to write a student shows that the model of teaching the analogy that constituted by inductive thinking model quality. This is in line with the) Joyce, dkk. (2000) that the model to improve the quality of the writing students.

b.   The effectiveness of this Learning Model the analogy

To measure the effectiveness of the analogy of learning in groups of quasi-experiment used two forms of the test the test-*t* and test the *gain*. Based on the analysis of the data could be concluded that the model of teaching the analogy used effectively in groups of quasi-experiment. The effectiveness of the model in line with) Joyce, et al. (2000:138) that the exercise is done independently which is the contribution of the model of inductive thinking as the foundation of the arrangement of the learning model the analogy can improve effectiveness. The conclusion was also supported by the discussion about the quality of the learning process the analogy.

The t-test the first measurement was done to identify the effectiveness of the Learning Model the analogy with prove the level of the significance of the difference between the ability to write the class quasi-experiment with control classes. The results obtained from the measurements found that there was a significant difference

between the ability to the end of the Muhammadiyah University students writing Palembang in class quasi-experiment (learning model analogy) and control classes (conventional learning model).

Based on the T-test obtained that gain total score writing skills of the group experiment (13,29) higher than on the control group (9,09). Based on further tests found that the difference was significant until the level of trust in the 95% (namely with the value of T = 3,345 and equal to the significance of 0.001) in this case could be concluded that the model of teaching the analogy was more effective than conventional models to improve student writing skills. Meanwhile, other measurements to identify the effectiveness of the model of teaching the analogy was to test the *gain*.

5. Conclusion and Remark

In this case it could be concluded that the model of teaching the analogy was more effective than conventional models to improve student writing skills. While the measuring ,other players to identify the effectiveness of the model of teaching the analogy was test gains. Based on the review of the gains, it could be concluded that the analogy learning model was effective. This was shown by the existence of improvement or development of writing abilities after measured with the gains compare the difference between pretest and post-test.

Both the measurement of the above also strengthened by the quality of learning to write with the analogy learning model so that the level of the effectiveness of the model had a high level validation.

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THE EFFECT OF GRAPHIC ORGANIZERS, GUIDED WRITING STRATEGIES, AND READING LEVELS ON THE WRITING ACHIEVEMENT OF THE FOURTH SEMESTER STUDENTS OF PGMI PROGRAM AT IAIN RADEN INTAN LAMPUNG

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Abstract

The strategies are needed in teaching process; the teacher must decide the strategies best suited for the writing skills of each process. Therefore, Graphic Organizers and Guided Writing strategies are strategy to assist the students in writing process. The objectives of the study were aimed in improving the student's writing achievement by using Graphic Organizer and Guided Writing strategies and highlighting the significant interaction effect of Graphic Organizers and Guided Writing strategy and Students' Reading Levels on Writing Achievement. Sixty students of PGMI Program at IAIN Raden Intan Lampung were chosen randomly based on their reading levels. The data were collected through pretest and posttest. The result showed that there was a significant difference in writing achievement after they were taught by using Graphic Organizer and they were taught by Guided Writing and between the students who were taught by using Graphic Organizer group and those who were taught by Guided Writing strategies.

Keywords: *Graphic Organizer, Guided Writing strategy, students' reading levels, writing achievement.*

1. Introduction

Reading is the key of learning. By reading, people can get a lot of information. According to Aebersold (1997, p. 15), "Reading is what happens when people look at a text and assign meaning to the written symbols in that text." Therefore, the readers can get the meaning of what they read. In other words, reading is the ability to draw meaning from the printed page and interpret the meaning or information appropriately (Grabe & Stoller, 2002), and it is something crucial and indispensable for students because the success of their study in any field depends on the greater part of their reading skill.

Reading is not a simple activity. "Reading is an active process that requires a great deal of practice and skill" (Moreillon, 2007, p.12). According to Hillerich (1983, p. 125), "The major goal for any reading activities is comprehension". However, to comprehend what is being read is not easy, especially if it is reading in a foreign language, such as English. Therefore, students as readers need a comprehension strategy to understand the text they read because reading comprehension is an important aspect to develop students' ability to read with understanding. This is supported by Barr, Sadow, and Blachwicz (1990) who state that reading is an active process in which readers interact with the text to reconstruct the message of the author or writer. In sum, reading comprehension is the readers' reading activity to find the message of the text, understand the meaning, and reconstruct the ideas. Therefore, in a reading process, students should understand the meaning of language that is used in text in order to comprehend the content of the text and state it by using their own words.

Furthermore, reading comprehension helps students form ideas that they can express in their writing. "Writing can be such an exciting adventure for students who have a firm idea of what to write about and how to get started" (Roberts, 2004). Roberts (2004, p. 7) claims that "learners are called successful learners when they are able to use the language which is well written". Similarly, Harmer (2004) believes

that the use of coherent and cohesive composition is very important so that the readers understand what they write. Coherent writing makes sense because of the sequence of ideas and points are easy to follow. In addition, cohesive is a more technical matter since the writer concentrates on the various linguistic ways of connecting ideas across phrases and sentences (Harmer, 2004).

Moreover, Myles (2002) claims that most students in ESL' writing classes hate this lesson because they have difficulties in getting started, finding the right words, and developing topics when they began to write and express their ideas. Furthermore, Setiawan (2008) shows that writing is the most difficult academic lesson and most students in Indonesia at the university level avoid this activity. The level of their writing is low; their difficulties are not only in arranging the sentences grammatically, but also in choosing the suitable words in their composition. In addition, writing is difficult for the students because do not do enough reading. The more students read, the more input of information or knowledge they gain. The inputs help students to explore new ideas and modify initial notions they have found. However, the pathetic fact of reading literacy level of Indonesia, students is ranked 64^{th} out of 65 countries or below average level (PISA, 2012). It means that the low writing skill of Indonesian students has caused the less input that they have to construct meaning. In addition, being poor in grammar, vocabularies, getting started and organizing ideas into well-organized writing were some points that make writing is difficult for the learners.

Likewise, the problems also happen in the skill of writing to publish in English. It is proved by the publication of books each year. Annual report October 2013 – October 2014 from International Publisher Association (IPA) showed a number of books published in Indonesia only 30.000 per year. It is still low compared with other countries in the world, such as English people publish 184.000 books. Moreover, Americans publish 304.912 books per year, Chinese publish 444.000 books, and Russians publish 101.981 books. In addition, Taufik Ismail's study

showed that writing competence of the Indonesian's student is the lowest in Asia due to lack of reading of the students (cited by Sudaryat, 2010, p. 86).

The same problem in reading also happens to the students of IAIN RadenIntan Lampung. The result of IRI test using passages prepared by Burn and Roe (1999) given by the writer to the 4th Semester Students of PGMI Program at IAIN RadenIntan Lampung showed that only 40% of the students were able to achieve level 4. This means that it was equal to 4th graders of English Native Speakers. For writing, it is also found that the average score of the students writing was 5.45. From the interview with some of the lecturers who teach English subject in PGMI program, it was found that the process of teaching and learning English towards students of PGMI program did not focus on teaching productive skills, especially either writing a paragraph or an essay. They only focused on teaching the basic aspects of English, like vocabulary and grammar. Students were rarely to write a paragraph.

Those results of studies confirm that the students still have problems in English reading and writing. Ormrod (2012) states the instructional practices have a significant impact on how students mentally process classroom material and thus also on how effectively students learnt it. Furthermore, Saeid (2014) mention using certain learning strategies are important to facilitate the learning process, recall and retention and he furthermore found a significant positive relationship between learning strategy and achievement. Therefore, an effort should be done. In this study, the writer focuses on the use of Graphic Organizers and Guided writing as the strategies for improving the students' writing achievement.

Egan (1999, p. 641) states "A graphic organizer is a visual representation of knowledge, a way of structuring information, and of arranging essential aspects of an idea or topic into a pattern using labels". Graphic organizers provide a visual representation of key details and ideas for students who have difficulty organizing information (Baxendell, 2003). Furthermore Baxendell (2003) suggests that Graphic Organizers be consistent, coherent, and integrated in creative ways to show success in student's learning. Graphic Organizers should be presented in a creative way.

Students are more likely to use Graphic Organizers independently if they are introduced in an exciting, creative way.

On the other hand, guided writing is designed to motivate the students to tackle a problem by collaborate with their teacher and other students first, then work individually. In line with this, Vgotsky (1978) states that students are capable of performing at higher intellectual levels when they are asked to work in collaborative situations than when asked to work individually. Brown (1994, p. 328) also states "Guided writing loosens the teacher's control but still offers a series of stimulators, for example, by asking students a series of questions". From the statements above, it can be concluded that Guided Writing is a process of writing after imitative writing and dictation guided by the teacher with stimulators.

In line with the statement above, Doff (1997, p.153) states, "As soon as students have mastered basic skills of sentence writing, students need to progress beyond very controlled writing exercises to freer paragraph writing; however, they will make this transition more easily and learn more if we can guide their writing." In addition Reid (1993) explains that guided writing is free writing limited to structuring sentences. Guided Writing concentrates on vocabulary building, reading comprehension, grammar and even oral skills that culminated in a piece of writing."

In Exp. group 1, researcher gave the student a topic and let them work individually. They started the activity from reading text first, gaining, developing, and organizing their own ideas until finishing their writing independently by using Graphic Organizers strategy. While, students in Exp. group 2 used Guided Writing strategy, after gave the topic for the students, the researcher let the students to read the text, then asked for the questions from the teacher and work in pair to exchange their ideas, and after that shared their ideas to the class. At the end of the class, they wrote a paragraph based on the topic has been discussed. In sum, the similarity between these two strategies are both of them focus on how students gaining and exploring their ideas about the certain topic, while the differences of these two

strategies are about the process in gaining and exploring the ideas, in Exp. group 1 the students work by themselves, while in Exp. group 2 the students worked in pairs.

In order to see whether the students' writing achievement were fully caused by the strategies employed or not, so the researcher used students' reading level as the moderator variable. Tierney and Pearson (1984, p. 33) described reading and writing as essentially similar processes of meaning constructing. In the process of reading, meaning is created as a reader uses the background of her / his experience to do or think and based on the experience he/she generates ideas in order to produce the written form. It means that it has a good relationship between reading and writing. Braunger and Lewis (1997) state that writing leads to improve reading achievement, reading leads to better writing performance, and combined integrated reading and writing instruction leads to a higher level of thinking than when only either process is taught.

Referring to the explanation above, the writer conducted a research to see the effectiveness of using Graphic Organizers and Guided Writing strategies without neglecting the influence of the students' reading level towards students' writing achievement.

2. Theoretical Background

a. Concept of Writing Process

According to McCrimmon (1984, p.10), the writing process is divided into three stages: *planning, drafting,* and *revising.* A) Planning is a series of strategies designed to find and produce information in writing. It is also called pre-writing. In this stage, the writer selects a topic and gathers information or ideas, B) Drafting is a series of strategies designed to organize and develop a sustained piece of writing, and C) Revising is a series of strategies designed to re-examine and reevaluate the choices that have created a piece of writing.

b. Concept of Descriptive Paragraph

According to Jolly (as cited in Sumarsih and Sanjaya, 2013) there are five types of descriptive writing paragraph. They are: 1) Describing process, 2). Describe an event, 3). Describe a personality, 4) describe a place, and 5) describe an object.

The example of descriptive paragraph

My first apartment → Topic sentence

My first apartment was very small. It was a studio apartment, so it had only one main room and a bathroom. The main room was divided into three areas. At one end of it was a kitchenette, where i cooked and ate my meals. My living/sleeping area was at the opposite end. I had just enough space for a bed, a coffee table, a floor lamp, and a small television. My study area was against the back wall. I lived there for two years, but I moved because my landlord raised the rent. My apartment was small that I could never invite more than three friends at the same time!

Supporting sentences

Concluding sentence

c.   Graphic organizer as writing strategy

Egan (1999, p. 641) states "A graphic organizer is a visual representation of knowledge, a way of structuring information, and of arranging essential aspects of an idea or topic into a pattern using labels" Graphic organizers provide a visual representation of key details and ideas for students who have difficulty organizing information (Baxendell, 2003). Although graphic organizers make successful in teaching writing process, the teacher must learn how to be cautious when choosing graphic organizers to incorporate into writer's workshop. Baxendell (2003) suggests that graphic organizers be consistent, coherent, and integrated in creative ways to show success in student's learning. It means that graphic organizers are presented in a creative way.

3. METHOD

3.1 Design of the Study

This research, the writer used experimental method. This experimental study uses a factorial design. Creswell (2012) explains that factorial design is a kind of research designs which enables the researcher to examine the independent and simultaneous effects of two or more independent variables on an outcome. In this study, a two by three (2x3) factorial design is used since the writer uses one dependent variable and two independent variables. In this study, Graphic Organizer and Guided Writing strategy are the independent variables and students' writing achievement is the dependent variable. Furthermore, the writer will also use students' levels of readingas the control variable to see whether there is interaction among writing strategies, students' Reading levels and their writing achievement.The research design can be seen as follows:

Table 1

The Factorial design

Exp. Group 1	R O_1 X_1Y_1 O_2 Y_2 Y_3
Exp. Group 2	R O_1 X_2Y_1 O_2 Y_2 Y_3

Notes:

Exp. Group 1 : Experimental group 1, Exp. Group 2: Experimental group 2 R: Random, O1 :Pre-test, O2: Post-test, X_1: Graphic Organizer, X_2: Guided Writing, Y_1: the 3th level, Y_2 : the 4th level, Y_3: the 5th level.

3.2   Research Procedure

a. Strategy

The strategies used in teaching writing in this research were graphic organizers strategy and guided writing strategy. The goal of this research was to know the effect of these strategies on students' writing achievement based on their reading levels. The researcher began visual representation of knowledge, a way of structuring information, and of arranging essential aspects of an idea or topic into a pattern using labels Egan (1999), Graphic organizers provide a visual representation of key details and ideas for students who have difficulty organizing information (Baxendell, 2003).When the information had gathered, students label graphic organizers. Then, students wrote a paragraph by seeing the lap as the concept of their writing. While, in Guided Writing, students started the activity by thinking individually about a certain topic, and then researcher "pair" students in small group to discuss and exchange their ideas and after that they shared their thinking to the entire class. At the end of the class, they wrote a paragraph about the topic that has been discussed.

b. Technique and Procedure for Teaching

This research was conducted in 32 meeting for each group. Thirty-two meetings were includes pre-test and post-test activities for teaching writing trough Graphic Organizers strategy, and thirty-two meetings includes pre-test and post-test for teaching writing through Guided Writing strategy. The meeting spent for about 90 minutes or 2 x 45 minutes. Since the sample of the research were the students from non-English department, the researcher taught them the materials related to academic writing before asked them to write a paragraph. The researcher taught them the writing materials from meeting 2 up to 10, and wrote a descriptive paragraph from meeting 11-31.

c. Population and Sample

i.   Population of the Study

The population of this study is the fourth semester of PGMI Program at IAIN Raden Intan Lampung in the academic year 2014-2015. There are 4 classes and the

total number of the fourth semester students is 120 students. Table 2 present the distribution of the fourth semester student at IAIN Raden Intan Lampung.

Table 2

Population of the study

No	Class	Total
1.	A	30
2.	B	30
3.	C	30
4.	D	30
Total		120

Source: IAIN Raden Intan Lampung, 2014-2015

ii.   Sample of the research

        This research, the writer used random sampling. Creswell (2012) defines that stratified random sampling is another possible sampling technique that enables the researchers to classify the population into groups on the basis of certain characteristics (e.g. gender, motivation, and so forth), then using random sampling to choose the sample from each groups of the population. The writer rolled those of paper and put them into a box. Then, the writer shook the box until a roll of paper came out of it. The writer determined the first roll of paper that came out of the box is B class and D class. Furthermore, the writer firstly administered an IRI test from Burns and Roe (Roe, 1999) to the population in order to find out their reading levels. After that, the writer assigned the students randomly into two groups. First group is taught using Graphic Organizers strategy. The second group is taught using Guided Writing strategy. The distribution of the sample in this study seen as follow:

Table 3

The Result of Students' Informal Reading Inventory

Reading Levels			Total
5	4	3	
10	20	30	60

Source: The IRI test of the students PGMI Program 2014-2015

Table 4
The Sample Distribution of the Study

Group	Level 5	Level 4	Level 3	TOTAL
Exp. group 1	5	10	15	30
Exp. group 2	5	10	15	30
Total	10	20	30	60

Source: The IRI test of the students PGMI Program 2014-2015

d. Techniques for Collecting the Data

Test is a method of measuring a person's achievement, knowledge, or performance in a given domain (Brown, 2003, p.3). Kind of test that was given to students is writing test. The ratters were the lecturers of IAIN Raden Intan Lampung.

In order to measure the students' achievement, the researcher used the score of pre-test and post –test as research instruments for both the Exp. group 1and Exp. group 2. The score in pre-test and post-test were the most consideration whether the treatments of Exp. group 1 and Exp. group 2 gave positive effect or not towards students' writing achievement. The topic that was given to students in pre-test was *our beloved university* and the topic for post-test was *our beloved university*. To ensure the reliability of the scoring, two ratters evaluated each of the students' performance by using scoring sheet. The scoring criteria covered the understanding of purpose, content, organization, support, language and CSWE. Two ratters were asked to score the students' writing achievement by using descriptive writing assessment taken from campus. Then, all the data obtained were converted into percentages ranging from 1-100. The achievement of the students was categorized as follows:

Very Good (80-100), good (70-79), average (56-69), poor (40-55), very poor (<40). (Buku Pedoman Tarbiyah IAIN Raden Intan Lampung, 2014, p. 5). The detail of the instruments in pre-test and post-test, and the rubric in writing descriptive paragraph.

The writer used in writing test to collect the data. The test contained a topic and the students were in instructed to write a paragraph based on the topic. The test was administered twice, as the pre-test and the post-test. The pre-test was done to find out the students' writing achievement as a baseline before the treatment. The post-test was done to find out the students' writing achievement and the treatment.

4. Result and Discussion

4.1   Result

4.1.1   Score Distribution of Students' Writing Achievement in Exp. group 1 and Exp. group 2

Table 9

Distribution of students' writing achievement scores in Exp. group 1 and Exp. group 2
(N=60)

Level of Achievement	Pre-test			Post-test		
	Mean	Frequency (%)	SD	Mean	Frequency (%)	SD
Very Good (80 – 100)	85.18	6 (10%)	0	90.81	40 (66.66%)	5.65
Good (70 – 79)	37.32	4 (6.6%)	2.82	74.20	14 (23.33%)	1.41
Average (56 – 69)	65.06	14 (23.3%)	1.41	68.05	6 (10%)	4.24
Poor (40 – 55)	46.61	16 (26.6%)	0	-	-	-
Very Poor (<40)	32.28	20 (33.3%)	1.41	-	-	-
Total	60.75	60 (100%)	5.64	77.69	60(100%)	11.30

Based on the data analysis of the students' writing achievement at the beginning of the study, it was found that most of the students in Exp. group 1 and Exp. group 2 were in average level achievement with mean score 60.75. Meanwhile after intervention was done, the students' mean score was 77.69 or was in good level of

achievement.

Table 10

Mean Score distribution of Graphic Organizers and Guided Writing Strategies used by students (N = 60)

Variable	Mean	Level 6	Level 5	Level 4	Level 3	Level 2	Level 1	Total
Total	31.80	50%	25.45	24.3%	-	-	-	100%
Purpose	2.66	29 (48.3%)	17 (28.3%)	14 (23.3%)	-	-	-	60 (100%)
Content	2.68	27 (45%)	26 (43.3%)	7 (11.6%)	-	-	-	60 (100%)
Support	2.6	18 (30%)	24 (40%)	18 (30%)	-	-	-	60 (100%)
Organization	2.52	19 (31.6%)	29 (48.3%)	12 (20%)	-	-	-	60 (100%)
Language	2.45	13 (21.6%)	27 (45%)	20 (33.3%)	-	-	-	60 (100%)
CSWE	2.35	7 (11.6%)	27 (45%)	20 (45.3%)	-	-	-	60 (100%)

Furthermore, based on the students' score in Graphic Organizers and Guided Writing strategies in posttest, it was found the distribution of the strategies used is as follows. For the aspects of Purpose, 48.3% students are in level 6, 28.3% are in level 5, and 23.3% are in level 4. For content, 45% students are in level 6, 43.3% students are in level 5, 11.6% students are in level 4. For Support, 30% students are in level 6, 40% students are in level 5, and 30% students are in level 4. For the language, 21.6% students are in level 6, 45% students are in level 5, and 37.3% students are in level 4. For CSWE, 11.6% students are in level 6, 45% students are in level 5, and 45.3% students are in level 4.

4.1.2 Analysis of Paired and Independent Sample T-test of Pre-test and Post-test in Exp. group 1 and Exp. group 2

Table 11
The result of Paired and Independent sample T-test of pre-test and post-test score in Exp. group 1 and Exp. group 2

Variables	STUDENTS' MEAN SCORE				PAIRED SAMPLE T-TEST						INDEPENDENT T-TEST			
	Pre-test		Post-test		Mean dif Exp. 1	Std. Dev	p-value	Mean dif. Exp. 2	Std Dev	p-value	Mean dif of pre-test	p-value	Mean dif. Of post-test	p-value
	Exp. 1	Exp. 2	Exp. 1	Exp. 2										
W_TOT	19.13	18.13	31.80	29.38	12.67	3.817	0.00	11.25	2.58	0.00	1.00	0.56	2.416	0.14
Purpose	3.60	3.40	5.66	4.98	2.066	0.989	0.00	1.583	0.492	0.00	0.20	0.53	0.68	0.00
Content	3.50	3.25	5.56	5.18	2.066	0.727	0.00	1.933	0.449	0.00	0.25	0.35	0.38	0.00
Organzt	3.26	3.08	5.35	5.05	1.850	0.617	0.00	1.800	0.447	0.00	0.18	0.51	0.30	0.81
Support	3.10	2.96	5.20	4.91	2.100	0.635	0.00	1.950	0.461	0.00	0.13	0.62	0.28	0.14
Languag	2.90	2.86	5.08	4.75	2.183	0.594	0.00	1.950	0.461	0.00	0.10	0.72	0.33	0.80
CSWE	2.76	2.63	4.93	4.50	2.166	0.976	0.00	1.866	0.776	0.00	0.13	0.71	0.43	0.01

To know whether there was a significant progress in students' writing achievement as the result of their being trained for about 2.5 months, paired sample t-test was used to analyze the pre and post-test scores.

The result of paired sample t-test analysis showed that students' mean difference of pre-test and post-test in Exp. group 1 was 12.67 with standard deviation of 3.817. Meanwhile paired sample T-test in Exp. group 2 was 11.25 with standard deviation of 2.58. The significant result of both groups was supported by the value of the level of significance 0.000, in which it was lower than 0.05. It infers that both of strategies enhanced students' writing achievement in writing.

The result of independent sample t-test showed that student' mean differences of pre-test in Exp. group 1 and Exp. group 2 was 1.00 with the significant result 0.56. Meanwhile the students' mean difference of post-test score in Exp. group 1 and Exp.

group 2 was 2.416 with the significant result 0.14. It means that there was no significant difference on students' pre-test and post-test score for both Exp. group 1 and Exp. group 2.

4.2   Discussion

The result of Paired sample t-test indicated that Graphic Organizers and Guided Writing strategies enhanced students' writing achievement. It was proved by the significant progress that the students had after the intervention. The mean of the students' post-test score of the writing achievement was higher than of their pre-test. In addition, the result of independent t-test showed that there was no significant mean difference on students' post-test score between these two groups. It means that Graphic Organizers and Guided Writing strategies were equally good to be implemented in teaching writing. These finding were similar to the finding of Martin (2008) and Delrose (2011) who found that Graphic Organizers strategy was an effective strategy to improve students' writing achievement. Meanwhile Utari (2014) and Wulandari (2013) who found that Guided Writing strategy was an effective strategy to improve students' writing achievement.

Furthermore, the finding above was supported by Piaget in Crawford (2005, p. 2) stated that the students learnt by making sense of the words in term of the concept they already have, so the teacher should begin a lesson by drawing the students' prior concept and showed them how to inquire questions, seek, and examine information. It is line with Strongman, Hall and Meyer (2003) stated that the use of Graphic Organizers to improve learning and aid students with learning disabilities in organizing thought, brainstorming ideas, and linking information learned from literature to prior schema.

Brown (2011) suggested that students with learning disabilities often struggle with processing reading comprehension to written language. He also emphasized the students were provided with graphic organizers during reading and writing, provided with explicit instruction on how to use graphic organizers, and provided time to

practice implementing them, student achievement scores increased.

Vygotsky (1962) as cited in Bounchard (2005, p. 9) suggested that students learnt best when their learning is scaffolding. He added that the importance of language in interacting with people. In other words, the learner will be able to confident working with a group of students and discus with the teacher. The Exp. Group 2 allowed the students were discussed and the teachers' role in guided writing is one of facilitator to help the students discover what they want to say and how to say it meaningfully with clarity. Therefore students and teacher join to compose a text well to develop their writing ability in accordance with writing process development. Autumn (2007) says that guided writing is the name given to a range of ways in which teachers support developing writers. It involves a small group of students sitting with the teacher, rehearsing, questioning, clarifying, and revising as each produces an individual piece of writing. Guided writing can take place at any stage of the writing process. They are; before writing to support students' planning and drafting of their work, at the point of writing, and after writing feedback session. These activities motivate the students to practice more and more to improve their writing. In brief, Graphic Organizers and Guided Writing strategies were equally good to be implemented in writing class.

Furthermore, the result of analysis by using two- ways ANOVA showed that: 1) there was a significant interaction between students' writing achievement and student' reading level; 2) there was a significant interaction between strategies used by the students' and their writing achievement; 3) there was a significant interaction of student' reading level and each used strategy (GO and GW) on students' writing achievement.

Since there was a significant interaction between students' writing achievement and student' reading level, the researcher continued to analyze the significant difference in students' writing achievement based on their reading level. From the computation, it was found that the best progress in Graphic Organizers was achieved by students' in level 3, followed by students' in level 4, and students' in level 5. Meanwhile in the best progress in Exp. group 2 was achieved by students' in

level 3, followed by students' in level 4 and students' in level 5.

Graphic Organizer strategy was more suitable to be implemented to the students' in level 3 it means to the low level student. It was proved by gain score achieved by the students' in level 3 in Exp. group 1 was above students' in level 4 and level 5. The Graphic Organizer strategy helped student in both reading comprehension and writing because the procedure increases processing (Avery, 1994). Both of these processes have certain steps that must be followed in order to have a successful outcome. Graphic organizers help the students put things in sequential order. Lehman (1992) believes that these organizers provide structure, organization, format and a place for the student to relate information to their personal experiences. Such a procedure is invaluable to the reading and writing processes. Since this strategy guided the students to comprehensive plan to help students with writing, text organization, reading comprehension and thinking. The Graphic Organizers were used as a facilitator to increase reading and writing achievement.

Meanwhile Guided Writing strategy was more suitable to be implemented to the students' in level 3 it means the students' who got low level. It was proved by the gain the highest progress because they help the students' in the process work with the groups and got the support from the teacher. Guided Writing strategy is a strategy that gives students the opportunity to review a taught writing skill in small group setting and to apply the skill through independent writing with the teacher support, and group comes together for purpose of learning and practicing this writing skill.(Ontario; 2005). Since students' in low level got many sufficient inputs after discussing with the groups and the teachers' support, they could write a paragraph easily. They got confident in writing process because they have known what they were going to write about.

The result from analysis of stepwise regression showed that all of the aspects in writing have contribution on students' writing achievement. However, the highest contribution in Graphic Organizers group was in the aspect of support/detail; it the same in Guided Writing group the highest contribution was in the aspect of

support/detail.

The highest contribution on students' writing achievement in Exp. group 1 was in the aspect of support/detail. Students in Exp. group 1 find their ideas into main-idea-and-detail charts, namely GO charts. They started their reading text to collect some information. This process allows students to organize thoughts before writing by displaying abstract relationships in a graphic representation where the relationships are clearly displayed (Kim, 2004). They flow in one direction, either right to left or top to bottom, and are often connected by arrows and numbered boxes to ensure clear understanding of the relationships of the sequence of events. This format can be used to present one main idea with its supporting details along one strand in the diagram which is then contrasted with the opposing main idea, or the ideas can be compared and contrasted point by point across main ideas (Baxendell, 2003).The main-idea-and-detail chart helps to extract main ideas and supporting details from extraneous information, allowing the focus to remain on relevant information (Ellis & Howard, 2005). Students can use this format in the writing process to create paragraphs that focus on one main idea and details highlighting the importance of the main idea.

In line with, the highest contribution in Guided Writing was in the aspect of support. Support is the aspect of writing is the descriptive information with detail. Since in Exp. group 2 were gaining and exploring their idea with in group and support teacher, they got more information and detail ideas about the topic for their writing. They developed the topic provided by the teachers in the inductive form that going from discussing and collecting some specific detail from their groups. Therefore students and teacher join to compose a text well to develop their writing achievement in accordance with writing process development.

5. CONCLUSIONS AND REMARK

5.1 Conclusions

From the finding and interpretations in the previous chapter, some conclusions could be presented. First, Graphic Organizers and Guided Writing strategies were effective to improve students' writing achievement. Second, both Graphic Organizers and Guided Writing groups were equally good to be implemented in teaching writing process. However, both of Graphic Organizers and Guided Writing strategies were more suitable for students' in low level because these strategies help the students more confident to start to write from ideas or the list they got some problem information through produce written composition with confidence.

5.2 Remark

After conducting this research, the researcher would like to give some suggestion. First, the future researchers are suggested to conduct a similar study on the other skills like reading, listening and speaking at other level of students for improvement of language skill. Second, it is suggested that the PGMI Program is the program for the students' who want to be elementary teacher; The English lectures at PGMI Program should implement appropriateness material based on the characteristics of elementary students therefore both these strategies GO and GW strategies are equally good for teacher in teaching writing.

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THE COMPARISON OF USING KEYWORD AND ROOT WORD ANALYSIS METHODS TOWARDS STUDENTS' VOCABULARY MASTERY

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Abstract

Two methods are used to know the different result of students' vocabulary mastery in this research. Those are keyword method and root word analysis. In this research, the researcher used quasi experiment design. The research was conducted at the second semester of English Department of Muhammadiyah University of Metro in academic year 2015/2016. The researcher took all of the students of second semester as the sample, 23 as the experiment class 1 and 23 were included as experimental class 2 which were taken by using disproportionate systematic purposive sampling. In collecting the data, the researcher used pre-test and post-test. In analyzing the data, the researcher used non-parametric formula. After analyzing the result of data by using non-parametric formula, the researcher gets the result of t_{ratio} is 5,096 and t_{table} 2,02 (on criterion 1) and 2,69 (on criterion 2). It means that t_{ratio} is bigger than t_{table}, then the criterion of t_{ratio} is H_a is accepted if t_{ratio} is bigger than t_{table}. So, there is the significant difference of learning vocabulary between using keyword method and root word analysis toward students' vocabulary mastery at the second semester of English Department of Muhammadiyah University of Metro in academic year 2015/2016 and keyword method is more effective than root word analysis toward students' vocabulary mastery. Keyword method can be used for increasing the students' vocabulary mastery.

Keywords: keyword method, root word analysis, vocabulary mastery

1. Introduction

English has been the first foreign language in Indonesia. Indonesia has been carrying out teaching EFL (English Foreign Language) in level of schools, starting to be taught in basic primary school until secondary school. English has four skills that should be mastered by learners until they can use it for communication. Those skills are listening, speaking, reading and writing which need some components namely structure, grammar, spelling and vocabulary. Vocabulary is one of the important

components in language learning which cannot be ignored. Without learning vocabulary, students cannot master English perfectly. EFL learners should know the appropriate words, how to spell, how to pronounce, what the meaning is, etc., to express the idea. In another hand, students need something different to make vocabularies accepted easily. Under scoring the importance of vocabulary acquisition, Schmitt (2000 :55) declares that "Lexical knowledge is central to communicative competence and to the acquisition of a second language". Nation (2001: 26) further describes that "There is relationship between vocabulary knowledge and language use as supplement: knowledge of vocabulary enables language use and opposite, the use of language aims to an increasing in vocabulary knowledge". The importance of vocabulary is demonstrated in the students' daily. "In English as a second language (ESL) and English as a foreign language (EFL) learning vocabulary fiddles important role in all language skills (i.e. listening, speaking, reading, and writing" (Nation, 2011: 56). In a real English learning process, most of the students only found vocabularies intuitively on the text they ever read, without learn them intensively. In giving method to the L2 learners for learning vocabulary need other way from the habitual learning process ever done. The researcher finds the problems on the vocabulary learning of EFL students. In the fact, the lecturers only focus on the finishing of materials in the class. The lecturers ignore the methods that should they use for teaching vocabulary to be interesting. The most important thing they did is giving the students task for remembering the new words. The lecturers do not have any interesting method to make their students get new vocabularies easily.

The problem formulations in this research are: (1) Is there any significant difference between keyword method and root word analysis toward students' vocabulary mastery? (2)Which one is better of keyword method and root word analysis toward students' vocabulary mastery. The purposes of this research are : (1) to know the significant difference between keyword method and root word analysis toward students' vocabulary mastery.(2) to identify which one is better of keyword method and root word analysis toward students' vocabulary mastery. The benefits of

this research are to give some information about the comparison of keyword method and root word analysis toward students' vocabulary mastery, can be used to improve the quality of learning vocabulary, can be used as reference for other researchers who want to conduct research about the differences between keyword method and root word analysis towards students' vocabulary mastery.

2. Theoretical Background

Keyword method, also known as the keyword mnemonic, is among the most widely researched mnemonic strategies. It is one of the most powerful methods for learning the meaning of foreign language vocabulary, and can also be used for remembering the pronunciation of a foreign language word when given a word in one's native language. Other uses include new terminology and facts in one's own language. Based on Helmut (2012), he argues that keyword method has important role as tool in the personal language learning toolbox. Onur Köksal and Ahmet Çekiç (2014: 1031) conclude as follow :

Mnemonic refers to systematic procedures designed to improve one's memory. It is essentially a mnemonic technique. In this technique, a new word is associated to a similar sounding familiar word or keyword. After, a mental image is formed to link the unfamiliar word to the keyword. The learner generates or is provided pictorial association of the definition referent that interacts with the keyword.

Chen & Hui-Jing (2006: 14) declare that "keyword method is effective for ESP learning because it provided a meaningful visual image upon which to base memory for the meaning of new words".

In conclusion, the researcher argues that keyword method is one of important strategies to build students' memory by imagine the words which can be constructed in systematic procedures.

Thus, One way in which vocabulary knowledge can be enhanced so that they are able to comprehend a reading text through the use of morphological analysis to predict the meaning of novel vocabularies.

Farsi (2008: 52) declares morphological analysis as follow:

Morphological analysis is the process of disassembling complex words into meaningful parts (prefix, suffix, and root), such as childhoods = child + -hood + -s and reassembling the meaningful parts into new meanings (motherhood, fatherhood, brotherhood).

It is also supported by Arnoff and Fudeman (2005: 15) who state there are two approaches of morphological analysis, they are the analytic approach which is concerned with morpheme identification or breaking words down into its meaningful components and the synthetic approach which is concerned with productivity of morphological structure or bringing the smallest pieces (morphemes) together to form words.

Morphological analysis involves three skills: (a) breaking a new word into its morphological parts, (b) connecting a meaning to each of those parts, and (c) combining the meaning of the parts to determine the word's definition. When learners have those skills, they may be able to predict the meaning of morphologically complex difficult word. This is because having an awareness of morphological structure and the ability to break down morphologically complex words into their constituent parts may help learnerrs assign meaning to new words they encounter in text. Kuo and Anderson (2006 :161) also state that "learners who are provided with morphological knowledge including the knowledge of how words are formed, by combining prefixes, suffixes, and roots have larger vocabulary repertoire and better reading comprehension". Therefore, morphological analysis may turn to be one of fruitful strategies to uncover the meaning of new words for promoting learners' vocabulary knowledge.

Based on some explanations above, the researcher can show off the conclusion that root word analysis is disassembling complex word to be some parts which can become new words or identifying morpheme word become new meaningful words then it can affect vocabulary mastery and one of English skill especially in reading comprehension.

Based on the conceptual of those methods, the researcher compares them to know the result of students' achievement in vocabulary mastery by using both of methods. The researcher shows the thinking framework of this research as follow:

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┌─────────────────┐        ┌─────────────────┐
│ Keyword method  │        │ Root word analysis │
│     (X¹)        │        │      (X²)          │
└─────────────────┘        └─────────────────┘
           \                      /
            \                    /
             ↘                  ↙
           ┌─────────────────────┐
           │  Vocabulary mastery │
           │        (Y)          │
           └─────────────────────┘
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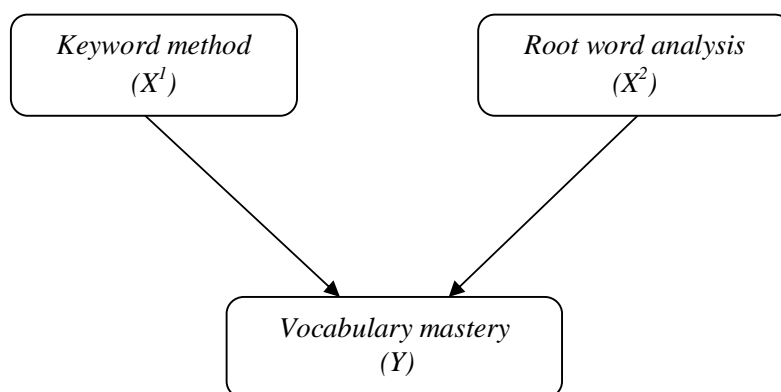
In this research, the thinking framework is keyword method and root word analysis as independent variable and vocabulary mastery as dependent variable. Keyword method is different from root word analysis. Although both of them have a relation but the use of them are different. Keyword method used to construct someone's image to link a keyword to be some words and appears the meaning. As Onur Köksal and Ahmet Çekiç (2014 :165) said that "mnemonic keyword method refers to systematic procedures designed to improve one's memory". Shapiro and Waters (2005: 48) indicated that the "keyword method of vocabulary learning is a mnemonic method to help students learn foreign vocabulary". The keyword method was effective for that, because it provides a meaningful visual image upon which to base memory for a new word's meaning. He argues that in this method a foreign word is connected to its English translation by a chain of 2 links-similarity in sound (acoustic link) and a mental image of the interaction between the 2 words (imagery link).

While, the root word analysis is breaking process on one word by dividing one complex word into some words which have more than one meaning. Stahl (2000: 99) states that "knowing a word means not only knowing its literal definition but also knowing its relationship to other words, its connotations in different contexts, and its

power of transformation into various other forms". According to Nation (2005: 55), "morphological analysis involves three skills: (a) breaking a new word into its morphological parts, (b) connecting a meaning to each of those parts, and (c) combining the meaning of the parts to determine the word's definition".

So, the difference of using keyword method and root word analysis is in process. Keyword method is building new words from one keyword and constructing someone's image. From its keyword will make new meaning. Then root word analysis is analyzing one complex word into some parts of the word and building up the new meaning from its part.

3. Method

This reasearch is included as an experimental research. According to Sugiyono (2013: 109) "Experimental research is research methodology which is used to find out the effect of the treatment to other in a restrained condition". The researcher uses comparative research which is belonging to quantitative research. The type of experiment research which is used in this research is quasi experimental design, it is the developing of a true experimental design. The researcher uses simple random sampling. The researcher takes one class on second semester of English Department of Muhammadiyah University of Metro academic year 2015/2016 to be divided into two classes. They were experimental class 1 and experimental class 2. The researcher divided them from 47 students by disproportionate stratified random sampling, because those classes consist of some boys and girls randomly. It is also included as systematic sampling because the way to divide them into two classes used odd and even SRN. Whoever had odd SRN were included as experimental class 1 and students who had even SRN were included as experimental class 2. So that, each class consists of 24 and 23 students which got the different treatment from the researcher. But, the amount of those classes is not balance. Experimental class 1 has 24 students and experimental class 2 has 23 students. So, it should be balanced to be 23 students for each class in counting the data. Dividing into balance amount is using

purposive sampling which relieve one sample from the data of experimental class 1. In this research the researcher used all the population as sample of the research. But, one of students' data from experimental class 1 was not included into the calculation result even that student was given the treatment like others. After dividing the sample into each class, the treatment were given to them which experimental class 1 was given the treatment through keyword method and control class got the treatment through root word analysis. For collecting the data the researcher used pretest, treatment and posttest. Pre Test is a first round test manages to determine a student's knowledge or preparedness for an educational experience or course of study. This step is given before presenting the treatment to know how far the student's vocabulary mastery. Pre-test consist of 30 items which is served into multiple choices with four choices those are a, b, c, and d. The students must answer the question as suitable as their own capability. When the students can answer all of the questions correctly, they get score 100 from 30 multiple choice questions. But, researcher makes sure that not all of the students can answer the questions correctly.

Treatment is an activity in giving lesson by method, technique or some games. The treatment conducted after pre-test and before post-test to know the students accomplishment on vocabulary mastery. The treatments are used by the researcher are keyword method for experimental class and root word analysis for control class.
In Post Test offered after a lesson or a period of instruction to conclude what the students learned, and to recognize the effectiveness of the technique which is utilized. After giving the treatment, the researcher presents the post test and asks the students for answering the test based on the treatment which has given by the researcher. Actually, there is no difference between pre-test and post-test questions. The post-test consist of 30 items which is served into multiple choices with four choices those are a, b, c, and d. The students must answer the questions as can as their own ability. While the students answer all questions correctly, they get score 100 from 30 multiple

choice questions. So that, the researcher can conclude which one better between keyword method and root word analysis.

The researcher gives the measuring to the students by giving some test appropiate amount of the variable and this research has two variables. So, the researcher gives 2 measuring for each variable. The instrument which is given to the sample is multiple choices which contain a, b, c and d. the instrument is constructed by matching with the syllabus of two variables (keyword method based on syntax course and root word analysis based on morphological subject). There are 30 questions which is given to get the data.

4. Result and Discussion

This research has some results in every measurement. The first result is in validity of instrument. In this research, there are two instruments. They are the instrument of pre-test and post-test. The researcher uses content validity which compares the content of Syntax and Morphology material to the content of the material which have been taught to the research sample. There are 30 (thirty) items for students' vocabulary mastery. The result of the validity is 0,992 it means that the instrument items are valid.

The second is result of reliability of instrument. To test the reliability of multiple choice questions, the researcher uses Cronbach Alpha and the result shows that the reliability is 0,941. It means that the reliability is very high as it can be seen in the classification Very high (0,80 – 1,00), High (0,60 – 0,80), Sufficient (0,40 – 0,60), Low (0,20 – 0,40), and Very low (0,00 – 0,20).

Third, for measuring of the normality, the researcher uses non-parametric formula by using Liliefors method to measure the data is come from normal population or not. The data normality of the test accepted H_0 if $t_{count} < t_{tab}$ for the significance level 5% ($\alpha=0.05$) and also the significance level 1% ($\alpha=0.01$). on the table bellow it is obtained that L_o post test are lower than L_{tab} in the significance level of 5% ($\alpha = 0,05$).

So, the hypothesis H_0 is accepted. It means that both of the samples in this research come from the population which have normality distribution.

Table 5. The Result Data of Normality Distribution Test

Test	Variable (X)	L_o	L_{tab} Significance level 5% ($\alpha = 0,05$)	Conclusion
Pre-test	Class A	0,1251	0,173	Normal
	Class B	0,1485	0,173	Normal
Post-test	Class A	0,0293	0,173	Normal
	Class B	0,1642	0,173	Normal

Source : The Students' Result of Normality Test

Fourth is the result of measuring the homogeneity. The data homogeneity of the test accepted H_0 if $F_{ratio} < F_{table}$ for the significance level 10% ($\alpha = 0.05$) and also the significance level 2% ($\alpha = 0.01$). on the table bellow can be seen it is obtained that F_{ratio} of pre-test and post-test is lower than f_{tab} in siginificance level of 10% ($\alpha = 0,05$) and 2% ($\alpha = 0,01$). So that, the hypothesis H_0 is accepted, it means that both samples in this research come from the population which have the variance equality.

Table 6. The Result Data of Homogeneity Distribution Test

Test	F_{ratio}	F_{table} Significance level		Conclusion
		10% ($\alpha = 0,05$)	2% ($\alpha = 0,01$)	
Pre-test	1,12	2,02	2,77	Homogenous
Post-test	1,20	2,02	2,77	Homogenous

Source : The Students' Result of Homogeneity Test

Fifth is counting of balancing data in pretest.

Table 7. The Calculation Hypothesis of Pre-Test

Experiment Class 1	$n_1 = 23$	$X_1 = 60$	$s_1^2 = 12$
Experiment Class 2	$n_2 = 23$	$X_2 = 62$	$s_2^2 = 12,9$

Source : Table data results of Hypothesis Pre test at English Department

The table above shows that $t_{count} = 0,17$ and t_{df} on significance level 5% = 2,02 it is gotten $t_{tab} < t_{count} < t_{tab}$. So, H_o is accepted and H_a is rejected. It showss that there is no difference of using Keyword method and Root word Analysis toward students'

vocabulary mastery at the second semester of English Department of Muhammadiyah University of Metro.

The last is the hypothesis test of comparison. The data which is gotten is as bellow:

Variable	N	Average score	S^2	S	T_{ratio}	T_{table}	Conclusion
X_1	23	74	12,05	3,47	5,096	2,02	Different
X_2	23	60	14,3	3,78			

Source : Table data result of Hypothesis of Post Test

From the table above, it is shown that t_{ratio} higher than t_{table}. On significant level 0,05 is 2,02 based on the criteria above, H_o is rejected and H_a is accepted. It means that, there is different result of using Keyword method and Root word Analysis toward students' vocabulary mastery at the second semester of English Department of Muhammadiyah University of Metro in academic year 2015/2016.

In this research, the researcher uses daily vocabulary in multiple choice test as the instrument of the research. Then, the average score of post-test from each class using keyword method and root word analysis is compared to find the differences of both scores. The result calculation shows that the score of post-test in experimental class 1 is higher than experimental class 2. It also can be seen from the pre-test score which is compared with the post-test score.

Considering the different result of the use of those methods in this research, the researcher agrees with some theoretical reviews which are declared by some experts about keyword method and root word analysis. First, the theory which showed that keyword method is important by Helmut (2012) "keyword method has important role as tool in the personal language learning toolbox". The result shows that every student should have the tool to improve their language learning. Keyword method as the method can be the tool to improve someone's vocabulary mastery. It is also supported by Onur Köksal and Ahmet Çekiç (2014: 1031) who conclude that mnemonic refers to systematic procedures designed to improve one's memory. It is

essentially a mnemonic technique. In this technique, a new word is associated to a similar sounding familiar word or keyword. After, a mental image is formed to link the unfamiliar word to the keyword. The learner generates or is provided pictorial association of the definition referent that interacts with the keyword. The students who studied vocabulary by using keyword method have some linking words and they can enrich their new vocabularies.

Second is for the theories of root word analysis which showed that it is process of disassembling complex words. The words which are analyzed are the complex words, so if the students or learners did not know the knowledge of morphological before will be difficult to learn. As Farsi (2008: 52) declares morphological analysis is the process of disassembling complex words into meaningful parts (prefix, suffix, and root), such as childhoods = child + -hood + -s and reassembling the meaningful parts into new meanings (motherhood, fatherhood, brotherhood). It is also supported by Arnoff and Fudeman (2005: 15) who state there are two approaches of morphological analysis, they are the analytic approach which is concerned with morpheme identification or breaking words down into its meaningful components and the synthetic approach which is concerned with productivity of morphological structure or bringing the smallest pieces (morphemes) together to form words. So, need more morphological comprehension to use this method to learn vocabularies. Some students in experimental class 2 felt difficult when did the breaking words because their knowledge about morphological is not much yet. Even this method is not give the better result than keyword method, but this method has effected to increase students' vocabulary mastery.

The difference result of this research is there is different achievement in mastering vocabularies. The result calculation shows that the score of post-test in experimental class 1 is higher than experimental class 2. It also can be seen from the pre-test score which is compared with the post-test score. The result showed that there are the differences between pre-test and post-test (post-test > pre-test). From the pre-test

calculation, t_{count} = 12,44 and t_{tab} on significance level 5% = 2,02, on significance level 1%= 2,7 it is obtained $t_{tab} < t_{count} < t_{tab}$ (2,02 < 2,7 < 12,44). So, H_0 is accepted and H_a is rejected which has the meaning that there is no difference between using keyword method and root word analysis toward students' vocabulary mastery at the second semester of English Department of Muhammadiyah University of Metro in academic year 2015/2016. Afterwards, from the calculation of post-test, it is shown that t_{ratio} is higher than t_{table} on significant level 5% is 2,02. So, $t_{ratio} > t_{table}$ (5,096>2,02). It proves that H_0 is rejected and H_a is accepted. It can be said that there is different result between pre-test and post-test score in experimental class and control class. Moreover, the changing of students' post-test score is higher than their post-test value, especially in experimental class which used keyword method as the learning method. It means that, keyword method is more effective than root word analysis to increase students' vocabulary mastery in daily vocabularies. The result of calculation indicates that the students' post-test result of experimental class is better than control class. It is seen when students' post-test score are compared to pre-test score. The result shows that there is significant difference between pre-test and post-test score (post-test > pre-test).

In conclusion, learning process for the students which used keyword method and root word analysis was different. They have medley ways to master something especially in vocabulary. In keyword method, students could build many new words for new meaning because it was not limited on the one word. While, root word analysis needs some knowledge to break up one word become many new words with new meaning. The researcher can say that by applying two methods could give the different result on mastering vocabulary. So, from the data of students' score on pre-test, treatment and post-test, it can be said that keyword method is more effective than root word analysis toward students' vocabulary mastery at the second semester of English Department of Muhammadiyah University of Metro in academic year 2015/2016.

5. Conclusion and Remark

Based on description above, the researcher purposes to give some suggestion to improve vocabulary mastery in daily activities can use keyword method. It can enrich students' vocabularies and it also can show them the differences of word class all at once in using the words. By using keyword method, the students also can be active to find the new words by themselves. They have the innovative to enrich their vocabularies especially in daily activities verb. From one keyword, they can build up it into 3 up to 10 new words with new meaning. If they have 10 keywords, they can build the new words around 100 words. It also can be memorized easily because the new words still have the relation with the main word.

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COMPARATIVE STUDY BETWEEN LEARNING OUTCOMES STUDENT USING MODEL EXPOSITORY AND COOPERATIVE LEARNING COURSE IN THE DEVELOPMENT OF LEARNERS

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Abstract

The purpose of this research was to determine the learning outcomes of students in lectures development of learners learning outcomes of students in the subject of the development of learners with learning model cooperative learning research methods and the nature of the study in the first phase begins the study of theoretical, primarily implemented in the literature, empirical studies conducted when a test model of learning. Sample in this research is the education of students who took the English language courses development of learners as many as 75 people. Data were collected to measure the effectiveness of the use of models of student learning using a written test of 70 multiple choice questions and one about the form of case studies. Result of the study is the use of models Expository learning on the eye lecture development of learners. The result is more effective than the use of cooperative learning models.

Keywords: *Comparative, learning outcomes, expository, cooperative learning, learners' development.*

1. Introduction

One of the important problems in the world of education that are often in the spotlight of various circles is that the quality of education. The learning achievement is often used as an indicator for the quality of education. Actually, many factors influence it. Abin Shamsuddin (2007; 166) describes various factors that influence learning outcomes among others, the expected output, input raw, instrumental input, and environmental input.

The expected out showed qualification level (standard norms) would be appeal and motivation, so that will be a factor next stimulus response in learning activities.

Raw input / learners with different character, shows the factors that exist in individuals who learn that will provide facilities or barrier in learning activities, besides that it would be a motivation and stimulus for himself.

Instrumental input showed qualifications and completeness of the means necessary for the process of teaching and learning. Which includes instrumental input here is the headmaster and his deputy, educators and education personnel, facilities and infrastructure, curriculum, management, finances.

Environmental input, showing the situation and the physical state (campuses, schools, climate), good-people relationships with friends, teachers and people who are in an educational environment which might be a support or could be the obstacle in achieving learning outcomes. If the description above refers to the professor or teacher plays an important role in helping the student or students in achieving the expected learning outcomes. professor or teacher is just not enough to master the learning material but also need to understand the various approaches, strategies, methods, learning models and apply them properly in the learning activities, so that the student or students can achieve the expected learning outcomes.

Students' developments constitute the basic education courses that aim to equip students the Faculty of Education with the understanding development of learners and ways of learning. With that understanding is expected of the students as prospective educators can determine teaching materials, approaches, strategies, teaching methods that are relevant to the developmental needs of learners. But the reality of course the development of learners have for students seems to be the number two courses after courses majors, so the learning result obtained is lower than the learning outcomes of the course subject.

The fact it requires researchers to experiment and investigate and compare the results of learning by using model Expository learning and cooperative learning in the lecture the development of learners. Hope author results of this study can give a contribution in enhancing the learning achievement of the students especially in development of learners.

2. Theoretical Background

The concept of learning

Learning can be defined as a functional interaction between the various components of education. According to Abin Syamsudin (2007; 166) there are several components involved in learning them, expected output, input raw, instrumental input and environmental input. The expected output, shows the level of qualification of raw size (standard norm), thus becoming the appeal and motivation, so it can be a stimulus and a response to the student in the learning.

Criteria for learning success

Learning outcomes can be interpreted as an accomplished student and in describing the level of learning success. Learning outcomes produced by the students can be measured by before and after the study is done. The results of the study can be viewed and expressed through the list of values. According to Abin Shamsuddin (2007; 54) results merupkan learn real skills (actual ability), which shows the aspect of the skills demonstrated and tested immediately on the spot due to the work or learning outcomes bersangkutan untuk achieve optimal learning outcomes then learning activities To-do consciously, deliberately and well-organized. The results of the study can be dinnyatakan in the form of the value or number based on the assessment criteria. According to Abin Syamsudin (2007; 249) in the evaluation norms recognize two commonly used to weigh the level of success of teaching and learning is criterion referenced and norm referenced

Criterion referenced evaluation (PAP = Reference Rate Benchmark) is a way to consider the level of success in learning by comparing achievements of students / students with criteria that had been established earlier. Criteria in question is the minimum size acceptable behavior as expressed in the Learning Objectives. Figures pass limit is typically used grades 6 scale figure 10 or 60 on a scale of l00, or 2+ in a scale of 4, or C on a scale of A-E. The philosophy underlying this assessment system

is mastery learning, where someone can be considered qualified skills (qualified) that dominate a minimum of 60% of the expected results.

Norm referenced evaluation (PAN = Reference Rate Norma), is a way to consider the level of success by comparing students' individual achievements with pestasi group (friends). Norms that can be used in various ways, namely; The average size and the size of the deployment group achievements grade achievement scores.

The concept of learning expository

Expository learning concept developed by Ausubel as a reaction to the discovery Inquiry learning developed by Jerome Bruner deems inefficient. According to Ausubel (in Abin Syamsuddin, 2007; 234) for high-level learning, students do not have to experience for yourself, students will be able to more efficiently and obtain as much information in the shortest possible time. The important thing students develop mastery of the basic framework of concepts or patterns basic understanding about something, so that students can organize data, information and experience in this connection. Expository learning in the learning system serving educators teaching materials in the form that is prepared in a neat, systematic, and complete, so that students stay listened regularly and orderly. Broadly speaking, the procedure Expository learning (in Abin Syamsuddin, 2007; 255) are:

- Preparation (Preparation). Where professors or teachers prepare lesson materials are systematic and tidy.
- Apperception (linkage). Here Lecturer or Teacher beta or provide a description speedy way to draw attention to the student or students who have been taught the material.
- Presentation (presentation of new material). A professor or teacher presenting new material by means of a lecture or tell a student or students to read materials that have been prepared (taken from the book, or specific text or written teacher)

- Recitation (evaluation). A professor or teacher to conduct a discussion about the material that has been studied, or a student / students were told to restate the material that has been delivered using their own words.
- Learning outcomes in learning expository learning in lectures development of learners in this paper is the result of the average of the semester the Middle Exam, Final Exam, Tasks, and activeness of students in the classroom.

The concept of cooperative learning

Cooperative learning is an instructional model designed to membelajarkan academic skills (academic skiil), social skills (social skills) and interpersonal skills (In YatimRiyanto, 2008; 271)According Ratim RJ (2008; 271) cooperative learning objectives are:- Individual: a person's success is determined by the person's own and not influenced by others.- Competitive: The success of a person is achieved because of the failure of others (no negative dependence)- Cooperative: The success of a person because of other people's success, one cannot achieve success with alone. The steps of cooperative learning in this paper are:- Lecturer / teacher provides information about the purpose and learning scenarios- Heterogeneous grouping of students in the study group (4 s / d 5)- Sharing of teaching materials in accordance with the existing teaching materials in the syllabus to each group.- Each group was assigned to find such material from various sources and systematically arranged in the form of papers.- Each group mepresentasikan assigned material in front of his friends in the audience. After the question and answer session between the speakers and students about the material that has been presented. Learning outcomes are the result Semester final exams and student assessment results in the presentation.

3. Method

The method in this study using an experimental method which aims to assess and compare the differences between the results of student learning using the model of expository learning with cooperative learning course on the development of

learners. Samples are two classes, one class that uses the expository many as 39 people and the classes that use the cooperative as many as 34 people. Its data collection techniques by providing posttest at the end of the lesson. The tests conducted are written tests in the form of a multiple choice test consisting of 80 questions, with the provision that if answered correctly were given a score of 1, and answered incorrectly given a score of 0.

4. Result and Discussion

	Metode	N	Mean	Std. Deviation	Std. Error Mean
Nilai	Cooperative	34	45,7206	10,19892	1,74910
	EKSPOSITORI	39	49,7179	8,92221	1,42870

The data was obtained using the average which is 49.71 expository models of the maximum score is 80. The average of the cooperative model is 45.72.

When viewed from an average of learning outcomes at the course development of learners, the learning outcomes use expository models better than that using cooperative model. This is because the learning by using models expository, faculty more involved in the learning process, while learning model cooperative, a student in the division of cooperation in the group was not running properly, it is because the motivation to learn is less / lower because it considers subjects development of learners is not so important compared to subjects majors

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Nilai	Equal variances assumed	,585	,447	-1,786	71	,078	-3,99736	2,23767	-8,45915	,46443
	Equal variances not assumed			-1,770	66,152	,081	-3,99736	2,25844	-8,50628	,51156

Because the probability value more than the value of alpha, ie 0.447> 0.05 then Ho is accepted which means that the two samples come from a homogeneous population, then if the t test analysis is done, then there is no significant difference between the average student results that use methods expository and cooperative. It is seen from the probability value is greater than alpha, the Sig. (2-tailed) 0.078> 0.005. From these data it can be concluded that there is no significant difference between the average results of student learning that uses the expository method with cooperative.

The findings in the field, students are not so interested in the subject development of learners, students consider the course participants did development is not so important compared to subjects' majors. Although it has been described at the beginning of the learning contract, that the course participants did development of a group of subjects' profession. So that the learning process with any model if his students do not understand his motivation to learn and less it will affect student learning outcomes

5. Conclusion

There was no significant difference between the average results of student learning using model of expository learning with a model of cooperative learning course on the development of learners as indicated by the results of the t test.

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THE ROLE OF GRADED READING MATERIALS IN TEACHING READING OF EFL LEARNERS

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Abstract

One of the priority purpose of teaching English as a foreign language to Indonesian people is that they can read in order to grasp the idea and to understand the book written in English. The ability to read is crucial for the students in reaching both the academic and society success. The successfulness of teaching reading cannot be separated from the skill of selecting an appropriate reading material. By reading an appropriate reading material, the students can effectively expand their knowledge; train their brain to think and acquire new information and idea. This paper aimed at discussing the role of graded reading materials in teaching reading of EFL learners. A number of studies point out that the L2 learners will feel motivated and enjoy in learning the language if the anxiety levels are as low as possible. Graded reading material which is written in various levels of reading, meets the needs of today's language learners by maximizing reading opportunities in an enjoyable, relaxing and accessible way.

Keywords: *Graded Reading Material, Reading Comprehension.*

1. Introduction

In language teaching and learning, the term of material is used to refer to anything which is used by teachers or learners to facilitate the learning of a language (Tomlinson, 2011). Considering that respect, materials could obviously be videos, DVDs, emails, YouTube, dictionaries, grammar books, readers, workbooks or photocopied exercises. Additionally, they could also be newspapers, food packages, photographs, tasks written on cards or discussions between learners. Keeping this pragmatic concept of materials in mind can help materials developers to utilize as many sources of input as possible and, even more importantly, can help teachers to realize that they are also materials developers and that they are ultimately responsible for the materials that their learners use.

In teaching reading, selecting or developing teaching materials have to be the biggest priority for the teachers. Teaching materials must be motivating and raise learners' interest. If teaching materials are not interesting and motivating, learners will learn nothing (Tomlinson, 2012). Meanwhile, Renaissance Learning (2012) point

out that students show the most reading improvement if they regularly practice reading within a range of difficulty that is neither too challenging nor too easy. In order to help learners learn better, a lot of researchers, therefore, suggest that level of the text must be closely relevant to the students reading level (Allington, 2012).

Meanwhile, various studies show that graded reading materials meet the needs of reading materials today. Graded reading materials or graded readers which are known as a set of reading texts which are specially written in various readability levels and adapted for second language learners, involve severely restricting the vocabulary and controlling the grammatical structures that occur, and matching the length of text to the vocabulary and grammar controls (Nation & Ming-tzu, 1999). This paper, therefore, discusses deeply the implementation of graded reading material in teaching reading of EFL learners in order to look at how important it is as reading materials in supporting students' reading comprehension.

2. Theoretical Background
Teaching Reading in EFL Context

As one of the language skills, comprehension of written texts or reading skill forms the stepping stone for the education of a learner. According to Addison (1996, p. 3), "Reading is an active process in which readers shift sources of information (what they know and what the text says), elaborate meaning and strategies, check their interpretation (revising when appropriate) and use the social context to focus their response". Iwuk (2007) states that reading is the heart of education, by reading, student can acquires all information about development of science and technologies, improves their thinking, generates idea, and solves their problems. Regarding that explanation, Kellerman (1996) emphasizes that teaching students to read must be the highest priority, if the students cannot read they will have low achievement, so they are on the road to academic failure.

Meanwhile, Richard and Schmidt (2002) state that reading can be done by saying a written text aloud which called oral reading or by comprehending a written text

silently which is called reading comprehension. Cooper, Warncke, and Shipman (1998, p. 24) divide reading comprehension achievement into five categories (1) meaning vocabulary in which the reader is concerned with learning the meaning of words he or she reads; (2) literal comprehension is concern with the information and idea that are explicitly stated in the selection; (3) inferential comprehension is concerned with drawing conclusion, generalizing or interpreting what is read; (4) applied comprehension is implicit schema that requires integration of new information into the readers' previous knowledge, from which new relationships emerge; and (5) critical reading requires reading with an inquiring mind and with active, creative looking for false statements.

Furthermore, Berry (2005) states that comprehension consists of three different levels which called literal level, interpretive level and applied level. *Literal level* regarded as the simplest skill, at this level the reader or student can attempt to answer the question: *what did the author say?* At this level the reader or the student would not have to understand the true meaning of the whole paragraph or text, because they can answer the question correctly only by looking at what was written by an author with little interpretation is need. At second level of comprehension, interpretative level, the student can attempt to answer this question: *what was meant by what was said?* At this level, students are attempting to understand what the author meant by what she/he said in the story, paragraph or textbook. It is presumed that students have already memorized certain facts at the literal level and then they are attempting to see the implications of the author's words. The last level is called the applied level. At this level, the students can attempt to answer this question: *How would the author's message apply to other situations give what you memorized and understood at the other two levels?* At this level, the students are attempting to elevate or rise their thinking one more "notch" or level to more critical, analyzing level. This presumes that you already reached the previous two levels. In other words, the students have to read between the lines and then examining the messages from the author and attempting to apply that message to other settings.

In addition to the level of comprehension, Cooper, et al (1988) state that there are at least seven reading skills which should be mastered by ELF learners including the ability to answer question about main idea (MI), detail (D), Sequence (Sq), Inference (If), Reference (R), cause effect (C/E), and vocabulary (V). By considering the previous explanations, Cunningham and Zibulsky (2013) conclude that reading is a very rich, complex and cognitive act that offers an immense opportunity to exercise human intelligence in ways we lose if we don't read. Reading provides students with a cognitive workout that transcends not only our inherent abstract problem-solving abilities, but also our levels of education (Bridges, 2014). In line with this, in maximizing students reading skill, the EFL teachers are regarded need to provide as appropriate as possible reading materials which are matched not only with the students' reading interest, but also more importantly with their reading level.

The Considerations in Selecting Instructional Materials

Richards (2005) states that effective instructional materials in language teaching are shaped by considering three factors: teacher, learner, and contextual variables. Teacher factors consist of the teacher's language proficiency, training and experience, cultural background, and preferred teaching style. Learner factors include learners' learning style preferences, their language learning needs, interest s, motivations and reading level. Contextual factors consist of the school culture, classroom conditions, class size, and availability of teaching resources in situations where the materials will be used.

Meanwhile, Tomlinson (2011, p.10) explains that there are fifteen basic principles of second language acquisition that must be relevant to the selected materials used in ELT. The principles are as follows

1. Materials should achieve impact or can arouse the learners' curiosity, interest and attention by providing pictures.
2. Materials should help learners to feel ease; they must be set based on students' achievement.

3. Materials should help learners to develop confidence.

4. The materials taught should be perceived by learners as relevant and useful for students' real life.

5. Materials should require and facilitate learner self investment i.e. learners profit most if they invest interest, effort and attention in the leaning activity.

6. Learners must be ready to acquire the point being taught i.e. the materials should consider the students' prior knowledge.

7. The learners' attention should be drawn to linguistics feature of input i.e. the materials developed may arouse students' comprehension, implicitly or explicitly.

8. Materials should provide the learners with opportunities to use the target language to achieve communicative purpose.

9. Materials should take into account that positive effects of instruction are usually delayed.

10. Materials should take into account that learners differ in learning style.

11. Materials should take into account that learners differ in effective attitudes.

12. Materials should permit a silent period at the beginning of the instruction

13. Material should maximize learning potential by encouraging intellectual, aesthetic, and emotional involvement which stimulates both right and left brain activities.

14. Materials should not rely too much on controlled practice.

15. Materials should provide opportunities for outcome feedback.

Moreover, since students' needs, interest, motivations and reading level are known as important considerations in selecting the instructional materials, the teacher, therefore, have to consider firstly whether or not the materials selected match with their students' levels, needs, interest and motivation. When classroom teachers provided students with easy access to a wide range of interesting texts, the effects on comprehension and motivation to read were enormous, hence learners would be more motivated to succeed in learning any language (Wan-a-rom, 2011).

Graded Reading Materials

Macmillan Education (2014) states that graded reading materials that also known as graded readers are short books and audio books, encompassing both fiction and non-fiction genres which is written in various levels of reading, thus, the students will find the quick and easy to read. Levels in graded reading material are carefully graded from starter to upper intermediate to help the students choose the right material for their ability. In other words, it offers a wide and attractive range of short, learner-friendly books which can be read quickly, easily and enjoyably. In line with the previous explanations, Malone (2013) states that graded reading material must consist of reading passages that are arranged according to several levels started from the lowest level to the highest one.

Additionally, Malone also emphasize that each level of text ideally is constructed not only in different readability level, but also in different purpose and use, for the example: level 1 is used for people or students who are learning to read in their l or a new language, level 2 for people who want to gain reading fluency, then level 3 for people who want to know more about the languages that they have learned, and the last, level 4 for people who have become life-long readers and learners. In other words, each text is suited in terms of its features, length, topic, pictures, format and language by considering the background or reading level of the readers.

The Rules and the Characteristics

Each text in graded reading materials has different characteristics, and it can be seen on its purposes, features, formats, contents, picture, and length. For the example: the lowest level tends to have the easiest language, or vocabulary, the shortest length, and also completed the biggest picture. Therefore, there are some rules that followed by the writer in constructing graded reading materials which also proposed by Malone (2013, p. 5). The rules are as follows.

1. Keep the stories short and easy to read. The short, well-written and easy-to-read stories provide readers with successful early reading experiences and encourage them to continue reading for learning and for enjoyment.

2. Use natural language. New readers may not be able to read quickly, therefore the use of natural language very recommended to be used in order to keeps them from having a meaningful reading experience.

3. Write about things that are familiar and interesting to the readers. When reading materials are about something that is familiar to them, new readers can use their own knowledge and experience to help them understand the written text.

4. Write about things that can be pictured. New readers also use pictures to help them understand written texts. It may be difficult to create pictures that communicate emotions, thoughts or speech so write about activities that can be shown clearly in a picture.

5. Write for a specific person representing the people who will read the story. Think of a specific person you know personally who represents the larger group of intended readers and write specifically for that person. That will help to ensure that the story is interesting to others in larger group.

6. For more experienced readers the writer can write differently. In this case, please use more descriptive words and phrases. Then, introduce new ideas and information that will be interesting to the readers.

One important point is that when using graded reading materials, the teachers have to bear in mind of the learners' level. Determining students reading level is regarded as the key activity of constructing graded reading materials, in short, it is used as basic consideration of selecting on which level of text will be started and ended. For more than 50 years, readability formulas have helped teachers, match books to students. Readability formulas use objective measurements to analyze text and predict which materials can be comprehended by individual readers (*Renaissance Learning, 2012)*. Thus, after the reading level of the students was considered through

standardized test, the readability texts are then calculated, after that the texts finally can be graded closely relevant to the students' level.

The Role of Graded Reading Materials in ELT

During the past decades, searching for appropriate and effective teaching materials occupies a great space of instructors' thinking. Using inappropriate teaching materials makes learners face difficulties in learning a foreign language. Obviously, graded reading materials can have several learning goals in ELT, these include gaining skill and fluency in reading, establishing previously learned vocabulary and grammar, learning new vocabulary and grammar, and gaining pleasure from reading (Nation and Ming-tzu, 1999). Moreover, graded reading scheme consists of a series of vocabulary and grammar levels with several readers available at each level of the scheme, a low proficiency learner would begin read this reading book at the lowest level of the scheme, and when reading at that level was comfortable, the students could move to the book at the next level.

Meanwhile, the obvious evidence of the utilization of graded reading materials was shown on the research taken by Wan-a-rom (2011). The study was aimed to examine how EFL learners of English reacted to graded readers in terms of reading strategy use, comprehension, speed, and attitude as well as motivation when control for ability level was determined. Eighty Thai high school students placed into their own reading level of graded readers by the scores gained from the graded reading-vocabulary size test participated in a six-week-extensive reading project. Through observations, semi-structured interviews, book journals, and post-reading questionnaires was found that comprehension, attitude and motivation were cultivated during the implementation of graded reading materials.

In line with Wan-a-rom's study, the important roles of graded reading materials were also reflected on the study done by some researchers in Indonesia, they were Monica (2016); Ningtiyas (2016); Indriyani (2016); Sari (2016), and Rawiha (2016). They all focused on measuring the potential effect of graded reading materials on

students reading achievement. Graded reading materials were given to the students in some cities including Palembang, Baturaja, Lubuklinggau, and Pangkal Pinang.

Through reading comprehension test, it was found that the students mostly have good scores after been taught by using graded reading materials, moreover through the questionnaires, they confessed that they felt happy, enjoy and interested to learn English by using this reading material. Additionally, since each level of text in graded reading materials were followed by comprehension questions, the teachers, therefore, can also use it as reading assessment to measure students' reading achievement or even more importantly, to determine student's reading level.

3. Conclusion

Graded reading material or graded readers is a set of reading texts which written in various levels of reading. Levels in graded reading material are carefully graded from starter to upper intermediate to help the students choose the right material for their ability. After going through the related literature, it is obvious that the use of graded reading materials in language teaching is supported by many researchers. Graded reading materials meet the needs of today's language learners which effectively maximizing the reading opportunities in an enjoyable, relaxing and accessible way. Furthermore, some studies also show that graded reading material plays important role in gaining skill and fluency in reading, establishing previously learned vocabulary and grammar, learning new vocabulary and grammar, and gaining pleasure from reading. Additionally, since graded reading materials are also completed by comprehension questions, so it also can be used as a tool in determining students' reading comprehension and even, their reading level.

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TEACHER PROFESSIONAL DEVELOPMENT
THROUGH ENGLISH TEACHER WORKING GROUP (MGMP)

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Abstract

Professional development (PD) is one of the key determinants in improving knowledge, attitudes, and skills of a teacher. The role of MGMP in improving the teacher's professionalism is becoming more important when the government is implementing new curriculum. This research aims at finding out the role of English Teacher Working Group (MGMP Bahasa Inggris) to Support Teacher Professionalism Development to Senior High Schools in Kabupaten OKU in the academic year of 2015/2016. The population was the English teachers of SMA, students, the board of management of English MGMP of Senior High School, and Vice Principles of Curriculum from State Senior High School in Kabupaten OKU. The research was a descriptive qualitative by using purposive sampling. Techniques of data collection were done through in-depth interviews, direct observation, document analysis. Data analysis technique was in form of interactive analysis techniques. Further data have been obtained used by triangulation method to obtain truly valid data. Based on research data analysis it can be concluded that; (1) English MGMP for Senior High School in Kabupaten OKU contribute greatly to the development of Senior High School English teacher professionalism in Kabupaten OKU in terms of developing the syllabus, annual and semester program, and lesson plan, developing teaching method and the innovative learning model, developing the use of teaching media and the evaluation system and improving the teachers professional competence; (2) English MGMP in Kabupaten OKU still found obstacles in its implementation so that it is needed for solving the problems in order the activities of English MGMP run better for the following years.

Keywords: *English, MGMP, Teachers' Professionalism Development*

1. Introduction

Education quality is not something that happens by itself. It is the result of an educational process. Drawing on Bunting (1993: 17), he declares that, "Quality in education does have a bottom line and that line is defined by goals and values which underpin the essentially human acctivity of education". The clear implication is that this bottom line must be the starting point for our understanding of the notion of quality in education so that we do not reify the practice of education. Cited in Suprihatiningrum (2015: 24), Laurence and Jonathan in their book, this is teaching, they defined teacher as a professional person who conduct classes. Teachers are

considered the most important factor on the quality of students' achievement in a school and as knowledge workers that take an active part in educating, teaching, guiding, evaluating the students to create the qualified outcomes through their professional competences.

The quality of teachers is one of the important indicators of quality education. It is in accordance with the Government Role Number 19 year 2005, in generally, teachers must own four competences namely, pedagogic, individual, social and professional. Without refreshing or updating teachers' knowledge and skills, teachers may not be able to attract students into learning engagement to provide students with appropriate hard and soft skills for competitive living in modern society. Teachers Professionalism has become one of the main requirements to realize good quality of education. Professional teacher can be achieved if teachers can work together with other teachers, to develop their potential through a program, one of them is the Teachers Working Group (MGMP). MGMP is a nonstructural organization of teachers whose establishment was stimulated in the Government Regulation No.38 in 1994 regarding Educational Personnel.

The role of MGMP in improving the teacher's professionalism is becoming more important when the government is implementing new curriculum. National Education Department (2003: 5) explains that MGMP has a role to carry out the development of insight, knowledge and competence of teachers so that the teachers will have a high dedication. Although teachers are suggested to be professional, reality shows things differently. Interviews revealed that there are many English teachers who do not make lesson plan, use various methods in teaching, make use of media, or arrange a good evaluation mechanism. The teachers do not consider carefully about the teaching learning strategy.

2. Method

This research was conducted in the form of qualitative research using naturalistic inquiry. In this research, the researcher observed to what extent MGMP

was effective to the quality of English teachers professionalism by making an interview and observation in natural setting, place where the observed activity takes place. This study was conducted at two State Senior High Schools in OKU Regency. Recruitment of participants began with the purposive sampling. There were three English teachers, sixty eight students of Senior High Schools who were in the eighth and ninth grade of their study, a member of English MGMP in OKU Regency, and two vice principle of curriculum were taken as the samples.

For the purpose of this research, the data collected was in the form of primary data and secondary data. Primary data was collected by using interview and observation, while secondary data was collected in the form of documentation. Collecting of data with observation, interview, and documentation in the field took about three months, November 2015 to January 2014. To know the roles of English Teachers Working Group (MGMP Bahasa Inggris) to Support Teacher Professional Development (TPD), teaching learning activities were observed from November 2015 to December 2015. Observation as the process of gathering open-ended, firsthand information by observing people and places at the research site (Cresswell, 2008: 221).

To triangulate a preliminary interpretation of the observation, interviews were conducted from December 2015 to January 2016. English teachers, vice principle of curriculums were the respondents of the interviews. The process of data collecting and data analysis were conducted in a synchronized and simultaneous manner. In doing this research, there were some strategies used to obtain the trustworthiness and credibility of the data. Those strategies were used to check the accuracy or the validity of the findings of the research conducted. From eight strategies proposed by Creswell (2008: 177-178), researcher only used three of them. They were triangulation, using rich and thick description, and clarifying the bias.

The data in this research was analyzed by using descriptive qualitative method. researcher used an interactive model of analysis involving collecting the data, reducing the data, and data display and also drawing conclusion. After collected

the data, the researcher reduced and present the data. In reducing the data, meaningless data was rejected, to get the important points of finding. It was followed by displaying the data. Thus, the researcher presented the data systematically and logically, so the meaning of every event would be clear. In the end of collecting the data, the researcher verified the data.

3. Result and Discussion

English MGMP for Senior High School in OKU Regency was founded by the Decree of the Head of Education Office No. 800/221/Kep/2011 on July 18, 2011 with the aim to accommodate all the teachers' activity and creativity of especially in Senior High School level, both public and private. Membership and management of MGMP were established by the agreement of MGMP's members. The members of English MGMP SMA in OKU Regency consisted of civil servants and non-civil servants teachers who teach English at the school in OKU both Public and Private schools, under the authority of the Ministry of National Education and Religious Affairs. There are 20 Senior High Schools in OKU Regency, which contain 15 private schools and 5 public schools. From the number of schools, 30 of them are active members while the others are passive members. Board of English MGMP SMA management in OKU Regency 2015/2016 is as follows:

English subjects in MGMP is scheduled every month. So on that days, English teachers are free from teaching duties in order to participate in MGMP. When there is no city level MGMP activities on Tuesday, they usually conducted school MGMP meeting. MGMP is a deliberation of teachers, by teachers and for teachers. Although MGMP is an independent organization activities, but it still requires financial support from other funding sources. Block grant funds is used to finance the teachers to participate English MGMP in OKU Regency, as disclosed by the chairwoman of English MGMP SMA in OKU Regency. Monitoring and evaluation of MGMP is a process to gain an overview of the activities and performance of MGMP in the management and implementation of activities

consistently and continuously. Monitoring is carried out by the principal, whereas the evaluation conducted at the end of the year.

Role of English MGMP to support teachers' professional development in OKU Regency

The results of the field study demonstrated that MGMP has a very important role for English teachers.

1. English teachers in OKU Regency in preparing a syllabus before they implementing their learning program. In formulating the syllabus, the teachers organize the syllabus based on KTSP (School Based Curriculum) from each school, Program Tahunan (annual program) and program semester (semester program). With Annual and semester Program, all learning activities undertaken by teachers should be right in line with what is programmed in annual program.

2. A careful planning is at the same importance as the teaching and learning process in classroom. According to English teachers in OKU Regency, by preparing lesson plans, a teacher describes the interactive learning and it can be used to explore the students' multiple intelligences, to optimize the schools' infrastructure and the learning environment of students, and to increase students' confidence when teaching learning process takes place.

3. Teachers are also use learning methods based on the teaching material and learning objectives in delivering the lesson, such as, lecturing, discussions, question and answer, demonstrations, etc.

4. After implementing instructional program, teacher comes to the next step named evaluation or it is often called learning evaluation. The English teachers in some Senior High Schools in OKU Regency Evaluate the students through conducting periodic tests and observing students' daily performance. The evaluation is done by the teachers affects the students' learning motivation for they tend to be more active in the teaching and learning activity which are assessed by the teachers.

5. By participating the activity of English MGMP SMA in OKU Regency, there is also an improvement in professionalism of English teachers in performing their

duties from the previous year. After carrying out English MGMP SMA in OKU Regency, the English teachers increased their professionalism. Teachers have complete teaching aids and have participated in some activities, such as conducting the Action Research, participating Seminar and workshops, and conducting a scientific work.

English MGMP SMA in OKU Regency is not fully successful in supporting the TPD. The data shows there are some factors that influence the implementation of English MGMP SMA in OKU Regency. First factor is that the meeting in English MGMP SMA in OKU Regency is held only in odd semester every year. The second factor is that only one English teacher of each school may participate the English MGMP SMA in OKU Regency. The third factor is that there are some English teachers who have to teach in the same day the MGMP is held. The next factor is there is no School MGMP in some schools, because the teachers are busy, not only the teaching hours, but also from the other school activity. And the last factor is the English teacher in OKU Regency sometimes has some difficulties in making the teaching media, and most of it is about the mastery of ICT.

Therefore, there are some solution offered for the problems, they are; (1) English MGMP in OKU Regency to maximize its performance by conducting routine activities each year well in odd semester or semesters, not to suffer vacuum activities; (2) English MGMP in OKU Regency to maximize its performance by conducting routine activities each year well in odd semester or semesters, not to suffer vacuum activities; (3) The school should not scheduling the English teachers to teach on the day when the English MGMP Activities is held; (4) Every school should arrange a schedule for their teachers to have school MGMP, because throughout this activity, the other teachers will also be able to develop their teachers' professionalism; (5) Every school must be facilitated with ICT, so that the teacher will be motivated to learn and use the facilities.

4. Conclusion and Remark

Considering the research findings and the discussion, the findings of the research show that English MGMP for Senior High School in OKU Regency is absolutely necessary, and contribute greatly to increasing the professionalism of English teachers in performing teaching learning task. English MGMP for Senior High School in OKU Regency has an important role to support the TPD in terms of developing the syllabus, annual and semester program, lesson plan, evaluation, innovative learning model, teaching methods, the use of teaching media, and Improving the teachers professional competence.

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SUPPORTING THE STUDENTS' UNDERSTANDING OF PERCENT BY USING GRID 10 X 10

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Abstract

Percent is often used in a variety of media in everyday life. Percent begins to be studied at the elementary level. Students are more or less know about percent, but they are often difficulties in percent problems. This study aims to support students' understanding in learning percent using a grid 10 x 10 and Indonesian Realistic Mathematics Education (PMRI) approach. The method used is design research of type validation studies. Design research consisted of three stages: preliminary, design experiments and retrospective analysis. This research was conducted in SD Negeri 23 OKU by involving students of class V. The data were collected through video recordings, students' work, interviews and then analyzed the data mostly in qualitative ways. The results of this study are learning trajectory that consists of 3 activities and shows that the grid of 10 x 10 with PMRI approach can help students understand the learning percent.

Keywords: Percent, *Design Research*, Grid 10x 10, PMRI

1. Introduction

The term "percent" derives from the latin meaning "per hundred", and percent provides another way to represent fractional or decimal hundredths (Fobringer dan Fuchs, 2014). Some conceptual understanding of percents is also essential for comprehension of messages in the media, such as statistical information about economic or social trends (Gingsburg *et al,* 1995). Percentages are a useful way of making comparisons, apart from being used to calculate the many taxes that we pay such as VAT, income tax, domestic fuel tax and insurance tax, to name but a few (*Mathcentre*, 2009).

Students are more of less know about percent, but they are often difficulties in percent problems (van Galen & van Eerde, 2013). Results of NAEP showed that students had difficulty with problems involving percent (Wearne & Kouba, 2000).

According to Van den Heuvel-Panhuizen (2003), to make students understand percentages, began with the introduction where students are confronted with stories of daily life in which the percentage of plays. De Corte et al (2005) also say the same thing, start a percentage of teaching, teachers can use many everyday situations are understandable for students. Additionally, Mulyani (2013) claimed to be able to help clarify what will be presented a teacher and easily perceived and understood by the students, then the required media. According to Fobringer and Fuchs (2014) using different types of model representation of a concept depends on students' conceptual understanding. Therefore we do not have to restrict representation percent using a 100-square grid, but also including models using pattern blocks, geoboards, meter sticks, line numbers, and other concrete objects and visual image, as we did when introducing fractions and decimals.

The approach can be used in this study, namely Indonesian Realistic Mathematics Education (PMRI). PMRI an adaptation of Realistic Mathematics Education (RME) where mathematics is the human activity and mathematics should be attributed significantly to the context of an everyday life of students as a source of development and as an area of application through the process of mathematization both horizontal and vertical (Zulkardi, 2002). Learning educational paradigm change from teacher-centered to student-centered learning is expected to provide a pleasant atmosphere and the creation of activity and creativity of learners, which in turn support the effective achievement of learning objectives (Putri, 2009)

2. Theoretical Background

Percent

Percent is a ratio expressed as a fraction whose denominator is equal to 100 (Sessu, 2014; Bird,J., 2002). Percent denoted by%. For example, 25 percent is 25/100 and written as 25%. To resolve the problem percent, Rosenberg (1975) argues that before you can add, subtract, multiply, or divide using percents, the percent must be changed to either a decimal or a fraction.

PMRI

Realistic Mathematics Education is a learning theory developed specifically mathematics. RME Freudenthal rooted in the theoretical view that mathematics as a human activity (Gravemeijer, 1994). Gravemeijer (1994) states that there are three important principles in the approach RME, namely: Guided reinvention and progressive mathematization (guided discovery and mathematics Continuous), didactical phenomenology (phenomenon educate), and Self-developed models (models developed by the students themselves).

Characteristics of Indonesian Realistic Mathematics Education consists of five, which is a combination of three levels of Van hiele, the phenomenon of continuous learning and mathematics Freudenthal Treffer. Here is a characteristic of realistic (Gravemeijer, 1994):

1.   *Phenomenological exploration uses of context*

Context is the real students' everyday environment. In PMR, the real world is used as a starting point for the development of ideas and mathematical concepts. By using the context, in addition to the student can be involved actively to explore issues (de Lange, 1987) but also can motivate and interest students in learning math and reduce math anxiety (Wijaya, 2012).

2.   *Bridging by vertical instruments/ use of model*

The model is directed at increasing concrete models to abstract or model of the real situation to the direction of the abstract.

3.   *Student contribution*

A big contribution to the learning process of students' construction itself is expected to bridge them from informal methods towards more formal.

4.   *Interactivity*

In the process of learning, students undertake discussions to resolve the issue. In the discussion of students interacting with other students or the teacher. Interactivity emphasis on social interaction among students to support each individual student (Wijaya, 2012). The social norm is a common pattern of social interaction

that is not tied to the topic or subject matter, for example, respect the opinions of others.

5.   *Intertwining*

In learning to use a holistic approach, meaning that the topics of learning can be linked and integrated to bring an understanding of a concept or an integrated operation.

3. Method

This research was conducted in SD Negeri 23 OKU by involving students of class V. The method used is the method of design research, the type used is a type of validation studies that aim to prove the theories of learning (Nieveen, McKenney, & van den Akker, 2006) , Design research aims to develop a Local Instructional Theory (LIT) with the cooperation of researchers and teachers to improve the quality of learning (Gravemeijer & Van Eerde, 2009). According to Gravemeijer and Cobb (2006), Design research consists of several stages, namely: (1) Preparing for the experiment / Preliminary Design, (2) Design Experiment, and (3) Retrospective Analysis.

The first step is Preparing for the experiment / Preliminary Design (preparation for research). At this stage, a literature review regarding the learning material is about percent, PMRI approaches, and methods of design research as a basis for the formulation of alleged initial strategy into learning or as a foundation in designing the learning trajectory. Furthermore, it would be designed hypothetical learning trajectory (HLT) is a series of learning activities percent material that contains learning objectives, learning activities, and allegations of students' thinking (Simon, 1995). HLT was developed based on the literature and adapted to the actual learning during the experiment teaching.

The second phase, Design Experiment consisted of two cycles, the pilot experiment and experiment teaching. The pilot experiment aims to pilot HLT has been designed in small groups in order to determine the extent of conjecture and

instruments that have been made so that the researchers can be accomplished. There are six students involved in the pilot experiment, with three different levels of academic ability. The sixth student academic levels were obtained from teachers who teach in class V. The results of the pilot experiment is used to correct the HLT that will be used for teaching experiment.

The third stage, Retrospective Analysis. Data have been obtained in the second stage is analyzed and the analysis results are used to plan activities and develop a learning activity design on the next. The purpose of retrospective analysis, in general is to develop local instructional theory. Data collected through video recordings, student activity sheets and interview then analyzed to improve HLT has been designed. Data were analyzed retrospectively with HLT as a reference. For data analysis, the researchers conducted a discussion with counselors and teachers model for improving the reliability and validity in this study.

4. Result and Discussion

This result in a learning trajectory on learning about the material learned in class V. percent of learning materials using a grid of 10 x 10 with the approach of Indonesian Realistic Mathematics Education (PMRI) can help students understand the material percent. Students can change the common fraction to form percent and remodel percent to shape common fraction. There are three activities that can help students understand the material percent.

All activities are conducted in groups with each group consisting of 3 students. Learning begins by giving apperception about fractions and motivation to students that percent is often used in everyday life. Students are required to discuss with each group to finalize and undertake appropriate activities that have been shared LAS. Each group has a heterogeneous academic ability. The first activity the students did after reading the student activity sheet (LAS), which divides the flat square form into 25 equal parts according to the problem was given to the student activity sheet (LAS). Furthermore, some parts in the wake of the shaded square to order at LAS.

From the square which has been shaded, students determine common fraction as much a part which has been shaded.
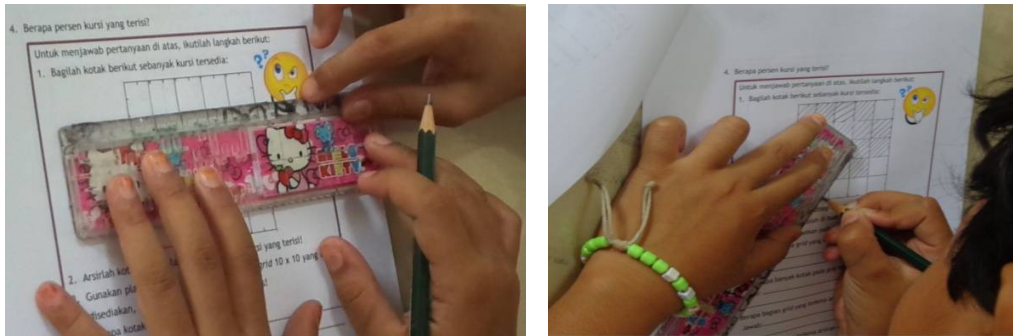
Figure 1. Students divide and square shading

During the discussion of students, researchers observed and provided guidance to students who are experiencing difficulties. One of the difficulties of students in this activity was to determine fractions of problems. With a little help students can determine the fractions of the problem given as the following conversation:

1. Teacher: What share of seats filled?
2. Yana: the first table ...
3. Teacher: Let's see, lots of chairs available there ...?
4. Ayu & Astrid: 25
5. Teacher: Yes, 25. Keep the number of seats filled?
6. Ayu: 22
7. Teacher: Yes, 22. So, what portion of seats filled?
8. Students: mmmm....
9. Teacher: How many seats are filled?
10. Ayu: 22
11. Teacher: na, of how much is available?
12. Ayu: 25
13. Teacher: So wrote it....
14. Ayu: 22 of 25 (22/25)

Transcription 1

Activities undertaken subsequently, the student uses a grid of 10 x 10 to change the common fraction to form percent. Students gluing 10 x 10 grid of

transparent plastic that has been created by researchers in a square image that has been divided and hatched before. Students compute grid that covered hatches and writes in LAS and noticed that every box has been divided on a square filled with 4 grid.
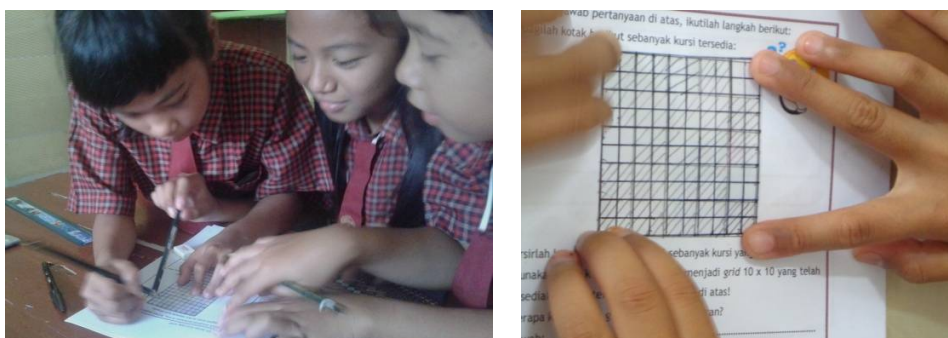
Figure 2. Students use a grid of 10 x 10

After calculating the affected grid shading, students deduce how to change a common fraction to form percent. Students hesitated to write the conclusions, so that teachers help students to excel in group discussions about writing, as in the following conversation:

15. *Students: (students have to write common fraction is 22/25, but hesitated to write back)*
16. *Teacher: So what now? What percent earlier?*
17. *Astrid: 88*
18. *Teacher: fractions?*
19. *Astrid: 88 per 100*
20. *Teacher: na, how 22 per 25 is made in 88 per 100?*
21. *Ayu: uy tiaaa ... multiplied (while talking on astrid or tia)*
22. *Teacher: write ...*
23. *Ayu: Eeeee ... ..22 multiplied by 4*
24. *Yana: yes, 2 x 4, 8*

Transcription 2

The third activity, to change to a common fraction percent of students shading grid of 10 x 10 which has been printed in the paper as much information obtained from the problems in the LAS. Students cut out the grid and classifying pieces of the

grid with each group of pieces of the grid as much as the shaded grid groups. Then students write up the results of grouping pieces of the grid at the LAS as shown below.
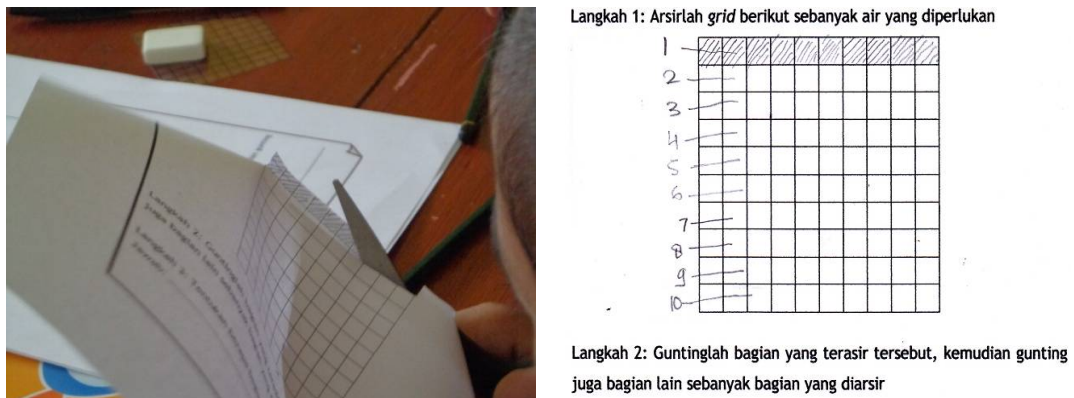
Figure 3. The students cut out a copy of a 10x10 grid in groups

Furthermore, students observe grid pieces that have been cut into sections and determine the number of parts of the grid that has been shaded.

25. *Yana: specify how the shaded part? (Read about at LAS), ...One.*
26. *Teacher: Na, one...*
27. *Yana: one line.*
28. *Teacher: one line of ... ..?*
29. *Yana: ten columns...*
30. *Ayu: ten boxes ...*
31. *Teacher: ten....*
32. *Ayu: ten boxes ...*
33. *Teacher: mmmm, write .. (student writes (1/10))*

Transcription 3

In group discussions, students are still not used to write the conclusion of the working group on the student activity sheet, so that teachers provide assistance so that students write the results of discussions as the following conversation:

34. *Students: (read a statement asking students to write a conclusion)*
35. *Teacher: Na was what percentage?*
36. *Student: ....*
37. *Teacher: The water?*
38. *Students: 10 percent*
39. *Teacher: Na, write. 10 percent ...*
40. *Students: 10 percent....*

41. Teacher: Na, 10 percent is the same as what?
42. Students: 10 percent
43. Teacher: na simple fractions so how many of the cans of paint?
44. Ayu: divided ...
45. Teacher: divided by how much?
46. Yana: divided by 2 e, in the fourth?
47. Ayu: divided ... divided by 10
48. *Yana: divided by 10, one means. (And then write on sheets 1/10 activity)*

Transcription 4

Learning implementation is in conformity with the HLT that has been designed. From a series of activities that have been done can be seen that students are able to change the common fraction to form percent is calculated by multiplying the numerator by a number equal to the number in the denominator so that the denominator multiplier turns into a hundred fragments. As for changing the shape percent to ordinary fractions, students divide the numerator by a number equal to the denominator in the denominator.

5. Conclusion and Remark

Based on the results of research and discussion that has been described, it can be concluded that the series of activities that have been carried out using a grid of 10 x 10 and PMRI approach can support students' understanding of the material per cent. Students can change the common fraction to form percent and remodel percent to a common fraction. Learning trajectory generated in this study consists of three activities, namely, the first activity, dividing and shading Flat (square) as in the application of the activity sheet. The second activity, students use a 10x10 grid to change the common fraction to form percent by gluing a plastic that has been molded into a grid to wake flat which has been divided and shaded. The third activity, students categorize and cutting a grid of 10 x 10 to determine a common fraction of shapes percent.

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4-TO-5-YEAR OLD CHILDREN SPEAKING ABILITY THROUGH CONSTRUCTIVE PLAY WITH PEER GROUP AT BON THORIF KINDERGARTEN IN PALEMBANG

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Abstract

The result of this research showed that there was improvement on pupils' speaking ability whose ages were from 4 to 5 through constructive play with peer group. The research was carried out at Bon Thorif Kindergarten in Palembang. The method was classroom action research from Kemmis and Taggart which consisted of planning, treatment, observation, and reflection. The treatments were conducted in 2 cycles and each cycle consisted of six treatments. The subjects of the research were 18 pupils whose ages were from 4 to 5 at Bon Thorif Kindergarten in Palembang. The data were analyzed quantitatively and qualitatively. The quantitative analysis showed pupils' speaking ability was improved from pre-treatments to the second cycle which was 82.2%. This showed the treatment's success with 75% improvement. It indicates that the reserach was successful. The qualitative analysis by using a model proposed by Miles and Huberman with triangulation was also carried out consisting: (1) data reduction; (2) data display; and (3) verification, through observation, interview, and documentation during the treatment. The result revealed that constructive play with peer group could improve pupil's speaking ability. Through some experiences in playing, having recreation, and interacting with peer group, all aspects of pupils' speaking ability were improved.

Keywords: *speaking ability, constructive play with peer group.*

1. Introduction

Basically, childhood is an initial portray of a child as a human being. As time goes by, children always experience motor, feeling, willingness, mind, and intellectual development. Parents obviously play a prominent role on children development. It is decribed in Ministerial Decree No. 58 Year 2009 which states that there are six aspects to be developed in young children: moral and religious values, cognitive, language, physic, motor, social, emotional, and art. As a teacher, this decree can be used as a strong basis to give the proper stimulation for children which is, of course, through various proper activities for children development.

Children with good development and growth are obviously teachers, parents, and people ideal expectation. In the learning process, a teacher has to understand children development, such as physical growth, motor, intelligence, sensory, linguistic, and emotional development. This paper is concerned with children linguistic development. One of the observable linguistic development is children speaking ability.

In kindergartens, childrenspeaking abilityis a top priority which requires special concern. In speaking ability, children are taught how to interact and communicate well with both their teachers and friends. They start to learn to express their thoughts and feelings. The speaking instruction is, of course, taught based on the levels of their ages.

One of the instructions done in kindergartens is through playing. Playing is not only a good activity for young children but also an appropriate strategy to train them to speak up.Through plays, they will develop all aspects including their ability to cooperate. Teachers have to design a fun learning activity to make young children enjoy. It is in line with what is written in *Early Learning Central* (2014), *"**Play nourishes for every aspect of children's development-it forms the foundation of intellectual, social, physical, and emotional skills that is necessary for success in school and in life**.*"

Furthermore, Rahim (2008) states that cooperative play is closely related to cooperation or roles division among children involved in the play to achieve certain goals. This activity generally appears at ages from 4 to 5,but childrendevelopment depends on their parents whether or not they gives their children an access to socialize. The use of media is to facilitate children to express the desired goals more easily through some interesting stimulation like plays.

Sudono (2003) recommends to choose high quality playing media. It is better if the media can expand knowledge, develop skills, and instill various good characters in society. The media can be in the form of sand, water, beam, and others. Media plays a prominent role for children, because the interesting media makes them interested in playing it and children's development will take place.

The experience of joyful plays with materials, things, other children, and adults' care will help childrendevelopment in physic, emotion, cognition, linguistic,and social. Playing is the most appropriate approach used as activities for young children. This learning indicates that we are aware of children growth and development, and we even help them indirectly by analyzing new alternative learning method for them. Besides the fact that playing is fun, it also can motivate children to explore more.

A research entitled*"Constructive Play: A Value-Added Strategy for Meeting Early Learning Standards"* conducted by Cristie et al (2013) was:Constructive play can develop children's ability. Children can use materials and ideas like what is in their imagination. They can ask questions and keep trying new things. Constructive play has to be connected to several games and activities with different aspects from the curriculum. Constructive play is a creative play and important to be implemented.

2. Theoritical Background

Speaking ability is an effective communication to convey meaning by using articulation or words. Speaking is an ability which has to be learned like other abilities. Peaget cited in Jalongo (2007) explains that speaking ability is divided into two categories, namely: Communicative and Non communicative. Communicative or socialized speakingincludes play talk, negotiation talk, excluding talk, challenge talk, emphatic talk, information and understanding talk. Non communicative includes: repetition, monologue, a dual or collective monologue.

Communicative is related to children's speaking ability in social life, while noncommnicative is related to childrenspeaking which is in the form of

repetition in which a child's talk during a play with his/her friends still sounds awkward by producing separated words. An ability to produce certain sound in a combination is known as word. Speaking ability takes a long time and it is complicated to relate the meaning to the word and to learn the grammar. Motor mental involves muscle to coordinate to relate the word to its meaning, and then words will become symbols for children or objects (Hurlock, 1998). Speaking is an ability to utter sounds of articulation or words to express, state, and deliver thoughts, ideas, and feelings.

Learning grammar is performed with good speaking ability, so the children can talk appropriately and easily understood in interacting with others. According to Mayesky (1990), interaction becomes a very important part in communicating. Children talk and listen when they play clay, dough, painting, blocks, sand and water. If the childrentalk, they will feel comfortable, they try to talk more with the children grammar. The ability of children in playing activities helpsthem in developing speaking ability. Children will try to talk with words that can be understood by others, so they are able to interact via spoken as a meansofcommunication.

Based on the opinion above, the speaking ability is an ability and skill possessed by every child in expressing ideas, thoughts and feelings through the articulation of sounds or words as a symbol for child or the object thatis represented. Children activitiesthat they can perform are interacting and communicating with people nearby, so it can train the children to be able to speak. The children experience is important, in order the children can imitate and think of new ideas, and then expressed through talking with others.

The playgroup is a group of socialization for children with peers in school or out school. If in the family, most interactions are performed by involving unequal relationships (such as uncle, grandfather, mother, aunt, sister, etc.), whereas in children play groups can be performed with children peers. According to Pearson cited by Sarwono and Meinarno (2009) that humans are social beings. That is, as social beings, humans can not establish their own relationships, humans need other people to understand each other and form the interaction.

Someone can socialize means that the person isable to interact with other people around.

As known, in fact the human essenceis not only as well as individuals beings but also as social beings. Humans are demanded to have their interconnected with each other in life, according to Santosa (2005) says that in a peer group *(kelompok sebaya)*, individuals feel their similarity to one another such as in age side, needs and goals to strengthen the group (HimCayoo, 2013). Peer group among members of the group feel of having responsibility for the group success and failure. This peer group, the individual feels of finding himself (personal) and can develop interaction through social communication.

Children learn a variety of new abilities by entering the stage of game phase (learn the rules that manage people role in equal position), so they obtain the values of justice. In this stage, children egocentric attitude is still very prominent. This condition would have caused conflict with friends. Nevertheless, the existence of the conflict will allow individuals to improve their egocentric nature. The purpose of self-improvement is in order they can be accepted back by their friends as a group member. One of an important role in play group with peers is a child gets a place to distribute various feelings, such as feeling of happy and sad (HimCayoo, 2013). Group peer gives opportunities for children to express ideas, opinions and feelings through direct interaction.

Playing in a peer group helps children to develop abilities more optimum.Hughes says that children who play in a peer group give experience to the child to interact with friends through communication and the children can cooperate in conducting playing activities (Hughes, 2010). Communicating with peers provides a very important for children, in order to express ideas and opinions through communicating when playing with his friends. Related to constructive play, Piaget said that constructivist is the process of building knowledge and definition of being contructed is when someone is socially engaged in dialogue and active in experiments and experience (Fosnot, 1996). The establishment of meaning is interpersonal dialogue in which children require experience and interaction with other children.

The children experiences help them to learn to interact better, so they are acceptable in peer group. Play activities with a group of peers will also develop the children ability to receive opinions and ideas of their friends. Similarly with idea (McGrath and Francey, 1991) says that in play group, children will be able to develop cooperation attitude, appreciate the idea of the other friends, and can discuss with other child related to playing activities that will be conducted. Playing in a group provide an experience to the child to respect the ideas and opinions, cooperate with each other to complete their activities, and to be able to interact through active communication with friends.

Based on the above description, the constructive play based on peer based group is a play that performed in groups include designing, shaping and creating the ideas and thoughts, child interests and pleasures based on child own experience with the materials and tools available. The activitiesof constructive playhas two types of material for playing: (1) liquid material, such as paint (drawing fantasy), crayons, markers, playdough, finger painting, collage, water and sand, and (2) to play a structured constructive material, such as puzzle, block units, maze, mosaic, and lego.

3. Method

This study was aimed at finding out the implementation of peer-group based constructive play to improve speaking performance of the children at Group A PAUD Bon Thorif Palembang. The sample was the children at Group A PAUD Bon Thorif Palembang. This study was conducted from January to March on the second semester in the academic year 2014/2015. The school was chosen because the children are weak in speaking performance.

This was a collaborative action research. The design used was in accordance with the research theories in education. This study was also aimed at improving the teaching and learning process at the school. The peer group based-constructive play technique was used in this study to improve the speaking performance.

Kemmis and Taggart procedures were applied for teaching and learning cycles in this study in the following steps: Planning, action, observing, and reflection. Cycle 1 and 2 were given six meetings. After that, the result of cycle 1 was identified to find weaknesses in that cycle. The data were qualitative and quantitative as they are recommended for action research.

3. Results and Discussion

Based on the analysis of the quantitative data, it was found that there was improvement in the speaking performance on the average of 63.7 %. In cycle 1 the speaking performance was 48.2 % before treatment and it increased to 15.5 %. There was 18.5 % increase from cycle 1 to cycle 2 with 82.2 % improvement in speaking performance

Based on the agreement between the researcher and collaborator which required the research to be stopped if there was 75% improvement before treatment, or if 75 % improvement was not reached, the research would go on. The data from the cycle 1 showed that there was 82.2 % speaking improvement before the treatment. This showed that the improvement percentage had been accomplished.
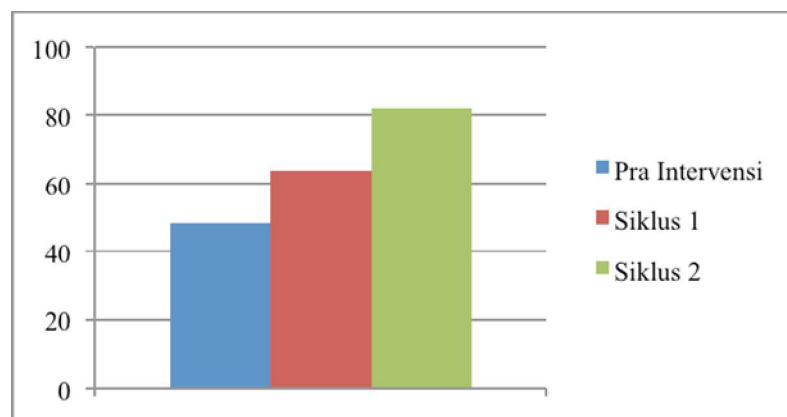
Picture 1. Improvement graph of speach abilitythrough constructive play based peer group

Analysis model by Miles and Huberman also supported this finding. This strategy gave opportunity to children to train their speaking skill by the fun and playing provided in the strategy so that the children could freely express

themselves. Research by Halida (2010) had also supported the finding. In her study, she said that a teacher must choose appropriate teaching technique to improve students' speaking skill, for example, role playing.

Moreover, Baiti (2010) in her study entitled "Improving Spatial Intelligence through Constructive Play" state that constructive play could improve spatial intelligence. This study showed that constructive play could help children in learning. The study by Cristie et al also showed that constructive play could use and build something without the prior knowledge. Children could use materials and ideas appropriately in accordance with their age. Children could keep asking questions and trying things. Constructive play is very important for children since it can trigger creativity for students of play group. The play must also interconnect with the other children play suggested in the curriculum.

The ability to speak the children aged 4-5 years each had a goal and is a series that explains that the speaking development of children has a significant stage. Aspects of non-communicative and communicative is developmentally speaking skills of children are at an intermediate stage between the egocentric to the socialist stage, thereby proving that, in its development, speaking continues to evolve with experience. Lee and Park stated that child verbal interaction in accordance with the child's gender had a significant effect and attitude as a supporter of interaction. In this study, it appears that the attitude of the children to interact with peers demonstrates the ability to communicate, socialize, and how children express their opinions. The patterns found in order to achieve the development of speaking skills of children that initial experience has been owned by the child, giving the game that gives freedom to the child a fun, interaction with peers, repetition or re-memory of the initial experience of children, their motivation and chance of teacher or other person as well as the motivation and effort to develop the skills of children.

According relevant research. Oostermeijer, at all revealed that 38,16% of variance in mathematical word problem solving performance is explained by children's contructive play activities and spatial ability. More specifically, spatial

ability acted a partial mediator, explaining 31,58% of the relation between constructive play and mathematical word problem solving performance.

Tsai purpose of current study is to review related literature on play, imagination , and creativity. By doing so, it is hoped to provide some useful insight for eeducator to bring those concept into classrooms in terms of promoting creativity. Finnaly, several creativity strategies fr faclitating creativity are discussed. The overall result of literature review suggest that educators should bring play, imagination in teir classrooms in order to encourage creativity. Related to this research play and imagination include to constructive play.

4. Conclusion and Remark

Based on the results of analysis of constructive play with peer group in improving children's speaking ability of B Class at Bon Thorif Kindergarten, some conclusions can be drawn as follows: (1) The precentage of children's speaking ability from pre-intervention, with average percentage 48.2%, was improved 15.5% at Cycle I, with average percentage 63,7%. Then, There was an improvement 18.5% with the average percentage 82.2% from Cycle I to Cycle II; (2) The implementation of constructive play with peer group which could improve children's speaking ability are (a) the activity must ve creative and innovative, so that it gives freedom to children to explore and create something based on their own ideas or thoughts, (b) the media must be various, concrete, and interesting, so that children are actively enganged in the activity and it can facilitate their thoughts, (c) it gives chances for children to share thoughts, interact with friends, help them to practice their speaking ability, (d) it gives chances for children to tell their work made by their group which will stimulate them to repeat the same experience and convey new ideas by having a talk which will enhance their vocabulary, and (e) it gives a compliment to students' work.

Based on the conclusions, there are also some suggestions as follows:

First, for Kindegartens, the improvement of childrenspeaking ability through the use of various ineteresting media has to be paid more attention.

Besides, schools are expected to adjust the learning time allocation with students' ability.

This results in lack of chances for children to develop and build their knowledge which in turn it will result in lack of exercises and social interaction with their friends which aims to improve children's speaking ability.

Second, the implementation of constructive play with peer group can be carried out everyday in the form of various activities to draw children's attention and make the learning process enjoyable. It gives freedom to children to explore, so that they actively communicate with friends and teachers. It also help children to fix their mistakes/errors in their pronunciation, and to know the correct pronunciation through practices, so that their speaking ability can be improved optimally.

Third, it is expected that parents cooperate with schools to give the same stimulation at home and have free time to train their childrenspeaking ability, especially mispronounced words.

Fourth, it is expected that other researchers expand the reasearch/literature review related to children's speaking ability improvement by inventing various media or plays which are appropriate and suitable with children's development.

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THE EFFECT OF IMPROVING QUALITY OF SPORTS PHYSIOLOGY

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Abstract

Sport is a human activity that is reasonable in accordance with the divine nature aims to provide welfare for those who do. Welfare highest is health. Healthy physical and spiritual. Therefore this article aims to explain the role of sport and its effect on improving the quality of physiology, which relates to the quality of physical health. This paper uses the method of literature, related to sports and physiology. Based on the results of the various opinions, it can be concluded, that sports activities are carried out regularly and continuously, through stages that are tailored to the abilities of individuals, will directly improve the quality of physiology, especially the performance of the heart, lungs, associated with the use oxygen in the lungs, including body fluids, such as red blood circulation, the function of white blood, and platelets.

Keywords: *Sport and quality of physiology.*

1. Introduction

Sport comes from the word "manner" means processing, repairing, "body" means the body, physically (Ateng: 2003). So the word is not foreign to the sport as an activity that takes human life, even every one speaks, that exercise is important as a preventive action against various diseases. Because in general the exercise aims to improve the health and physical fitness (Brian: 2003). Where the fresh must be healthy. Even under the banner of sport, the which has been included in the Guidelines since 1983, with the motto "Promoting sports and Exercise your society". But it was still only a slogan, not yet Tirrenus Widely Among the public. Facts on the ground in Indonesia society freshness national research community freshness Indonesia in 2006 only 7% (Arifin: 2006). Means that there are still many people who do not understand and execute the importance of sport as an alternative to familiarize healthy lifestyle through positive activities such as sports.

Sport is a very important component as a preventive action against all kinds of diseases, both diseases caused by microorganisms and degenerative diseases. Especially for the people who live in urban areas, where the people who live in urban deprived of motion, due to the physical performance of almost all replaced by machines created by humans paced Automated. Where humans are pampered by a variety of equipment that was created to replace the performance (motion) in all sectors of human life, even almost all the work completed using the all-powerful engines. This has an impact on the health and physical fitness, motion prolonged crisis. Directly going to hedge on our physiological functions, in turn, will cause various diseases, especially diseases related to physiology.

Such as diabetes, osteoporosis (brittle bones), cardiovascular, high blood pressure, kidney and breathing apparatus. Even lately heart disease did not attack in adults, but children and young people have a lot to heart disease. This adult heart disease ranks the top cause of death. In addition to heart disease also has penetrated in other diseases due to physiological damage. So that our physiology is not functioning properly, including diabetes, respiratory, kidney and others. Actually rationally can all be prevented if we get used to a healthy life through positive activities (sports), diligently moving our bodies through exercise, you can bet we will be working with the physiological optima according to function.

2. Theoritical Background

1. Sports Influence on Metabolism

Metabolism is a process of change of substance in the human body. While the exchange of substances found in all cells of the human body called the exchange of substances in total. Body in the working state will have an exchange of different substances, depending on the severity of a work performed by the person. The exchanges when someone in a state of rest about 1500 K.calories. Called the exchange of basic substances. But if in physical activities such as exercise, like running 12 km / h can be increased by up to 1000%. Calories needed each profession is estimated as follows:

No	Job	Calories are needed within 24 hours
1	Scribe (employees)	2600 K.Calori
2	Doctor, carpenter	3000 K.Calori
3	Soldiers in an exercise	4000 K.Calori
4	Athletes (sportsmen)	5000 – 6000 K.Calori

In principle, the exchange of substances in humans there are two, the first is called anabolism, the exchange of these substances is to build (build). That means building new cells in humans. If this occurs in adolescents aged children, then he will add height. While the second is called the word bolisme (vandalism) otherwise if they occur in adolescent age children, it will be stunted. Including when we do heavy physical activity. As doing exercise with high intensity, then our body will occur destruction of cells for preparation of energy, when the energy of carbohydrates as a primary energy is not sufficient, it can be replaced by energy from protein and LEMAKA, so there will be destruction of cells in protein or fat for energy, in maintaining the continuity of the activities being carried out. After completing the activity at rest (sleep) will return to anabolism (formation) of new cells, the so-called theory of compensation.

Sumber (Bompa:1994)

2. Effect of Sport against Pulmo (Lungs)

The lungs of a nonsports people will vary with the sport, a sportsman who perform hard physical activity will affect the anatomy of the lungs. So that the lungs of a sportsperson can accommodate 1.5 liter more oxygen than non-sportsmen. Anatomy of a sportsman lung bigger and stronger than non-sportsmen. This is due to the physical gestures that do, will automatically be followed by activities on pulma respiratory (lung). Motion respiration tend to have higher with the motion of inspiration (insert) oxygen into the pulmonary through the nose will be more, especially on respiratory insulair was led by Hb (hemoglobin) for combustion with glucose in the muscles that perform contraction, then the rest of combustion in the form of CO_2 released, motion expiration as the rest burning. A sportsman perform respiration is lower than non-sportsmen.

Lung (pulmonary) is located in the chest cavity, the side of the back. Where the chest cavity (thorax) is formed by by the side of costae, thoracalis rear vertebra, sternum on the front, while the bottom is limited by a diaphragm (diaphragm). All of which form the chest cavity (thorax) and helped performance, especially at the time of pulmonary respiratory insulair. Where at the time a person has completed a strenuous activity. As an athlete just finished a 100-meter sprint, the lungs are working very hard to restore debt oxygen (O_2). Because the 100 meters sprint power used is an-aerobic power yet use oxygen, then a runner will have a debt of oxygen (O_2). The task is to perform pulmonary respiration. Based on the results of research conducted by Archibald V., Hill of England expressed an athlete with an average size at rest the lungs using a ¼ liter of oxygen per minute. However, when doing strenuous activity increased to 15 times of about 3 to 4 liters.

Lungs as respiratory or breathing apparatus with respiration is a bodily system continuously delivering oxygen to breathe (Davis: 1999, 66). In the uptake of oxygen (O_2) and remove the combustion residue in the form of carbon dioxide (CO_2). Oxygen (O_2) is required by the body for energy (Davis: 1999.66), when the disruption of alveoli like the smoke of cigarettes smoked, then the decision-O_2

(oxygen) will not be optimal. Thus it will directly increase the expenditure of energy and reduces appetite.

So that people who smoke are not able to optimize the performance of his lungs. Especially in the alveoli (bubble dead end) as a tool for the exchange of gas (respiration) between the oxygen O2 as a result of inspiration with carbon dioxide CO2 to expiration (Co2 disposal) were tied by hemoglobine (Hb), or blood red dye. With the amount of nicotine and tar which stick to the alveoli, it will have a direct impact on the time taken (Inspiratie) oxygen (O2), for combustion with glucose to manufacture energy (power) and exhaust (Expiratie) carbon dioxide (CO2) as a combustion residue not optimal. In addition, nicotine but to close the neural connections can also cause cancer of the lungs.
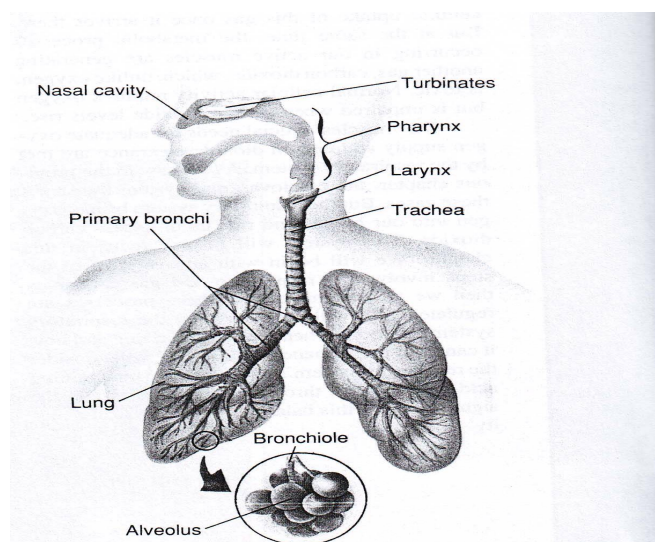
Gambar Pulmo. Sumber: Jack H., Wilmore & David L., Cotill. 1994. 192

Based on the results of Hammond & Horn stated that people who smoke (*cigaret*) are likely to be suffering from cancer of the lung, cancer of the larynx, bladder, diseases of coronary arteries, liver cirrhosis, pneumonia, ulcers of the stomach and intestines twelve finger. Below is a picture of the lungs.

Lung air shelter, in this case oxygen (O2). The amount of oxygen present in the lungs of about 5500 cc O2, consisting of regular air 500 cc, 2000 cc of air reserves, air complementary amount of 4000 cc 1500 cc, which is called tidal volume. While the total volume of air plus the residue of 1500 cc of air that is attached to a 5500cc called alveoli so the overall total volume. Air used for

physical activity of 4,000 cc, is called tidal volume. People who have a higher Vo2 Max, then certainly have excellent physical freshness and certainly has good health. Whereas a person who has Vo2 Max is low, then the physical freshness is also low (Kuntaraf & Kathleen: 1992.35). To determine the fitness level of a person can be done through a physical fitness test. Including through bleef test, cooper test or test Balke, Harvad test, mentoye test, and others.

3. Effect of Sport Against Heart

The heart is a vital tool as pumping blood throughout the body. Big heart are normal in the not sportsmen at left fist. The heart has four chambers room at the top there are two rooms, the atrium and the atrium dextra sinistra. In the bottom two chambers are ventrikel sinistra and ventrikel dextra, between the upper and lower space limited by the muscle is musculus annulus fibrosus.
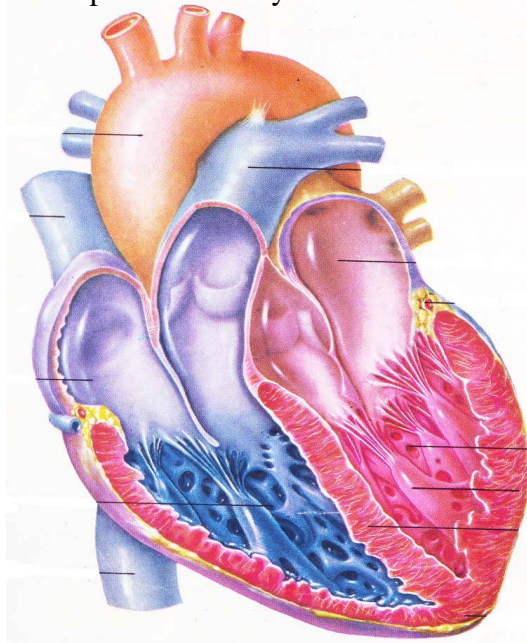
Gambar. Pulmo (paru-paru).
Sumber. Anderson: 1975. 153)

The whole red blood pumped by the heart throughout the body to perform its functions, ie the body's supply purposes. Blood in the adult human is about 5 liters and must circulate throughout the body in one minute is called the heart minute volume. The formula to calculate blood 1/13 X weight. The number of blood cells for fresh, for the red blood cell (RBC) of approximately 6 million cells per mm^3, for white blood cell (WBC) of approximately 8000 cells per mm^3 and platelets about 300,000 cells per mm^3.

An athlete or someone who exercise regularly and continuously through a targeted program that will certainly have an optimal physical fitness. For ages 40 years and older should exercise regularly, should not be less than 4 times in one

week. Each time with about 45 minutes to 90 minutes, with intensive movement, if it is done regularly and continuously, it will certainly have an optimal fitness, as well will have good health. Because by doing regular exercise and programmed, according to the physical needs, it will directly improve the function of physiology, especially on the heart as a vital component in life. Heart as a means of pumping blood throughout the body, where the blood as the body cells carrying purposes. At the time of physical activity, such as exercising an increase in heart rate and stroke volume (Flora: 2015. 9). The increase in the stroke volume of heart-related laws starling heart with each heart muscle ajar will cause contraction of the heart is getting stronger, will cause more blood back to the heart, called venous return, where the blood of his duty to bring the purposes of the body and forth carrying substances that are not required by body in the form of carbon dioxide (CO_2) to enter the atrium dextra.

Based on research data that heart disease is the number one killer disease in the world, while in Indonesia is the number three killer diseases (Kuntaraf & Kathleen: 1992.41). The most prominent causes of heart disease is due to the lack of movement (exercise), stress and diet is not well controlled. The person doing the exercise correctly will be able to do the burning of more than 2,000 calories, then he will be protected from heart disease. This is evidenced from the results of research conducted by Moris on out in 1970, that those who exercise regularly have an increased risk of coronary heart disease does not reach half of that of those who do not exercise. (Kuntaraf & Kathleen: 1992.45).

If we perform in an optimal physical activity (exercise), the heart and the pulmonary (lung) we also will conduct its activities optimally anyway. Because of the heart and pulmonary would always be associated with or adjust to the physical performance (skeletal muscle). A sportsman who exercise regularly and optimally, it can certainly have a different heart to people who are not sportsmen (non-athlete). In the sporting activities of an athlete who is more dominant in moving anaerobic, have a different heart with a dominant athlete doing aerobic movement. As the heart of a sportsman distance running marathon suppose bigger heart, but the ventricular wall is not too thick. While the heart of a sprinter (an-

aerobic) heart is not too big but its thicker ventricular wall. whereas the non athlete (ordinary people) heart is only as big as a fist of his left hand. That is smaller than the second heart sportsmen, both aerobic and an-aerobic. Where there is a difference between the heart of a sportsman (athlete) aerobic long distance (distance running) the image to the left. while on the right an-aerobic athlete as in sprint (sprint, and the image in the middle is a picture of the heart of man is not an athlete.

Endurance Athletes   Nonathletes   Non-Endurance Athletes
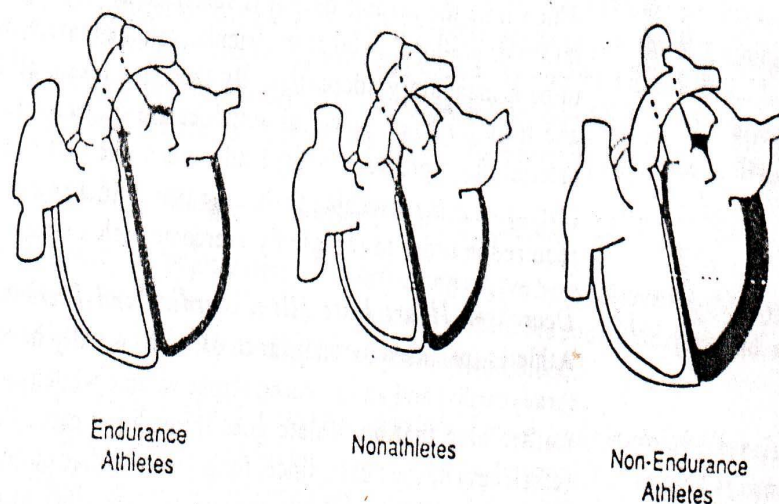
Based on the comparison of the image above shows clearly that, the heart of the person who is not an athlete look smaller and ventricular wall is also thinner, not as thick as ventricular heart sportsmen. Where the left ventricle is indispensable for the performance of the heart in pumping blood through the aorta to circulate throughout the body, in order to meet the needs of the body in performing daily tasks. To carry out its duties in the form of supply of nutrients such as glucose and oxygen as materials for energy or energy in doing muscle contraction. While on ventriculus dextra rooms where there is on the lower right, serves to pump blood to the pulmonary (lung) for excretion (throw) from the combustion of carbon dioxide (CO_2) through the nose.

Someone who has ventricul thicker and large, it is certain that more amount of blood that is pumped throughout the body to supply the body's needs. Because the task of red blood (erythrocyte) serves as a transport carrying everything needed by the body, either oxygen as material oxidatie with glucose, and carries carbon dioxide (CO_2) as the rest of the combustion are discharged through pulmonary (lung) including other substances that are required by body.

Performing heart systole in one minute for the ordinary non sportsmen about 70 times, called the minute volume of the heart. While the cardiac stroke volume means that blood can be pumped or removed by the heart through the aorta in one systole about 70 cc, or often called the stroke volume of the heart. Whole blood must have been circulating throughout the body within one minute. A minute and a stroke volume of the heart, then the amount of blood that circulates throughout the body in one minute can be calculated by multiplying 70 x 70 cc = 4900 cc. So overall human blood was around 5 (five) liters.

As for a sportsman does not have 70 times systole in one minute. But it would be even lower may be only 40 to 60 times only for every minute. Because of a sportsman (athlete) has a thicker wall ventricul and very strong. In addition, the heart of a sportsman or athlete is greater. So that an athlete or sportsman is certain to have optimal physical fitness. It can be concluded that exercise is the most appropriate means to improve cardiac performance optimally, by having optimal physical fitness will automatically heart healthy and strong. A performance that is not supported by good physical health, it is certain that the results achieved will not be optimal. To that physical fitness is one of human needs.

Someone who has a physical fitness with good, then certainly have more opportunities to get what he wants, which is the physical fitness in this book is someone who is able to perform activities or certain jobs in their daily lives without experiencing fatigue meaningful. The method of training related to improving the components of physical fitness including: (1) exercise circuit (Circuit Training) can be used to increase strength, explosive power (power) muscle endurance local, aerobic capacity, the ability of an-aerobic, agility, skills

in accordance with a branch sport. (2) the exercise load (Weight training) can be done to help increase strength, explosive power (power) and local muscular endurance. (3) Calisthenics can increase strength, muscle endurance local, agility, speed, and flexibility, (4) Interval Training (sprint) helps improve power, the ability of an-aerobic, agility and speed, (5) Continuous training aims to improve aerobics and local muscular endurance (Davis Kimmet Auty: 1998 165).

4. Influence of Sports on Blood Pressure

For people who trained with moderate portion activity, blood pressure systole at the break lower than in ordinary people. If the person doing heavy exercise, the blood pressure at the time of the break was higher than the average person, even an athlete's blood pressure could reach 220. But after he reduced the severity of exercise, the resting blood pressure back lower than in ordinary people. Pulse pressure is the difference between the pressure systole and diastole. Pulse pressure is influenced by exercise. While pulse pressure trained person during his practice will be greater than usual. Because the heart is greater stroke volume. While the frequency of heart less. A sportsman or athlete in the blood are not the same as people who are not athletes, usually of regular physical exercise will be changes include:

a. Erythrocyt (grains of red blood) in people who trained the number is increasing every mm^3 to 6 or 7 million eggs. While the usual 4.5 to 6 million eggs per mm^3 her.

b. Her hemoglobine levels also rose. It will benefit our body tissues in serving the needs of O_2 as a material oxidation with glucose in the muscles that are contracting.

There is also a rise in the levels of erythrocyte because the long silence in the mountains. This is due to air in the mountains a lot less containing O_2. so that the body we multiply the number of erythrocyte. Bone marrow red marrow (medulla rubra) is a place for producing erythrocyte, the people who are trained to be very active. The advantage is in the time of strenuous exercise, damaged erythrocyte

soon be replaced by the medulla rubra. Erythrocyte prime number around 6,000,000, - its cells per mm^3. While the people who are not trained replacement passive, so that he will temporarily become anemic as a result of the exercises weight will also increase the number of leukocyte (cells, white blood cells) increased from the normal amount of 7000 per mm^3 will be 20,000 eggs per mm^3, since the center manufacturing becomes more active. The more severe the sport bigger gains.

Table. The Increase Leukocyte on Sport

No	Type Sports	The increase in the number of leukocyte each mm^3
1	basketball	8100
2	Wrestling	7800
3	Runners 400 m	7700
4	Runners 1500 m	76003

Sumber: (Kuntaraf & Kathleen: 1992).

The principles of measuring blood pressure is put on the principle of RIVA Rocci, which is already commonly used by health workers. In pathological circumstances (illness / disability) Blood pressure also changes from a healthy state. As the people who are doing sport, then the blood pressure will rise temporarily, about 30 to 40 mm Hg from a normal state, and a sleeping person, the blood pressure will decrease slightly. Blood pressure beyond normal limits can cause a disease called hypertension (high blood pressure), through sports activities regularly and continuously, it will be protected from the disease. It is based on research results George in 1964, the tribe "tangled" from Kenya all members of the tribal community was not found diseases related to high blood pressure. Because the tribe masai have a lot of physical activity throughout life. Even the physical condition of the male Masai tribe in proportion to the physical condition of athletes the Olympic Games (Kuntaraf & Kathleen: 1992. 63). To monitor your blood pressure situation, we should always check systole and diastole our blood pressure. The normalcy of blood pressure listed in the table below according to age as follows:

Table. Estimated Blood Pressure Normal accordance Age

Age	TD Systole (mmHg)	TD Dyastole (mmHg)	T. Nadi (mmHg)
10 years	103	70	33
20 years	120	80	40
30 years	123	82	41
40 years	126	84	42
50 years	130	86	44
60 years	135	89	46

Blood flow velocity in each place is different, is influenced by a wide number of vessels hole traversed by the blood. In the vast number of burrows aorta entirely at least. Therefore, blood flow in the aorta is very swift. While in arterioles (arteries were small) number of wide hole hundreds of times greater, because the branches capillaire innumerable, because the flow of blood in capillaire very slowly, and in venula (veins hair) blood flow increases fast, because the vast number of burrows in venula began to decrease, until the vena cava, of the superior vena cava and inferior vena cana blood flow has been rapid. While the speed of blood flow in the aorta each second ranged between 200-600 mmHg per second, diarteriolen blood flow of 2.8 mm per second and in the area capillair 0.5 mm / sec.

Blood flow very slowly in capillaire very beneficial, because it gives the opportunity for an exchange of blood to the water network. To illustrate how the speed of blood flow, the experiment as follows: Substances which taste bitter (decholin) injected in the veins around the upper arm (near the elbow). This bitter substance will follow the blood through the heart, lungs until the tongue so that people feel bitter. It turns out it takes just about 20 seconds, the substance flow with blood from a vein in the arm to the tongue. So we feel a bitter taste on the tongue.

At the time of physical labor, muscle tissue should receive more arterial blood, cardiac minute volume must be increased. His breathing is deeper and faster, suctioning of blood to the heart also increased (remember the increasingly negative intrathoracic pressure). Then the muscles that work dynamic tapered (contracts) or loosen (relaxatie) continuous, veins in their stressed muscles because of the valves in the veins. Blood venues as if pumped to the heart (muscle

pump mechanism). Moreover, if the work is big muscles, for example the movement of walking and running. Presso-Receptor.

In general, red blood can be divided into two parts: (1) The solid part called blood cells (corpus Coli), (2) the liquid part called blood plasma. Human blood has a pH of about 7.4 and can change the range of 7.3 s.d 7.4. This change is caused by hemoglobine, blood red dye. People who lack hemoglobine, will lead to a disease called anemia. Due to the lack of minerals, especially iron. Iron is obtained from green leafy vegetables. Such as cassava leaves, katuk, leaves and other nuts. Erythrocyte red blood cells have cells that are shaped like a disc with a size of 7.5 x 2 micrometer. In a normal red blood mm3 approximately 5,000,000 (five million) cells, and this can be increased through exercise and a balanced feeding of up to 6,000,000 cells per mm3. The red blood cells in adults is made on the bones that have the red marrow. In the red blood cells are dye called Hemoglobine (Hb). This substance is a compound with a substance with iron globine eggs called Hb color red.

Hemoglobine is a substance that is extremely sensitive to O_2. Hb in pulmonary deals with O_2 and reduced back to Hb, while O2 is used on oxidatie with glucose to produce energy (power) in the muscle tissue, to excite or muscle contraction. People who lack hemoglobin or blood red dye, will lead to a disease called anemia. While thrombocyt (blood clotting) the shape of thin pieces 1 mm3 for the normal (healthy), there are about 300,000 cells. The pieces in the blood contained a substance called protrobine. This substance is essential for blood clotting, when exposed to injuries, while those who do not have thrombocyt, the disease is called hemophilia.

5. Effect of Sport against Kidney

Kidneys are vital organs in the body there are two, located between the waist, as a means of disposal of liquid exresi in urine. Urine is made through glomerulus water with filtered blood, where unused water will be discharged in the form of urine. So the blood becomes clean. Damage to glomerulus will cause kidney failure resulting in death.

1. Kidney Function

- Filtering metabolic waste substances from the blood

- Maintaining fluid balance

- Maintain osmotic pressure by regulating the balance of salts in the body

- Maintaining the balance of acid and alkaline levels of body fluid by removing the excess acid / base via urine

- Removing the remnants of metabolism such as urea, creatinine, and ammonia

- Produce the hormone erythropoetin that played a role in assisting the manufacture of red blood cells

- Enabling vitamin D to maintain blood calcium levels and bone health

Kidney is one organ of the human body are included in the excretory system, other organs of the excretory system is the heart, lungs and skin. The kidneys are located on the posterior abdominal wall, especially in the lumbar region, on the right and left of the spine, wrapped in a thick layer of fat, behind the peritoneum, and therefore beyond the peritoneal cavity.

Position kidneys can be estimated from the back, ranging from the height of the thoracic vertebrae to the third lumbar vertebra. Right kidney is slightly lower than the left, because the heart occupies a lot of space on the right. Shaped like kidney beans, totaling a pair and located in the lumbar region. The size is approximately 11x 6x 3 cm. It weighs between 120-170 grams. The kidneys filter waste material from the blood and removing it with urine.

In physiological functioning kidneys maintain acid-base balance in the blood (electrolyte balance) by throwing metabolites and ingredients that are not useful anymore of blood. At first screening of blood carried on the glomerulus, and then repeated at 1 kontraktus tubules (proximal tubules) that there is a balance of salts in the blood. The final result of such filtering is urine that is finally out of the ureter.

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Kidneys play an important role in the regulation of blood mix, and obviously kidneys dispose of substances are destroyed by the liver. The role of the kidneys in the body to regulate blood mix, not just trash metabolarine result set either in the form of organic substances such as urea, urine acid, kreatine, also includes setting the concentration of salt, moisture content, and the degree of acid (zuurgraad) of blood. So the job of the kidneys is very extensive and important. So if there is severe disruption of the kidney, such as kidney failure, human beings may not be able to survive, if they do not do a kidney transplant. Continuously throughout the blood circulating throughout the body, the blood must pass through the kidneys as much as 25% of it.

The blood vessels that go to the kidney spread into branches to be capilair-capilair shaped spools of thread called glomerulus (thread-benag filter). Each glomerulus has a sheath called sheath Bowman (Bowman Hoop), which is the beginning of the bile duct. Glomeruli with Bowman sheath called objects of Malpighi. Blood vessels that come out of the glomerulus branches and eventually became capilar capilar-encircling channels of kidney (renal tract that is a continuation of sheathing Bowman). The speed of blood flow through the kidneys approximately 1200mml / ment. So the capillary network of high pressure by an average of 60 mmHg. Thus causing a rapid fluid filtration into capsules bowman.

Conversely low-pressure capillary network in the capillary system pritubulus work at an average pressure of 13 mmHg which allows asorssi caitran fast because of the high pressure plasma somotik. So kidney function is a tool for filtering or washing the blood, so the blood becomes clean not mixed with other substances that harm the body. The image below inside the kidney. A person who suffered damage to his kidneys, so he can not do the washing of blood in his body, and failing to do kidney transplants, with the long term would have fatal consequences and will lead to death.

Urine keluar
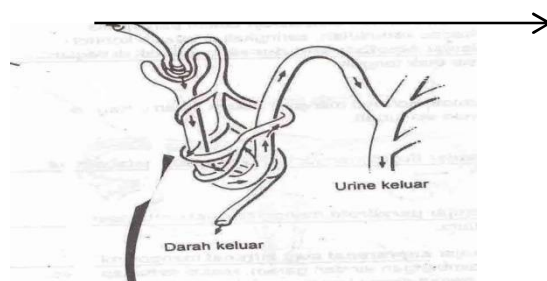
Darah keluar

Darah masuk

Darah keluar
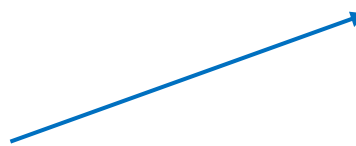
As for the things that can damage the kidneys is when we are short of drinking, eating foods high in containing certain substances similar ammonia, such as eating jengkol, pete, if consumed too much, eating foods that contain dyes, which do not have permission from the Ministry of Health.

Below is the process or how the pro urine in humans as follows:

1. The blood pressure in the glomerulus is still very high, because the distance from the aorta to the glomerulus is very short (close).

2. Wall capilair glomerular filter is very soft (ultra filter) which can be penetrated by water and substances that are very small molecule, but the protein molecules can not penetrate.

3. Very high blood pressure in the glomerulus can win colloid-osmotic pressure stress proteins found in blood plasma, and consequently came water molecule substances other very little through the walls of the glomerulus to Bowman sheath, then there was a pro-urine (in pro-urine still contained glucose).

If the water content in the blood, colloid-osmotic pressure of the blood is reduced, so that the pressure in the glomerulus is free to push the water in the blood to the majors sheath Bowman, consequently lot of urine production. If the water content in the blood is very low (because a lot of sweat) urine bit and a bit lumpy. Especially litter nitrogen and acids are removed from the body by the kidneys with urine. For the urine through the process as follows: the pro-urine still contained glucose, but glucose in the urine is already lost, because sucked

back by the wall of the renal tract capilair continue into the blood vessel. This indeed is a must, since glucose is the energy source.

Suctioning back of this glucose is the active work of the bile duct. Furthermore, there is also actively suctioning back some of the water from the pros - the urine (water is indispensable also by blood). Now there lived urine containing substances whose levels are higher than in the pros- urine earlier. The substances present in urine, namely:

1) had higher levels of certain substances in the blood (Na, K, Ca, Mg, Cl).

2) substances that are actually really should not be in our blood ammonia, dye shoes, paper, cloth, etc.).

Thus, the substances discharged with urine only the rest of the group no.1 above substance after being sucked as needed. While no group substances. 2 must be disposed of with urine. The number and mix of urine each time can be changed. The amount depends on the usage of water and sewer, when many excreted through the skin (sweat), then a little urine. Meanwhile, mix the urine depending on the nature of a person's diet. When people eat a lot of protein (meat) there exists a mixture of urine that many amino acids in desainur pass that after ammonia. So people who eat the meat, the urea in the urine is so high that burdensome task kidney.

Instead people can save kidneys with little to eat the meat. The yellow color of urine coming from some of them dye dye bile into the blood and excreted through the kidneys. So two very important things that need our attention from the work of the kidneys are: (1) Filtration (filtration that occurs in the glomerulus). (2) suction back that occurs in the bile duct. There are hormones that intervene against kidney tasks that hormone hypophyse (from embelan gland of the brain). When this hormone is not present, the amount of urine for 24 hours about 20 liters and very much water. Hormones hypophyse was very instrumental in arranging the household water. After the urine until the end of the bile duct, then all the water collected in advance in the cavity of the kidney, then the water is sent to the bladder (vesica urinary) through the urinary tract (ureter). The bladder walls are

composed of smooth muscle tissue which can adapt itself to the amount of the contents contained therein.

6. Sports for Ages Baya and More

Lately a lot of people in sports activities is not oriented on the circumstances and the physical ability he has. Did not feel that the growing age, will decrease his ability, especially his physical ability, keep in mind, that people aged over 30 years will decrease physical abilities one percent annually. So that the exercise is not in accordance with their capabilities will lead to things that are not desirable, it will even lead to death. As often happens a lot of people doing sports activities, which should improve their health and physical fitness. But after exercise, which gained even cause havoc (death). One may even consider exercise cause a negative thing for us, because many disastrous (death). This is due not aware that his physical abilities are not in accordance with the exercise done.

As of late this is a trend, shall exercise foot. While he was already entering the age above 40 years of age which are already decreasing the physical abilities and no longer able to perform an-aerobic movement with a relatively long time. While futsal. Closely related to the performance of an-aerobic, then .no matched for age. Because an-aerobic movement of energy used is an-aerobic energy without using oxygen (O2), such as foot shall, highly unsuitable for the age. Sports are recommended for the elderly is a sport associated with aerobic movements, such as walking, jogging, biking, doing exercise, gymnastics flexibility, and swimming.

Sport is very important to maintain body fitness. But we must realize that the power to the middle and advanced age, is not as good at a young age. Peak physical abilities a person up to age 30, the sportsman is often called the golden age (golden age), above that age will decrease their physical capabilities, including its ability to function. Such as cardiac, pulmonary it began to complain at the time of heavy activity, such as climbing the stairs.

To resolve all such complaints very necessary to do sports, through a program tailored to his abilities, targeted and sustainable. Recommended exercising 4

times per week with a duration of 45 to one hour, If you want the order to the muscles, heart and lungs heal, to be able to perform tasks in support of the daily performance, if it is done with full sincerity and continuous, will improve health and physical fitness (Harsuki: 2003). As well as to reduce the cost of healthcare to zero%, where health care costs are now more expensive.

Doing exercise is preventive and not curative for all diseases, especially generative diseases, even including diseases related to microorganisms. Because the exercise will improve the ability of our physiology, especially in body fluids such as RBC, WBC and Thrombocyt, when RBC are both about 6 million cells / mm3, while s.d 8000 WBC approximately 7000 cells / mm3 and thrombocyt 300,000 cells / mm3. If someone has it, it is certain that the person will have good health. To improve all that can be done through sports activities gradually, on a regular and continuous, must also be balanced with a balanced nutritional intake adjusted to the performance is done.

So the sport is not just shy away from a variety of diseases illnesses. But it can be done to lower blood pressure, for those who already suffer from high blood pressure (hypertension). But it must be remembered exercise undertaken must be adapted to the circumstances of their physical condition of each and should always consult with a physician. Most people who die as a result of exercise, because exercise is done not in accordance with their condition.

As in the present sports that were "hot" is the sport of futsal. Futsal sports activities are not appropriate for people aged over 30 years, especially in people who are not trained to be fatal. Because the sport belong in sports that have an-aerobic movement, then the energy needed including an energy-aerobic. Because futsall including sports activities that require energy-an-aerobic. where movements are requiring speed and high durability.

Recommended for those who are age above 30 years old and not properly trained, should do a sport associated with aerobic energy, which is classified as aerobic exercise. Such as physical fitness gymnastics, jogging, roads and other flexibility exercises. Because basically exercise aimed at making man healthy,

fresh and strong. In healthy Islam is seen as second best after of Faith favors. Even God actually like strong believer. Therefore, exercise is necessary.

7. Conclusion

Exercise is the most effective means to cultivate healthy lifestyle through positive activities. Sport as a preventive action against various diseases. So as to reduce health care costs, even to zero percent. Except for diseases caused by mechanical, and chemical chemis. Like hit, exposed to heat, and as a result of poisoning. Exercise can improve the quality of the performance of our physiology, so it can work more optimally included in the circulation. Diseases that arise in a person due to the blood circulation is not smooth or not normal.

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LEARNING PROCESS OF BIOLOGY THROUGH THE GUIDED DISCOVERY LEARNING BASED ON LOCAL EXCELLENCE ON THE SUBCONCEPT OF EUBACTERIA ROLE IN LIFE

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Abstract

The purposes of this study were to determine learning process of biology through the guided discovery learning based local excellence on subconcepts eubacteria role in life and to determine the skills of the students process through the guided discovery learning based local excellence. The method used was a descriptive method. The population in this research was class of X of SMAN 13 Tangerang District. The sampling technique used in this study was purposive sampling. The sample was the class X.A of SMAN 13 Tangerang District consisted of 46 students. The data were collected by observations, questionnaires and skills process of science test. The results of this study showed that student responses during learning activities using guided discovery learning based local excellence on subconcepts eubacteria role in life was good with a percentage of 77.34%. The skills process of the students belong to the good categories with an average percentage of 82.52%.

Key Words: guided discovery learning, Eubacteria, local excellence

1. Introduction

Biology learning process in school requires a variety of learning experiences to understand the concept and process of science. Biology is not just rote learning or remembering it. However, in the implementation, there are stil teacher who teach biology by memorizing the information. It makes the student only accomodate what the teacher said without knowing the true meaning of the learning process. Method's selection done by monotonous teachers lead to the lack of student's ivolvement to discover the concept based on their own thoughs in the learning process. The biology learning process was just eventually see the final result without seeing the process that lead to the student's ignorance.

One of the learning model that involves student's activeness to find the concept it self is a guided discovery learning model. In guided discovery learning

model, students are encouraged to be able to find the problems related to the subject matter, so the students can be actively involved in the learning process. In addition, in that learning model, teaching materials presented are not in the final form, but the students are required to perform various activities such as organizing problems, collecting the data, solving the problem, communicating and forming a new concept. So the teacher is only as the facilitator who creates active, creative and fun learning (Hamalik, 2010). By giving an opportunity to students for being a problem solver makes the students will search more for the information related to the problems.

In general, the learning model by using guided discovery learning model only requires students to find solution for the problems related to the subject matter without concerning them selves with the enviroment. Eventhough many problem can be solved from the enviroment around them related to the subject matter. For example is the problem of using the local excellence as learning resources. The local excellence is all of the thing which are the characteristics of one area, includings the economy, culture, information and communication technology, ecology and many other (Ahmadi et al., 2012:). There are a lot of local excellences that can be utilized in the learning process, espesially in the Banten province.

Banten province has the potential in the mining, plantation, agricultural, tourism, culinary and industrial (Sulasno, 2008). One of the potential that can be developed into the local excellence is in plantation sector. One of the leading commodity plantation developed in Banten province is coconut palm with the productivity around 696.60 kg/ha in 2011 (Dishutbun, 2012). There are coconut palm plantation in almost all cities and district in Banten province. One of example is in the Tangerang distric. Coconut palm production in Tangerang district from 2008 to 2012 is aporoximatelt 5700 tons/ year (BKPM, 2015). The coconut palm is taken as example of an existing potential plantation in Banten province. Coconut can be used as nata de coco as learning application for biology in the subconcept of Eubacteria role in human life.

Based on the introduction above, the reseachers aims are to apply the biology learning on the subconcept of Eubacteria role in human life by using guided discovery learning based on local excellence in SMAN 13 Kabupaten Tangerang and measure the student's science process skill after doing the learning process by using guided discovery learning based on local excellnce.

2. Theoritical Background

Discovery learning is a learning model that involves the students actively in learning process and the teachers act as facilitators, it means that the teachers role play is guiding the learning process and helpinh to find out the knowledge, for example is by giving problems to students to solved by experiment (Syah, 2010). Hamalik (2010) stated that in the guided discovery learning model, students act as scientist conducting experiment through his own mental process. The student acts as scientis, so the result obtained by the student will be durable in memory and are not easily forgotten because the students participate in all learning activities. Discovery learning model in learning process provides the opportunity for students to find out their own information through the problems or issues that are given by the teacher to be solved through discovery or experiment which will be provide information such as new concepts or principles (Suryosubroto, 2002).

The guided discovery learning model based on local excellence is an innovative learning model by emphasizing how active learning is which provides greater opportunities for students to develop their knowledge and potential by teaching the skill to investigate and solve the problem in accordance with the characteristic of the region. So that the students can achieve the goal of learning as a preparation to face the future life by referring to the cultural values of the region. Therefore the learners can keep the preservation potential of the region (Wijayanthi et al., 2014).

The implemantation of guided discovery learning based on local excellence in school is aimed at contextual biology learning as biology learning objects are very easily found in the neighbourhood. Teachers should be able to

present such objects significantly both in the classroom and structural task outside the classroom. The contextual object can facilitate the students to understand the concept (Mumpuni, 2013: 3). The education stages of local excellence in senior high school (SMA), the first is determination of themes and type of local excellence. The next stage is intergrating the themes with syllabusband lesson plans, then determinante the competencies of local excellence education that must be mastered by the students (Mumpuni, 2013).

3. Method

The research method used in this research is descriptive method that aims to describe the facts, the chacteristics and the correlation between the investigated phenomenon. The method illustrates the learning process by using guided discovery learning based local excellence and student's science process skill on the subconcept of Eubacteria role in life. The research was conducted in the academic year of 2015/ 2016 at the first semester. The population in this study are the 10th grade students of SMAN 13 Kabupaten Tangerang. The sample of this study were the The 10th grade of class A students of SMAN 13 Kabupaten Tangerang. The sampling in this study is done randomly (simple random sampling).

The data collection technique used in this study is non test and test technique. Non test technique consists of observation sheets and questionnaires, while test technique consists of the description test to measure the science process skill. The data were analyzed by using quantitative descriptive statistical analysis techniques. The analysis technique in this study is analyzing the quantitative data obtained from observation, questionnaries and description test. The data obtained will be calculated by using certain formula to obtain the data in number form which will be converted into percentage which is then interpreted by using the qualitative sentence.

4. Result and Discussion

a. The application of guided discovery learning based on local excellence

Guided discovery learning based on local excellence basically promotes active learning for student by giving opportunity for student to discover and solve the problems. In this study, students are guided to find the problem and solve it by conducting discussions and observations. At the begining of learning, the student groups are asked to find information on local excellence in Banten province by reading the literature from books and internet. The students discuss about local excellence that can be assosiated with the subconcept of Eubacteria role by using existing literature and guidance from teachers. Furthermore, the students are asked to work on the students' worksheet. The answer of the students' worksheet that has been done by each group showed which is generally every group has been able to answer the problem on the worksheet properly. Each group already know the existing plantation is the potential excellence in Banten province. In addition, students learn how to use the existing potential by processing the coconut oil into more valuable product. There are so many products that can be produced from it, because all parts of coconut can be use, which are fibers, shell, and the coconut water. The coconut water can produce some products when current manufacturing process uses the help of bacteria. The resulting product examples are nata de coco by using *Acetobacter xylinum*, bioethanol and virgin coconut oil (VCO) by using *Sacharomycess cereviceae*. However, because of the used of facilities and material is only support for the manufacturing process of nata de coco then the teacher leads the students to make product from coconut water into the nata de coco form. The nata de coco processing requires the help of *Acetobacter xylinum*.

The students' worksheet answer showed that the students are able to built their own knowledge. The knowledge is already gained by applying the manufacturing process of nata de coco making process. All the learning process stages can not be separeted from the teacher's guidance.

The guided discovery learning stage is done in twice meeting. Although it ls just two meeting but the students can attend the learning and mastering the subconcept of Eubacteria role in life well and also built good science process skill.

b. The student's science process skill assessment on guided discovery learning based on local excellence

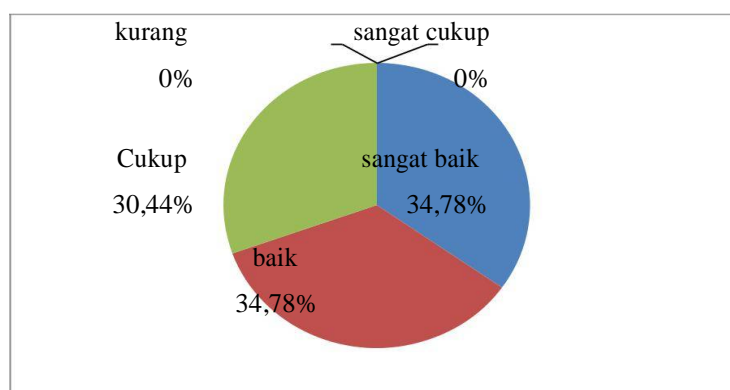The student's science process skill assesment on guided discovery can be seen in figure1 .

Figure 1. KPS assessment on guided discovery learning based on local excellence

Based on figure 1, the excellence category and good category are at the same percentage value of 34.78%, the results indicate a highly student's role were directly involved in learning process. At each stage of guided discovery learning based on local excellence, the students are always active in discovery process. In the process of the problem in Banten province, students built their own knowledge through the structured questions from the teacher e.g what do you know about bacteria?, mention the bacteria's benefit in daily life!, mention the Banten province's potential in plantation!. These questions make the students have high curiosity about material learning by searcing the answer by the existing literature. At the collecting data stage about the problem, the teacher provides an opportunity for student to conduct discussion to obtain data or information related to regional characteristic that can be assosiated with the subconcept of Eubacteria role. At the collecting data stage for experiment, the teacher gives the students an opportunity to solve the problem by doing activities such as the nata de coco experiment. This activity will show the student's science process skill aspect. At the formulating problem's information stage, the students are given the opportunitiy to observe the result of the nata de coco product that have been

made, discuss with their group to fill out the observation worksheet and process the experiments data of laboratorium activities. At the conclusion stage, the teacher gives the students the opportunity to build conclusion derived from observation and discussion goal which to find a common concept. All the stages of guided discovery learning based on local excellence goes well and it brings the measured KPS aspects. The students are trained to find the concept systematically by appllyig the model, the student's science process skill will be developed so they can solve daily life problems by using their science process skill.

The study is supported by Ibrahim's research result at al (2014) which is states that guided discovery learning based on local excellence can lead to achieve and mastery the concepts with the high performance of the minimun completeness criteria (KKM). In addition, at the learning process, the students are working together in a goup. The cooperation is estabilished when they solve the problem of worksheet through discussion and doing laboratorium activities of the manufacturing process of nata de coco. The students' cooperation and active participation makes the learning run smoothly. The cooperation and active participation was observed by using the observation sheet. The observation sheet's result showed 60.80% of student is included in the good category. The observation sheet's result is supporting the KPS assessment result. This is consistent with Meli's research result et al (2013) which is states that the application of the discovery-inquiry learning provides an oportunity for students to participate actively, increase interest and motivation to learn, and help students find the concept based on the experiment makes the easier learning material to understand.

The student's science process skill assessment with excellent and good category are also obtained for the positive respons of students. This can be seen a positive responses with the aquisition value of 19.57% in excellence category and 80.43% in good category. The guided discovery learning bases on local excellence gives the students the contextual learning resources and also provides the opportunity to participate directly in learning activities. If the students participate directly then the students will be interested in the learning and the

teaching materials will be easy to understand and become meaningful. This is supported by research conducted Ibrahim et al (2014) which is states that diacovery learning by utilizing the student's enviroment to be more contextual would make the more meaningfull learning for students.

In the figure 1 also shows 30.44% of the student's science process skill is in the adequate category. This is based on abservation of 14 student from 46 students during learning process do not pay attention to the teacher's direction so the scores in each science process skill aspects are not optimal. The attention is one of things can be affect the learning outcomes. If the student has good attention to every learning process stages then the result would be good. According to Slamento (2010), the student's attention in learning is one of the factors that can affect to the learning outcomes that will be earned by the student.

The student's science process skill aspects were observed on guided discovery learning based on local excellence are observe, classify, interpret, predict, applying the concept, planning research and communicate.

Figure 2.KPS Assessment in each aspects
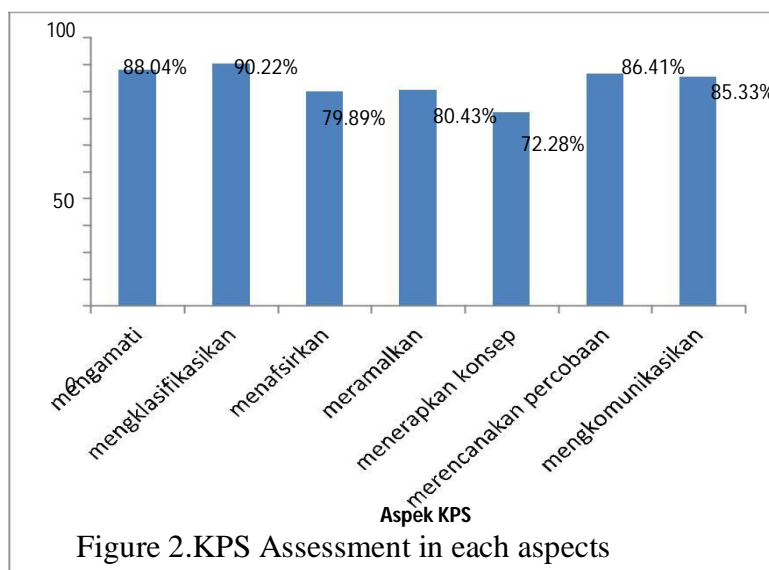
Based on the figure 2, the average percentage value of the observed student's science process skill on mastery ability is 18.52% which is in good category. This suggests that the guided discovery learning developes the student active learning during discovery activities which is to develop the student's science process skill. This was also addressed by Rachyuni (2015) that guided discovery learning model has a positive influence on improvement the student's

science process skill. The guided discovery learning model is enable the learners to be involved directly in the learning activities, the organize and confront the problems learning, problem solving ability, and draw the conclusion of studied problems. The highest percentage value of student's science process skill is 90.22% of the classifying aspect while the lowest percentage value of student's scince process skill is 72.28% of the the applying the concept aspect.

The observation skill aspect's percentage is 88.04% with a good category. It can be seen from the student's process skill assessment answer that the students can explain the characteristics of good nata de coco. The students can answer because they are already obeserved the good and the bad characteristics of nata de coco by themselves. The observation skill is also strengthened by the percentage of the observation sheet which value of 87.68% with good category. This is because during the manufacturing process of nata de coco, the students are involved directly in the object observation activities. The students obeserve the change characteristics of nata de coco during the manufacturing process by using the senses which are sense of touch, vision amd smell. The student can observe the good and the bad characteristics of nata de coco by comparing the students' nata de coco with the teacher's nata de coco. The observed characteristics are the white color, spongy texture and fresh scent. The teacher's nata has a milky white color, very chewy and thick texture, the sour aroma but does not stink. The students' nata in each groups has the differences, there are white as milk, yellowish white, and translucent white. The texture was different, there was very chewy, not too chewy and aqueous. There are thick nata and thin nata. There are the differences of aroma (figure 3). The different result of nata de coco such as the color, texture, smell, thickness and the presence of contaminants caused by the accuracy of measuring ingredient and the cleanness of tools and ingredients.
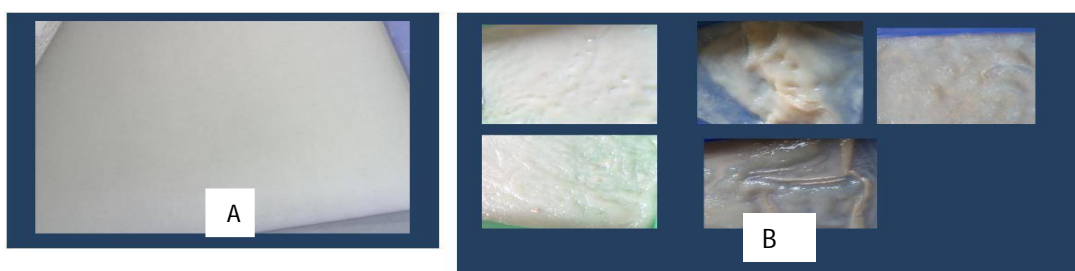
Figure 3. The teacher's nata de coco result (A) and the students' nata de coco result (B)

The teacher and students are directly observing the nata de coco's color by using sensory vision. Furthermore, the studnets are rubbing and pressing the nata de coco to characterized the texture. The more features or characteristics to consider by using various sense makes the students are able to have their own information relevant to the observed object (Usman, 2003).

The classification skill has the highest percentage in amount of 90.22% with an excellence category. It can be seen from the student's answer, that they are able to distinguish the tools and ingredients are used in the manufacturing process of nata de coco although there are tools and ingredients are not used in the manufacture process of nata de coco. The classify skill's percentage is reinforced by the observation sheet which is equal to 89.87% with good category. It shows that the students are very capable in classifying the tray, spoon, pot, plastic buckets, stirring spoon, paper, string ties, stove and filter. While the coconut water, sugar, vinegar, urea/ ZA and bacteria seeds are categorized as the ingredient. At the application process, the students can find the differences and the similarities of tools and ingredients because they are already done the worksheet by the teacher. At the classifiying process, the students are asked to find the function of each ingredient and tool. For example, the function of sugar as a carbon source and ZA as nitrogen source both of them are nutrients for the bacterial growth. So almost of the student in that class can distinguish an object. The classification skill is a skill to sort out various object based on specific characteristics, so we can get the class or similiar groups of questioned object (Dimyati and Mudjiono, 2009).

The interpretation skill's percentage value is 79.89% with a good category. It is based on students' answer which is the less ability to conclude the data provided in tabular form on student's science process skill assessment. Meanwhile in the observation sheet, this aspect's percentage value is 82.61% with good category. At the application process, the students can record some informations of

the created nata de coco from the shape, color, texture, thickness and aroma. The obtained datas from the observation sheet are transfered into the table form on the students' worksheet. The interpretation skill of the collected object, reality, event, concept or informatiotion through observation, calculation, research or experiment (Usman, 2003).

The prediction skill's percentage value is 80.43% with a good category. At the answering questions process, the students can find out that the vinegar can be added at the manufacturing process of nata de coco because it can change the pH into 4-4.5. It is the optimum pH of the bacteria growth, if the pH is not appropriate the bacteria growth will be inhibited and the success of the manufacturing process will be influenced. The prediction skill's percentage in the observation sheet is 84.06% with good category. At the manufacturing process of nata de coco, the students have to be able in prediction the event based on the obtained data, for example describes the possibility of poor result. The students know the contamination of fungi and other bacteria by the less cleanliness of the manufacturing process is the factors can be caused the poor quality of nata de coco. The other reasons are the unsystematic process and the inaccurate tools and ingredients. At the observation process of nata de coco product, the students find the contamination of fungi. That cases is accordance with Hamalik's opinion (2009) which is states that the students have to be able to connect the data, fact and information. The students are demanded to have the prediction and anticipation skill of the future activities or events.

The concept application skill has the lowest percentage of the average value of 72.28% with an adequate category. It is because of the answering process about the newspaper actual function. The newspaper actual functions are to cover the tray and allow the aeration in the covered tray by the newspaper's pores so the bacteria still can get the oxygen and the growth of bacteria can not be inhibited. Generally, the students answers that the bacteria need the air so its covered by the newspaper. However, the percentage value of this aspect in the obeservation sheet is 84.78% with good category. This is because the students are able to perfom all of the parcticum stages systematically which is assessed by the observer. The

systematic stages are the students' ability in the manufacturing process of nata de coco systematically with the accurate ingredients. Meanwhile there are 15.22% of students have not been able to do the practicum stage systematically, it can be seen at the practicum process that they can not measure the ingredients accurately which is influence to the result of nata de coco. The students' unsystematic process is because of the less mastery concept. Through the concept application skill, the students are able to explain new events by using their owned concept (Rustaman, 2015).

The research design skill's percentage value is 86.41 % with an excellent category. It can be seen from the students answer on the science process assigmnent. The students are able to fill in the blank chart of the manufacturing process of nata de coco. This data is supported by the data in the observation sheet, that has the percentage value of 85.51%. It can be seen during the practicum, the students are able to prepare the equipments and ingredients for the manufacturing process of nata de coco very well because that is not difficult aspect to be done by each student. The research design skill is the first step to the successfull research. In order to succesfull reasearch and produce the useful and meaningful things, so the research design is needed (Dimyati and Mudjiono, 2002).

The communication skill's percentage value is 85.33% with a good category. It can be seen from the students'a answer at the answering process of questions. Generally, the students are able to create the bar chart based on the narative data form. In addition, the observation sheet is in a good category with the percentage value of 81.88%. After the students complete the stages of manufacturing process they are asked to deliver the information verbaly with discussion in front of the class. The 16.04% of students are less capable in delivering practicum result and able to communicate the problem solution of student's worksheet. It is because at the discussion process the students are less active. It is assosiated with Usman's opinion (2003) which is states that the communication skill is an ability to convey the aquisition or learning outcomes to other either orally or in writing.

5. Conclusion and Remark

The conclusion of this study is the student's science process skill through guided discovery learning model based on local excellence in overall is well categorized by percentage of the average value of 82.52%. The percentage of the students' questionnaire response toward the guided discovery learning based local excellence is 80.43% with a good category and 19.57% with very good category. The suggestion for the next research is the implementation of guided discovery learning midel based on local excellence on other biology subcobcept in order to develop the exist local excellence in their region.

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DEVELOPING ISLAMIC-BASED READING MATERIALS FOR THE TENTH GRADERS OF MA NURUL HUDA KASMARAN OF BABAT TOMAN

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Abstract

The purpose of this study was to find out the developing Islamic-based reading materials text were valid, practical, and potential effect of the Islamic-based reading materials text. Development research consisting of analysis, design, evaluation and revision was used in developing the product. To collect the data, questionnaires and a test were used. The data were analyzed by using average score for the questionnaires and percentage for the test. In evaluation phase, formative evaluation consisting of self-evaluation, experts review, one-to-one, small group, and field test was also used. There were two Islamic experts reviewing the product, three students involved in one-to-one evaluation, nine students involved in small group evaluation, and 20 students of a real class involved in field test. The developed product was valid based on the result of the expert review phase in terms of its content. One was expert of content and another one was expert of instructional design. The result of experts judgment showed that the product was valid with average score was 89,2 categorized in good validity. The product was practical with average score in one-to-one evaluation was 84,3 and in small group phase was 86.6. The effectiveness of the product could be seen from the average score of students' achievement in field test. The score was 92.8 meaning that score was higher than the criterion of minimal mastery (KKM) of English subject in MA Nurul Huda Kasmaran 75. Therefore, the product had potential effect categorized in good level.

Keywords: *development research, I*slamic-*based reading materials, genre-based text, reading skill.*

1. Introduction

English is one of the compulsory subjects that should be taught Islamic-based reading materials properly to students in Indonesia since in Junior High School up to Senior High School. Thus, elementary school students also learn English as a local content subject even it has been promoted at playgroup and kindergarten. Moreover, the students should master English well in order to communicate with English about developing Islamic-based reading material in global era.

In Indonesia, reading is an activity that the Indonesian high school students do in their English class. However, because students do not use English in their daily life. They may face problems to comprehend the texts, such as; grammar, punctuation and main idea in paragraph. Therefore, they need motivation about Islamic reading, support from their environment and availability of learning facilities, for example from their family members, Islamic text books. In this case, family members are referred to parents .

Reading is the most important component of literacy that enables a person to be successful in school and achieving his/her vital life goal (Pecjak & Peklaj, 2006). Reading can empower students with extensive vocabulary, syntax, and other language expertise that will enrich their use in the target language (Guo, 2012). The two quotation above show that really is vitally important for the students to understand reading comprehension. By reading they can develop their vocabulary and they can develop their knowledge, and etc. Hence, teachers play an important role in providing sufficient reading materials for students. Students can expend their knowledge, train the brain to think and acquire new information and idea through reading.

Reading is one of the most crucial skills for the children's success in school and in life. Reading is very important "to achieve one's goals, to develop one's knowledge and potential, and to participate in society" (OECD, 2014, p. 37). Additionally, reading in foreign language is the main goal of learning and the most important skill in a foreign language (McDonough & Shaw, 2003). Moreover, Fong (2008) argues that reading has come to hold the most significant place in education as a means of communication in a highly literate society contributing not only to an individual's well-being, self-development and progress but also to the whole nations and the world.

Based on the informal interview held on May 2016, the representative of students from each class stated that they only had worksheets (LKS) to be used both at school and at home. The English teachers only used worksheet mostly in teaching English. They also stated that they could use textbooks only in the classroom because the school only lent it to the students during instruction in the

classroom. The textbook had to be returned to be school after the lesson was over. Therefore, the students needed more materials in learning English in order to improve their reading skill, that there was no Islamic materials content in their textbook.

Need Analysis

In this analysis phase, an interview was conducted to the tenth grade English teachers to obtain information about their problems in learning reading as well as students' reading skill. A questionnaire was also administered to the tenth grade students to obtain information about their needs or problems in reading and their English teachers' teaching habit. It is also used to obtain information based descriptive text which related.

Based on the explanation above, the problems of this study were formulated in the following questions: 1). How to develop of valid Islamic-based reading materials in genre-based context for the tenth graders of MA Nurul Huda Kasmaran Kecamatan Babat Toman?, 2). How to develop of practical Islamic-based reading materials in genre-based context for the tenth graders of MA Nurul Huda Kasmaran Kecamatan Babat Toman?, 3). How was the potential effect of the developed Islamic-based reading materials in genre-based context for the tenth graders of MA Nurul Huda Kasmaran Kecamatan Babat Toman on students' reading achievement?

2. Theoritical Background

Theoretical Description

Material for language learning is anything that can be used to facilities the learning of language. Materials can be in the form of course book, a cassette, a CD-ROM, a video, a photocopied handout, a newspaper, website, flashcard, printed materials which present about the language being learned (Tomlinson, 2012). He states that materials can be informative (informing the learner about the target language), instructional (guiding the learner in practicing the language), experiential (providing the learner with experience of the language in use),

eliciting (encouraging the learner to use the language) and exploratory (helping the learner to make discoveries about the language).

Language instruction has five important components, the component are student, a teacher, materials, teaching method, and evaluation. Material is an important resource for teacher in assisting students to learn English. Material has a role as one of the main instrument for shaping knowledge, attitude, and principles of our young people. In teaching learning process, students are the centre of the instruction. However, in many cases, teachers and students rely on materials, and the materials become the centre of the instructions. It is because of the teacher is busy and does not have the time or inclination to prepare extra materials, course book and other commercially produced materials which are very important in language instruction. Therefore, it is important for teachers to know how to choose the best materials for instruction, how to make supplementary materials for the class, and how to adapt materials.

In Indonesia, English is not used in all fields of life as its role is as foreign language. Brown (2001:3) defines that it is not used as key language in commerce and education; this often refers to English taught in countries. English is a foreign language or EFL. As clarified by Brown (2001: 117) in teaching English as a foreign language.

Brown (2000: 7) said that teaching is a part that cannot be separated from learning. He stated teaching is guiding and facilitating the learning, enabling the learners to learn, and setting the condition for learning. According to Tomlinson (2012), materials development is all the processes made use of by practitioners who produce and/or use materials for language learning, including materials evaluation, their adaptation, design, production, exploitation and research. Ideally, all of these processes should be given consideration and should interact in the making of language-learning materials.

Materials adaptation is changing the materials to improve or to make them more suitable for a particular type of learner. Adaptation can include reducing, adding, omitting, modifying, and supplementing. Most teachers adapt materials

every time they use a textbook in order to maximize the value of the book for their particular learner (Tomlinson, 2011).

The Concept of Reading Comprehension

Reading is getting meaning from the printed page (Romero & Romero, 2008). Mitchell (1983) states reading can be defined loosely as the ability to make sense of written or printed symbols. The readers uses the symbols to guide the recovery of information from her or his memory and subsequently uses this information to construct plausible interpretation of the writer's message.

Comprehension is making sense out of text. From an interaction prospective, reading comprehension is acquiring information from context and combining different elements into a new whole by using one's existing knowledge (schemata) to interpret text in order to construe meaning. Meneghetti, Carretti, and Beni (2006) state that reading comprehension is a complex cognitive competence which needs a capability to connect the information found in the text to the listeners'/readers' prior knowledge so that the elaboration of a mental representation can be made.

Descriptive text is one of the functional texts which will be the first genre of those texts that must be taught according to the syllabus of English curriculum. Descriptive text is the text that describes the features of someone, something, or a certain place. The students usually find some difficulties to develop their imagination and organize their ideas. Based on the statement above, teachers must be able to design, create, and organize good learning-teaching materials.

The Definition of Descriptive Texts

Descriptive text is one of the functional texts which will be the first genre of those texts that must be taught according to the syllabus of English curriculum. Descriptive text is the text that describes the features of someone, something, or a certain place. The students usually find some difficulties to develop their imagination and organize their ideas. Based on the statement above, teachers must be able to design, create, and organize good learning-teaching materials.

Descriptive text is a part of factual genre which describes a person, a place, or a thing. More often, description is a part of another piece of writing and is used to inform an audience about how something or someone looked or to persuade an audience to see something from the writer's point of view (Wardirman, 2008).

Descriptive text is a text that describes a particular person, place, or thing. A description consists of: identification and description.

1. Identification is a part identifies the thing/person being described.

2. Description is describes parts, qualities, and characteristic.

An example of a description:

Identification ⊏⊐ Identifies the person being described.

I live with my beloved mother.

Description ⊏⊐ Describes the characteristics.

My mother is big. She has short black hair. She has big dark eyes. Her hobby are singing and gardening. She plants a lot of flowers in front of my house. Every evening, she waters them together with my little brother. I love my mother.

(Inderawati, 2012: 90).

The generic structure of descriptive text are identification and description. The first paragraph is as introduction paragraph that introduces character especially a cat in this context. The second paragraph is as description that describe about courteousness

Learning materials are fundamental elements in the teaching and learning process, including in the teaching and learning of reading. The learning materials help the teachers deliver the instruction and information to the students and facilitate the students to understand the instruction given by the teachers. Materials may be suitable for students' needs, even if the materials are not

designed specifically for them, that textbooks make it possible for students to review and prepare their lessons that textbooks are efficient in terms of time and money, and that textbooks can and should allow for adaptation and improvisation. There are many kinds of learning materials that can be used to teach English reading, e.g. magazines, newspapers, charts, images and some technological aids. By considering that learning materials are significant to make the process of teaching reading run well and achieve the goals.

The interesting Islamic reading activities will help learners willing to engage the activities. The teacher should find out the students' interests such as hobbies, films, toys, games, TV programmers, music, sports, etc. Besides that, the teacher should some considerations below.

a) dealing with bilingual learners

b) managing pair and group work

c) the effects of different kinds of classroom activities

d) the mix ability class

e) time management

f) classroom organization and layout

g) keeping teaching record

Brown states approach informs about nature of language, language learning, and the applicability to teaching learning process (2001: 16). Another expert, harmer says that approach describes how language is used and how its constituent parts interlock and offers a model of language competence. Approach describes how people acquire their knowledge of language and make statements about the conditions which will promote successful language learning (2002: 78). The approach used in this research is Contextual Language Teaching (CLT). The CLT approach will be presented in the next explanation.

2.4. Islamic-Based Reading Materials

Islamic-based reading is a set of reading text which present the reader some stories related to the Islam. The content of reading text contains   of Islamic values, Islamic tradition, Islamic literature, Islamic history, etc. According to

Douglass and Shaikh (2004) the term Islamic is accurately applied only to that which pertains directly to the faith and its doctrines (such as Islam values, principles and belief, Islamic worship). The core Islamic sources is Qur'an and Sunnah (the words and deeds of Muhammad transmitted through the Hadit literature). Islamic-based reading materials are designed to the Islamic school students in order to introduce Islamic value and practice in daily life. The goal of Islamic studies is to build a strong Muslim identity in the student based Qur'an and it also covers the following areas of study Allah is one, Prophet Muhammad, worshipping Allah, Islamic manner (akhlaq), Islamic history and Islamic social studies (Everest Academy, 2013)

In addition, Islamic education aims at moral and spiritual formation. Although Islamic education looks at physical, mental, scientific and practical aspects, more emphasis is laid on moral training. Another aim of Islamic education is instilling appreciation of secular issues in life. This is because Islam is a way of life and embraces political, social and moral, economic and religious aspects. Religious, social and moral aspects are regarded as most important. Islamic education is also concerned with the material aspects of life. Muslim philosophers studied science, literature and arts. These subjects are regarded as important both in the acquisition of a livelihood and in the strengthening of moral character (Thungu*et al*,2008:29).

Here are the examples of Islamic text:

Text 1.

DIVINE TAX (ZAKAT)

Zakat or divine tax is one of the pillars of Islam. It is the fourth of the five pillars of Islam. The purpose of divine tax are to meet the social needs of the Moslem society and to improve the economic position in Islam.

The word divine tax means purification, blessing and increasing. It is a kind of protection of the wealth of those who are rich. Moslem protects his money from unexpected disaster when he pays his divine tax. As the prophet said, "

Protect your property by giving Zakat and help your relatives to recover from the illness by giving charity."

There are many kind of divine tax: zakat al fitr which is an obligatory payment by a Moslem slave or freeman, male or female, young and old. It should be made before the Ied prayer. It is usually given from the food majority: rice, wheat or grain. In country like Indonesia, the cost of zakat could be given instead and it is preferable. It can be done by giving money.

Other kinds of divine tax are money zakat, either gold or silver, trade zakat: cattle zakat, involving camels, cows or sheep; cereals and fruits zakat. These last two are one kind. Zakat is only pay able as compulsory if it is fulfilled two conditions: first, it must reach the nisab and second, it must have been owned by the person for one complete year.

Readability of the Text

The readability texts which are given in this study based on students' reading level in order to match their reading understanding level. Readability is the level of ease or difficulty with which text material can be understood be a particular reader who is reading that text for a specific purpose (Pikulski,2002). He also stated that it is dependent upon many characteristics of the reader. He also states that be the same text materials may be easy for one reader yet extra ordinarily difficult to another. Prior knowledge will greatly influence how well a reader can understand text dealing with a particular topic. The readability of texts in this study was calculated by using Flesch Kincaid on line (i.e;http://readability-score.com)

3. Method

To develop English teaching materials model in this research, the writer applied the developmental research. Development research was applied to develop Islamic-based reading materials in this research. Development research label has

been used to various kind of research approaches that are related to design and development work (Akker, 1999). He also states that development research aims to design a product for certain purposes through certain procedures, i,e. analysis, design, evaluation, and revision.

This research were conducted at MA Nurul Huda Kasmaran Kecamatan Babat Toman. The population of the study was the tenth grade students consisting of one classes in academic year 2015/2016. Purposive sampling was used. Fraenkel, Wallen and Hyun (2012) state that in purposive sampling, the researchers use their judgment to select the sample for specific purpose. The results of students' English achievement in the report card are used as a reference in selecting subject of study. There were three student for one to one test, nine students for small group test and all students in a real class for field test which did not include those in one-to- one and small group test.

This research aimed to develop Islamic reading materials descriptive texts which was valid, practical, and has potential effect. The researcher used observation and testing. Therefore, to determine its validity, practicality, and potential effect, some instruments used in this study are questionnaires (Likert-Scale) and reading comprehension test.

Questionnaires were given to experts in expert review and also to students in one-to-one and small group evaluation in the form of Likert Scale to get information about their opinion and comments after reviewing and/or using the developed Islamic reading materials with descriptive texts. These questionnaires were in a Likert Scale form ranging from strongly disagree, disagree, neutral, agree, and strongly agree with score ranging from 1 to 5.

To know the potential effect of the product, an evaluation was used in this study by using reading comprehension test in the form of multiple choice question with alternative answers ranging from a - e. The reading comprehension test was constructed based on descriptive texts developed in this study. The reading comprehension test includes several aspects, such as main idea, inference, vocabulary in context, cause and effect, etc.

The procedure that were used in this developmental research are proposed by Akker (1993, p.7) which are described as follows;in this phase, the descriptive texts available in the students' textbook which is issued by government was analyzed in terms of the number of the descriptive texts and the readability level of the texts. Besides, learning objectives relate to materials of descriptive text were also analyzed to formulate the learning objectives of the developed materials.

An observation was conducted to obtain information about the learning environment where the students studies. It was intended to determine whether or not the developed product could be applied in the classroom.

In this analysis phase, an interview was conducted to the tenth grade English teachers to obtain information about their problems in learning reading as well as students' reading skill. A questionnaire was also administered to the tenth grade students to obtain information about their needs or problems in reading and their English teachers' teaching habit. It is also used to obtain information based descriptive text which related.

Students' reading level is also identified to match their reading ability with the readability of the developed local-content based descriptive texts so that the difficulty level of the developed descriptive texts was appropriate with students' reading ability which is neither too difficult nor too easy. For this purpose, Jennings Informal Reading Assessment (Jennings, Caldwell, & Lerner, 2006), an informal reading inventory (IRI) which was developed by Dr. Joyce, was given to the students which included reading texts at level 3, 4, 5, 6, and 7. Each text consisted of three reading stages which are frustration, instructional, and independent. The criteria of these three reading stages are described below:

1. Frustration stage indicates that the texts are difficult for students to comprehend.

2. Instructional stage indicates that the texts are moderate for students to comprehend.

3. Independent stage indicates that the texts are easy for students to comprehend.

Design

In this phase, the first prototype of the product consisting of Islamic-based reading materials text and also embedded test for reading skill will be designed. The reading materials consist of the one genre which is *descriptive texts*. The reading materials were designed based on the students' reading level. The readability of the texts was measured by using Flesch Kincaid online in order to find appropriate texts for the students. Then reading comprehension test was constructed based on each passage and the difficulty level of the test was in line with students' reading level. The comprehension test consists of multiple choice, true-false and matching question.

Evaluation and Revision

In evaluation phase, formative evaluation proposed by Tessmer (1993) was used as described in figure 1 below:
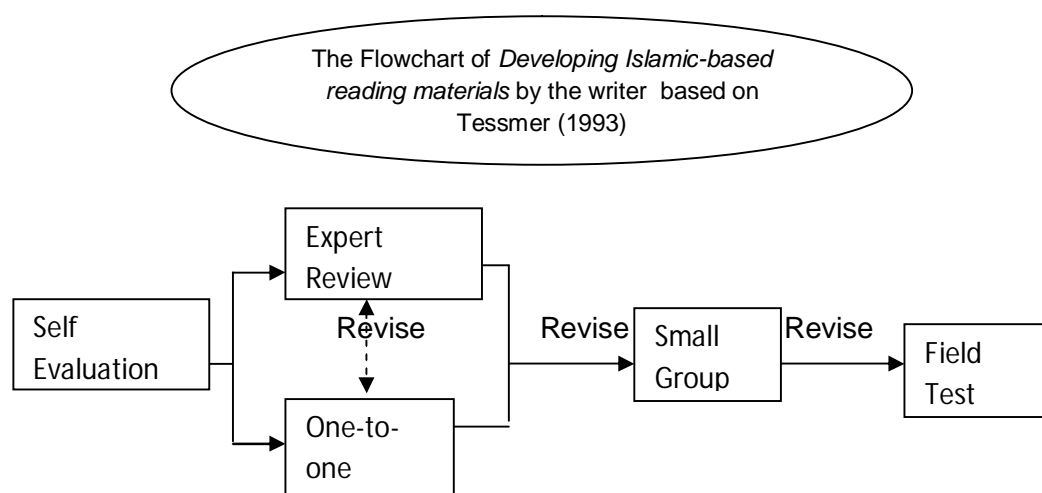
Figure 1. Formative evaluation (Tessmer, 1993)

The product was evaluated in the next phase by experts. The validity of the product was evaluated in this phase including content and layout of Islamic-based

reading materials in genre based contents and one experts were evaluator who were one expert in English and Islamic contents and one expert in instructional design. The description of experts can be seen in table 5.

Table 5. The Description of Experts

No	Experts	Experts' Description
1	Content	An English lecturer of PPs Sriwijaya University Palembang (Consideration: A doctor of education with high TOELF score (500) and expertise English)
2	Design	An English lecturer of PPs PGRI Palembang (Consideration: A doctor of education with high TOELF score (500) and expertise Instructional Design)

In one-to-one evaluation, three students of tenth were chosen. The students were chosen based on low, medium and high abilities (Tessmer, 1993). This evaluation was intended obtain their comments on the developed product to know the practicality of the product. The product was evaluated through expert review and one-to-one test was called prototype 1.

The phase *Developing Islamic-based Reading Materials for The Tenth of MA Nurul Huda Kasmaran Kecamatan Babat Toman* refers to English teaching and reading materials. The word *developing* refers to the process of creating of selecting teaching material development, especially Islamic-reading text.

In this study, some terms are used and the way they are interpreted in the scope of this current study will be described in the following operational definitions:

Developing is creating new product(s) or adapting existing product(s) for certain purposes through certain procedures, i.e. analysis, design, evaluation, and revision which in this study, it is creating Islamic based descriptive texts for the tenth-grade students which will be evaluated through formative evaluation in terms of its validity, practicality and potential effect by using questionnaires, interview, and reading comprehension test.

Validity refers to the extent to which the intervention under the development is in line with the state-of-the-art knowledge (content validity) and that all

contents and components included in the intervention are consistently related and connected among each other (construct validity).

Practicality refers to the extent that users and experts consider the intervention as appealing and usable in 'normal' conditions.

Teaching material is anything which has been designed systematically and is used to help teachers/instructors in the implementation of teaching and learning activity (*Depdiknas, 2008*).

Validity

To know whether the product was valid or not, the validation sheet from the expert review related to the content and instructional design of Islamic-based reading materials text are effective. All the data which were collected were tabulated and the result of each instruments were calculated, the writer was used percentage calculation (Riduwan,2005: 89) toward the result of interviews conducted by students, teachers, and English lecturers. The formula is as follows:

Percentage = The total score of each items x 100%
                        The total number of students

The category of validity of the developed materials were shown in the table 6

Table 6. Category of Developed Materials Validity

Percentage (%)	Category
86 -100	Very good
71 -85	Good
56 – 70	Average
41 -55	Poor
0 – 40	Very poor

Practicality

To find out whether the Islamic-based reading materials for reading skills developed was practical, the writer tries that materials in the classroom. The category of the practicality of the materials evaluate in one-to-one evaluation and

small group. All the collected data were analyzed by using tabulation. The category of practicality as in the table 7.

Table 7. The Category of Practicality

Average of Score Range	Category
86-100	Very good
71-85	Good
56-70	Average
42-55	Poor
0-40	Very poor

Potential Effect

To find out whether the Islamic-based reading materials developed had potential effect, the result of reading comprehension test was seen. The developed materials were said to be effective if the students have already reached and passed the criterion. Gusleys' opinion (2000) was taken as a reference in which started that the product developed was effective if the students acquired the intended knowledge and the skill. This criterion is known as minimal mastery criterion (*KKM*). The standard score of English lesson in this school is 75 (seventy five). The potential effect of the product was categorized as in table below:

Table 8. The Category of Potentials Effect

Average of Score Range	Category
86-100	Very good
71-85	Good
56-70	Average
42-55	Poor
0-40	Very poor

The questionnaire is also used to investigate student's acceptability on reading. Students were give questions on the form of the close format question to investigate that interest and response on the short stories to be analyzed.

4. Result and Discussion

Some steps of instructional design model Akker (1999) were applied in developing *Islamic –Based Reading Materials Text*, namely; analysis phase, design phase, and evaluation (self-evaluation, expert review, one-to-one evaluation, small group and field test) and revision.

Analysis Phase

In this phase, there were four main activities conducted to get information about the tenth grade students which were instructional analysis, environmental analysis, students' needs analysis and students' reading level analysis.

Instructional Analysis

The first step in this phase was analyzing students characteristic, i ,e students achievement of the tenth grades in English. The result showed that the average score of the tenth graders of MA Nurul Huda Kasmaran kecamatan Babat Toman based on the final examination in academic year 2015/2016 was 61,9 It showed generally that students' achievement in English was in fair level.

The second step was curriculum analysis by analyzing the standard competence for the tenth graders based on Content Standard and also the reading levels of the texts in the worksheet as their textbooks. The purposes were to know whether the levels of reading text were appropriate with students' reading level and to know whether the genre of reading materials in worksheet matched with standard competence and basic competence stated in content standard.

The result of curriculum analysis showed that the genre of the text in Islamic reading materials matched with standard competence and basic competence i, e descriptive text. The readability of the reading text in second semester worksheet varied. The lowest level of the reading text was grade 3 and

the highest level was grade 11 Here is the list of readability levels of texts in second semester of students' reading materials.

Readability Level of the Text Available in the materials text.

Chapter	Title of Reading Text	Pages	Readability level
1	Ramadan	19	7,2
	Devine Tax	23	9
2	Kaa'ba	30	7,3
	Mecca	33	4,5
3	Prophet Muhammad	37	5,6
	Islam and Recism	40	5,7
	Zam Zam	41	6,7

The third step was measuring students' reading level Jennings Informal Reading Assessment was used to measure students' reading level including grade 3 to grade 7. The questions were in form of multiple choice. The number of items in the test were 50 questions consisting 10 of each grade. There were 20 students as participants in this step.

Environmental Analysis

In this analysis, the writers observed the learning environment in MA Nurul Huda Kasmaran Kecamatan Babat Toman. From this observation, there were several conditions in this school.

Students' Needs Analysis

Students' needs analysis was conducted to obtain information about their needs in terms of reading. Aspects which were taken into consideration to obtain information about students' needs were (1) their reading achievement; (2) their perception about the reading materials in their text book; (3) their barriers in reading comprehension; (4) their perception of the learning process; (5) their expectations on the developed reading materials.

Students' Reading Level Analysis

The analysis was intended to find out students' reading level as the readability levels of the developed descriptive texts had to match with their reading level. In this activity, Jennings Informal Reading Assessment developed by Dr. Joyce, was given to the students which included reading texts at level 3, 4, 5, 6, and 7.

Design Phase

The first step conducted in this phase was develop Islamic-based reading materials text (prototype 1). The sources of reading materials were adapted from internet and some books. The titles of the texts were Ramadan, Kaa'ba and Mecca . The genres of the texts which was descriptive text. The readability of the text was measured by using Flesh Kincaid online in the internet.

Self Evaluation

The developed product was evaluated by the researcher in this phase. Some errors i.e misspelling, punctuation and grammatical sentences were revised.

Expert Review

There were two experts as validators of the product in this phase. The expert of instructional design was labeled Expert I and the expert of content was labeled Expert II, each expert have 500 score in English.

Evaluation and Revision

One-to One Evaluation

There were three students in this phase including high, medium and low level students. In this phase, the students were asked to check the developed product i,e finding errors of punctuation, spelling layout and direction. Students' understanding and the problem faced by students toward the developed product also could seen in this phase.

Small Group

Small group was conducted to know the practicality of the developed Islamic-based reading material text. Thus, the result of prototype 2 was evaluated in small group which consisted of nine students including three students for each level namely high, medium and low level.

Field Test

Field test was concluded to see the potential effect of the developed Islamic-based reading materials which was indicated by percentage of students who passed the minimum mastery criterion which was 75.

5. Conclusion and Remark

This chapter presents the conclusions and suggestions based on the finding and interpretations in previous chapter. Based on the results of the analysis and interpretations in previous chapter, several conclusions can be drawn as follow: The results of expert review showed that the developed Islamic-based reading materials text for the tenth grade students of MA Nurul Huda Kasmaran were valid.

In conclusion, Islamic-based reading materials text for the tenth grader students in MA Nurul Huda Kasmaran were valid, practical and had potential effect in teaching and learning process. Based on the conclusion above, there were some suggestions offered to the teachers, students and school.

First, the teachers are suggested to have information about students' reading level before they teach reading skill. The teacher may use developmental research proposed by Akker if they want to develop teaching materials. The teachers may use not only text books that they have but also they should use from many sources. And the last, the teacher should be accustomed to use ICT as instructional media in teaching and learning process. This medium can be used to attract students to be focus and more creative toward the materials presented and also help them to understand the materials well.

The teacher or tutor should develop the English supplementary instructional materials that are effective but interesting to the children. In preparing the lesson plans or materials should find out what things they like and need. It is expected that the result of the study can give an informative input to other researchers who want to conduct similar researches, For example instructional materials to improve children's' vocabulary mastery for Islamic boarding school students.

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THE ENHANCEMENTS OF NUMERACY THROUGH THE FLAVELL'S PRINCIPAL IN THE COGNITIVE 'S DEVELOPMENT FOR THE CHILDREN IN TK B SRIJAYA KM 5,5 PALEMBANG

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Abstract

This research of class' action is occurred in TK Srijaya Km 5,5 Palembang with the participants of 25 children. With a problem formulation: "Is it possible for the use of Flavell's Principal in numeracy: 1) could increasing the children's motivation for studying? 2) increasing the numeracy of the children?". This research is aimed for increasing the motivation of studying and the numeracy for the cognitive development of children in TK B Srijaya Palembang. The data collecting are the observation and test for each cycle. At the first cycle, achieved for 60 score, and the average ability of children's numeracy is 50 with the deficient category, for eleven children or 44%. The weaknesses of first cycle are: the lack of children's motivation for studying, the lack of curiosity and confidence. In numeracy, there was a child who repeated the specific number and skip the other numbers, so he couldn't able to say the numbers of things which has been counted. Therefore, this condition is fixed in the second cycle by giving the verbal or non verbal enhancements and the various playing activities and more motivations, so it could reached for the good category for 18 children (72%) with average score 70 or the numeracy is 66 with good category for 16 children or 64%. The weakness of this cycle is "The abstraction principle and The Order Irrelevance Principle" where the children were still not confident for doing the task. So, the children couldn't differ the countable things and uncountable things like water, sand, flour. And, the children couldn't represent the things that has been counted as the ordinal symbol of numbers which has been said. This thing is fixed in the third cycle as by giving the maximum motivation and giving the various playing facilities, so the children are motivated for doing the task. It has been proved in the 3rd cycle, as 21 children (87,5%) who are in the good minimum category (score >= 70) and the average numeracy in the good minimum category (score>= 60) as 20 children (83,33%). Therefore, in TK Srijaya Palembang is suggested for apply the Flavell principal for counting learninf of cognitive development.

Keywords: Flavell Principal, Motivation, The Numeracy of Kindergarten Children

1. Introduction

On the range of 0 up to 6 years old, children experience the golden age which children start to sensitively accept the various stimulations. Stimulation period for each children is different, accordance with the rate of growth and development in children individually. This is occured because of the physical

and psychological ripeness which are ready to response the stimulation that is given by the environment.

In other words, it is also the firt placement period to develop the cognitive, affective, psychomotoric, language, social-emotional and spiritual ability (Asnimar; 2006: 1). Kindergarten A's students are averagely 4-5 years old. On the psychological development program which is arranged in the five development departments in Kindergarten, the teacher has to use the relevant strategy, model, method, media or learning principals. And also the parents or the adults which are around the children's environments, both in school and home, have to understand the numeracy development strategy for the children, so the children will consider about numeracy in the future.

With the statement above, Atkinson said the survey showed that the lack of mathematics basic in this case- numeracy in children, is caused of practical situation. Hughes saw the numeracy problems with the suprising conclusions, it is discovered that in fact, mathematic's language and the understanding of it are really needed in the home's environment for children. Because, they are actually always used in the daily basis of children life even though with the informal language. That is really important for children's numeracy ability in their life.

For reaching the development of four up to five years old children in cognitive ability , especially in numeracy ability, it should be developed in this period. But in fact, the majority in Srijaya Kindergarten Km 5,5 Palembang which are 17 out of 24 children (70,8%) have the numeracy ability are poor and the motivations also are also low. The students who only get score 73 are only six children (25%). The lack of numeracy in that case are in ordering numbers scope and counting things that are surrounding with the children.

For solving the problems above, five principal from Flavell will answer them. The Flavell's Principal implementation starts with counting things in order with the purpose for children's understanding of "ordinal number" and train the well-ordered of counting which reaching the "cardinal number"

ability. And in the end, the children will mentally understand the ordering and number concept.

Research Question

The problems for this research are:

1. Is it possible for the use of Flavell's Principal in numeracy could increasing the children's motivation for studying in Srijaya Kindergarten Km 5,5 Palembang?
2. Is it possible for the use of Flavell's Principal in numeracy could increasing the numeracy of the children?

Purposes

The purposes of this research are:

1) For increasing the children's motivation through the Flavell principal's implemantion in Srijaya Kindergarten Km 5,5 Palembang.
2) For increasing the children's numeracy ability through the Flavell principal's implemantion in Srijaya Kindergarten Km 5,5 Palembang.

Benefits

The benefits of this research are:

1. For teachers, giving the alternative learning strategies which could develop the numeracy ability for children.
2. For Kindergartens, used for the new knowledge for the refinement of teaching-learning process.
3. For other researchers, as the source and literature for the other research for getting the better conclussions.

2. Method

This research used the class action research which is purposed for develop the children's study motivation through the Flavell principal and for increasing the children's numeracy in Kindergarten Srijaya Palembang.

The variable of this research is the children numeracy using Flavell's principal. The research's subjects are students batch 2013/2014 in Class A of Srijiya Kindergarten Km 5,5 Palembang. The 24 students are divided by 14 girls and ten boys.

This research is done by three cycles. On each cycle, there are steps which are occured 1) the preparation, 2) the implementation, 3) the observation, and 4) the reflection. The explanation of that steps are showed by this chart:
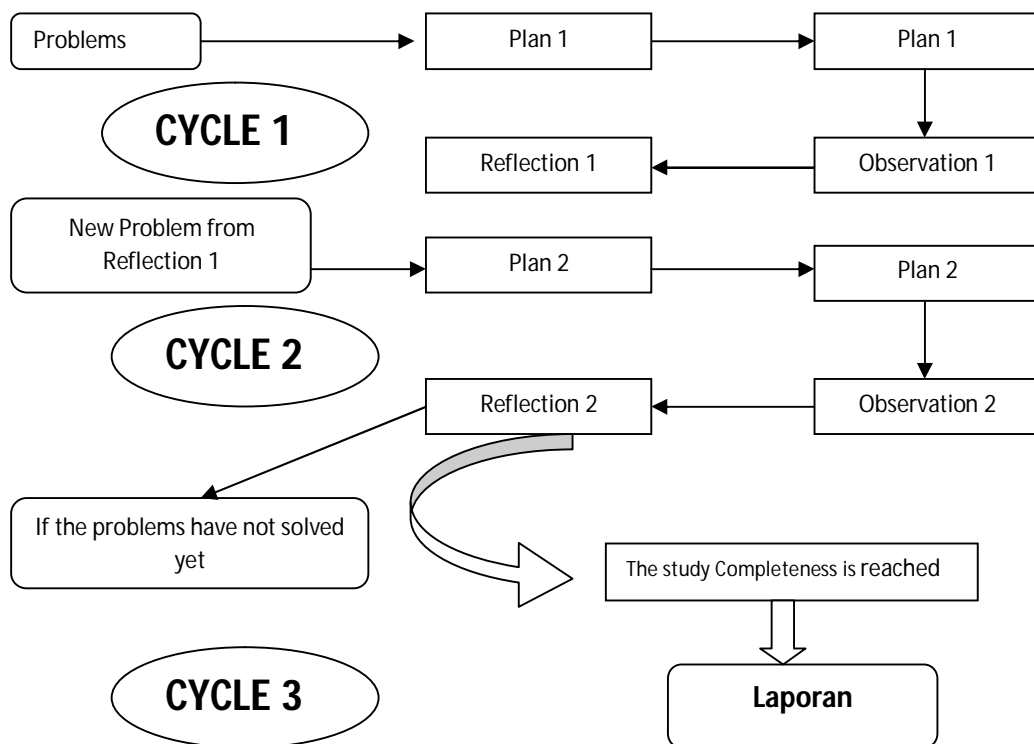
Figure 1. PTK Cycle Steps Chart

Before maintaining the first cycle, the former researchers implemented pre-cycle for take the data which used as the comparison of first cycle data. This pre-cycle is a oral test where the students try the first attempt of counting.

The data collecting technic which is used in this research is test technic and observation. The test technic in this research is both in oral and written. The test which is used in this research consist of beginning test that given at the pre-cycle and last test on each cycle. The beginning test is implemented for knowing the beginning ability of children in numerical. And the last test is for knowing the children ability in counting

Observation is used for knowing the children's motivation during the learning process-using the Flavell principal. This observation is done by the researcher by documenting the activities which are done by children and teacher during the learning process. The documentation could be videos, photos and observation report.

The data about children ability of numerical are obtained by checking the children's worksheet. There are steps for analyzing the result data:

- For collecting children numerical data, the scoring is occured in children workheet for each children worksheets both in written and oral. And also, there are the scoring criterias based on Flavell Principal which are showed in Table 1.

Tabel 1. Scoring Criteria of Numerical

The aspects which are evaluated	Score	Explanation
The one-one Principle	1	Mentioning the numbers 1-10 correctly, less than 5 numbers
	2	Mentioning the order of numbers 1-10 correctly, more than 5 numbers.
	3	Mentioning numbers 1-10 completely.
The Stable-Order Principle	1	Mentioning numbers 1-10 less than half of fluent
	2	Mentioning numbers 1-10 half of fluent
	3	Mentioning numbers 1-10 in order and fluently (neither random nor decreasing counting)
The Cardinal Principle	1	Can't determine the amount of numbers in the last count
	2	Can count things correctly and determine the amount of numbers without a help.
	3	Can determine the number amount of things indipendently.
The Abstraction	1	There are no correction or no explanation at all

Principle	2	There is correction but unfinished.
	3	The correction is occured for seeing the explanation of result and process.
The Order Irrelevance principle	1	Can change the order of numbers 1-10 less than 5 numbers.
	2	Can change the order of numbers 1-10 less more than 5 numbers.
	3	Can change the order of numbers 1-10 less with other things

- Checking the children worksheets which are suited with the answer key that are already made before.

- The final score test is calculated by sum up the score which are collected for each test question and converted it to percentage 0-100. Final test score is calculated by this formula:

$$Final\ score = \frac{Collected\ Score}{Maximum\ Score} \times 100\%$$

- Next, that final score is consultated into Criteria Table. Children's numerical ability criteria will be determined by the benchmark of children who achieve minimum score 60.

Tabel 1 Criteria of TK Srijaya Students' Numerical Ability Score

No	Score	Category
1	32 – 45	Very poor
2	46 - 59	Poor
3	60 - 73	Average
4	74 - 87	Good
5	88 - 101	Very good

- After receiving the percentage of success in cycle I, the next thing to do is reflection towards the steps of learning implementation with Flavell principal for increasing the children's numerical ability.

Observation data analysis is done by counting the amount of children who reach the study motivation which come in each groups. Observation data

score is achieved by using likert scale, if one descriptor appears it will be given score 1, if two descriptors appear and then it will be given score 2 and if three descriptors appear then it will be given score 3.

The steps for analyzing the observation data are:

- Make a check mark on observation sheet for each descriptors which appears.The indicators in Observation Sheet are showed on Table 2.

Table 2. Observation Sheet of Students' Study Motivation

Indicator	Descriptor
1. Have the spirit	a. Children come on time Anak datang tepat waktu
	b. Children prepare the stationary and book
	c. Children pay attention on teacher's explanation and answer the teacher's question
2. Have the curiosity	a. Children actively ask during the learning process
	b. Children persist when finishing the task that given by teachers like LKA
	c. Children ask for help in explaination of material which has not already be understood by one group or other child.
3. Have the confindence	a. Children are not anxious during the learning process Siswa tidak gelisah ketika proses pembelajaran berlangsung
	b. Quickly doing the task
	c. Work without any help

- Checking the observation sheet, calculating the received score and converting the score to convertion 0-100. So, the final score will achieve by formula: Memeriksa lembar observasi menghitung skor yang diperoleh dan mengkonversikan skor tersebut ke dalam konversi 0- 100. Sehingga diperoleh skor akhir dengan rumus :

$$motivation score = \frac{achieved descriptor}{\max imum descriptor} x100\%$$

- That score will be converted into qualitative data for determining the students' study motivation category.

Table 3. Students' Study Motivation Criteria Kriteria Motivasi

Belajar Siswa

Skor Motivasi	Kategori
87 – 100	Very good
73 – 86	Good
59 – 72	Average
45 – 58	Poor
31 – 44	Very Poor

- Data yang diperoleh dari hasil akhir pada setiap siklus tersebut dianalisis untuk mengetahui adanya peningkatan motivasi belajar anak setelah menggunakan prinsip Flavell. Kriteria peningkatan motivasi, jika anak mencapai skor minimal 73 tergolong kategori baik.

3. Result And Discussion

Before the implementation of cycle I, students' study motivation was in the category "poor" for six children (25%) (score ≥73). On the first cycle, the students' study motivation were in the "average" category (score 60) for eight children out of 24 (32%).

On the first cycle, the motivation were still poor, especially in directly responsing the task which are given by the teachers and have not gotten use for work in team reaching the learning purposes. On doing the task, the children have not independently worked or had the poor confidence.

Likewise, the information that were given have not been received by the children because of the peculiarity on new condition and lack of basic knowledge. This is caused by the lack of exercise that should be given from the teachers, so in the second cycle the repairement is done towards the action which is the chance for children on task through counting game with using various games tool. The results in second cycle show the students' study motivation increases into "good" category (score ≥ 73) as much as 18 students out of 24 or

72%. These conditions increase again on third cycle as much as 21 students (87,5%) for receiving score ≥ 73. For further explanation, it can be explained in this table:

Table 4. Study Motivation Enhancement

Steps	Score	∑ Children	Percentage	Criteria
Beginning	≥73	6	25 %	Minimum Good
Cycle I	≥73	8	33,33 %	Minimum Good
Cycle II	≥73	18	75 %	Minimum Good
Cycle III	≥73	21	87,5%	Minimum Good

For children's ability in numeracy, on first cycle reach the mean as 50 with "poor" category as much as 11 children or 44%. The weaknesses on first cycle are: the lack of motivation for studying, the poor curiousity and confidence of children. On counting numbers, there are children who repeatly name the numbers and skip other numbers, and in the end they couldn't name the ammount of things which were counted. Hence, this condition is fixed in second cycle by giving the verbal/non verbal strenghten and more various playing activity and more motivation, so it can result the motivation increasing as 18 people (score 70) or 72% and the mean of chidren's abilility of numeracy is 66 wit the "avarage" category for 16 students or 64%. The weakness of this cycle is "The abstraction principle and The Order- Irreleavance Principle" where the children are still shy to doing the task that are given by the teachers, so that children can't tell the difference of countable and uncountable thing like water, sand, and flour. And also, the children haven't able to represented things that are already counted as the actual symbol of number that they mention before. This problem is fixed in third cycle, by giving the maximum motivation and giving the various game tools, therefore the children can be motivated to doing the task. It is proved in third cycle, for 21 students (87,5%) that are in the "minimum good" category (score ≥

73) and numerical ability in "minimum average" category (score $\geq$ 60) for 20 children (83,33%). Thereof, in Srijaya Kindergarten Palembang is suggested to implementing the Flavell principal in counting learning on cognitive development. For further information, it can be seen in this table.

Table 5. Numerical Enchancement

Steps	Score	∑Children	Percentage	Category
Beginning	60	7	29,2 %	Minimum average
Cycle I	60	11	45,8 %	Minimum average
Cycle II	60	16	66,7 %	Minimum average
Cycle III	60	20	83,33%	Minimum average

5. Conclusion and Remark

Based on the beginning condition, cycle I, cycle II and cycle III, evidently there are the enchancements for study motivation and children ability of numeracy- step by steb that can be seen on the table above.

For the rest of it, it can be avowed that the use of Flavell principal of counting learning can increasing the study motivation and children ability in numeracy. Therefore, the other kindergartens shall use Flavell principal.

Base on that conclusion above, this research is needed to be widen on the other scoupes on higher level and different kindergarten.

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DEVELOPING OF CONCEPTUAL CHANGE TEXTS (CCTs) BASED ON CONCEPTUAL CHANGE MODEL TO INCREASE STUDENTS' CONCEPTUAL UNDERSTANDING AND REMEDIATE MISCONCEPTIONS INKINEMATICS

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Abstract

The main objectives of this research are to develop a valid and practical Conceptual Change Texts (CCTs) material related to Newtonian Mechanics and to test the influence of the CCTs in order to increase students' conceptual understanding and overcome their misconceptions in the relevant topics. The research is divided in to two years comprising of three steps, namely 1) preliminary study, 2) design development, and 3) product testing. This article reports some result of the first year research for kinematics materials. The method for the first and the second steps are descriptive qualitative and development research, respectively. Based on the analysis of the preliminary data it is found the weakness of the basic and standard competencies for Newtonian Mechanics materials in Basic Physics 1 course and it has been changed from 7 to 9 standard competencies. It was also arranged essential material and found 9 common misconceptions in kinematics, namely velocity and acceleration are considered equal, position and velocity are considered equal, velocity is not as vector quantity, ego-centered reference frame, heavier objects fall faster, gravity increase as an object falls, acceleration differs along the trajectory of a projectile motion, an object thrown vertically upward from a linier moving object will land behind this moving object, and a bullet will not hit a target if the target falls downat the same time the bullet is fired. These findings are basis to develop the CCTs. It is developing the CCTs for kinematics comprises of: case, question(s), space to answer and reason, kinds of misconceptions, and explanation of the right concepts. The CCTs in turn can be utilized to improve learners' conceptual understandings and to remediate their misconceptions toward the truer concepts in the Kinematics topics.

Keywords: Conceptual Change Texts, misconception, Kinematics.

1. Introduction

Learners come to physics classrooms with their own concepts and not necessary whether their concepts are correct or not. Their conceptions are constructed based on their own experiences from the beginning of their life, which may be include observation, perception, culture, langguage, prior teachers' explanation, and prior instructional materials (Lin, 2004). Constructivism believes that people construct their understanding about nature based on their interaction

with other objects or what they look in daily activities. The restriction of human senses and reasoning cause people construct different conceptions and it may differ from what the true conception is. Through experience, students develop explanations for what they know; some of these explanations may be incorrect or naive, but nevertheless they form the basis for the foundation of their knowledge. This pre-conception is resistant to change. Moreover, the conception will influence in acquisition for the next concept. Students' prior conceptions have a substantial influence on their future learning, in terms of both conceptual accumulation and conceptual change (Tomita, 2009).

Misconception phenomena are commonly in science such as in physics, astronomy, biology, chemistry, and earth science. A number of alternative conceptions appear across a wide variety of culture, countries, and ages (Grayson, 2004). In a variety of science topics, a growing number of studies have shown that students from different ages have a wide spectrum of alternative (Yürük, 2007). Research has shown that the same misconceptions are held by students from different countries and cultures. For instance, Bayraktar (2009) Studied comparing different cultures from different countries as to misconceptions of studentsabout various topics of physics suggest that they are universal in nature. It can happen to all level of students from elementary school to university, it is known that students of all ages (elementary, secondary, and undergraduate) can have alternative conceptions in all areas of science (Pinarbaşi, Canpolat, Bayrakceken, &Geban, 2006) even thought to teachers.

Kinematics is importance topics in physics. It is the main concept that students need to have an adequate understanding in order to move to next steps of physics study. It is usually given in the beginning of physics study.In Curriculum of Physics Education Department of Faculty of Teacher Training and Education of Sriwijaya University, kinematics is firstly given in *FisikaDasar 1* (Basic Physics 1) course, in the first semester. However based on researcher observation so far, it is found that many students have serious problem with their conception in this mechanics area. Students, for example, can calculate time needed by a stone to reach the ground in free fall motion, but unfortunately they give wrong

answer when they are asked how two different weigh stones released from the same height reach the ground. It is a paradox. Based on preliminary research using FCI to Physics Educational Department students enrolled in 2010, it is found that students' mean scores are 20.17% and 15.33% for regular class and for extension class respectively. It is far under Newtonian mastery threshold 85% or even for entry threshold for Newtonian physics 60% (Hestenes&Halloun, 1995).

Therefore, the efforts to improve the mastery of concepts and overcoming misconceptions held by learners need to be done. Various strategies of learning oriented to this conceptual change, such as analogies, bridging analogy, Conceptual Change Text (CCT), the substitution concept, modification of the learning cycle, Observed Predict-explain (Syuhendri, 2010) can be used. Each strategy has its advantages and limitations. The Conceptual Change Text can be used flexibly by students both in class and outside of class. The CCT also be used as a supplement teaching materials that can be read by students repeated at home.Various studies on the chemistry materials have already widely tested in various countries and get satisfactory results e.g. by Yürük (2007) for an electrochemical cell and Ozmen (2007) for chemical equilibrium. However, the CCT is still a bit used in physics learning. Based on the description above, the problem solved in this research is how to develop the CCT on topics of Kinematics that is valid and practical to improve the mastery of concepts and remediate misconceptions physics students.

2. Theoretical Backgroud

Misconception and identifying

Misconception is believed as a result of individual's long experience in his/her life influenced by word around him/her. Many researchers agree that most preconceptions emerge as a result of experience in interacting with the environment. Through continues use, this preconceptions become readily available and whenever need ready to interpret the events. So, misconceptions star being constructed from the birth and then continue developing as a result of day to day experience. In other words, misconceptions are an accumulation of

individual's experience in the environment, not because of "yesterday" teaching. Furthermore, misconceptions are mostly not the fault of students themselves, nor that they learn wrongly, and no because they difficult to understand or because of difficult subject-matter, but rather they are misled by their experience that construct their conception as a result of interacting with the environment.

Whenever misconceptions want to be overcome, the first step that has to be done is to identify them. Identification of misconception and distinguishing them from a lack of knowledge is a fertile area in education research (Hasan, Bagayoko, & Kelley, 1999). However, some researchers say that an effort to identify misconception is difficult. One of the difficulties is how to differentiate between students who have misconception and students who really do not know the concepts. If researchers do not identify the misconception correctly, the researchers will not be able to overcome it. There are several ways to identify misconceptions, for instance diagnostic interview, concept mapping, class discussion, question-answer practicum, essay test, multiple choice test with reasoning. In addition, there are other ways that also can be used to identify the misconception, such as 1) giving diagnostic test in the beginning or in the end of learning process. The diagnostic test can be in terms of multiple choice or other tests such as using physical diagram, vector, or graph, and explanation in words. 2) using structure assignment such as individual or group task in the end of learning or as a homework. 3) giving open-ended questions, reverse question, and context-rich problems. 4) analyzing each step students do to solve essay physics problems. 5) giving open-ended questions to students, and 6) interviewing by using a tool such as question card.

The Model of Conceptual Change

Overcoming a misconception means a process to shift status of conception on students' mind. That is a process of how a new conception can be replace the old one. In other words, it is a process how to change someone belief, truth, or view of point that are rooted far in his/her mind with a new paradigm. This is of course not a simple case. The science education literatures suggest that how to

conceptual change takes place is not a simple thing (Baser, 2006; Pinarbaşi, Canpolat, Bayrakceken, & Geban, 2006), for instances; it is not enough to simply inform students of scientific conceptions (see e.g. Hakkarainen & Ahtee, 2006).

To discuss conceptual change it is essential to back to constructivism paradigm about how conceptions are constructed. Constructivism is a philosophy of learning founded on the premise that, by reflecting on our experiences, we construct our own understanding of the word we live in. Any discussion of conceptual change needs to consider the nature of conceptions (Treagust & Duit, 2008). Conceptual change strategies based on cognitive conflict are grounded on Piaget's notion of disequilibrium (Baser, 2006).

Jean Piaget asserted that the basic pronciples of cognitive development are the same as those of biological development (Wardsworth, 1984). He believed that the mind has structures such as the same way of the body does. He called this cognitive or mental structure as schema (plural: schemata) that adopts individual to and organize his//her envoronment. Schema can be simplistically thought of as *concepts*or categories (Wardsworth, 1984) stored in the mind. As an analogy, schema might be an index card in a file. These schemata continue growing and developing. It never stops changing or becoming more refined. The index cards in the file gradually growth based on time and needs.

Influenced by Piaget's work (see Hakkarainen&Ahtee, 2006; Pinarbaşi, Canpolat, Bayrakceken, & Geban, 2006; Greiffenhagen & Sheram, 2008) Posner, Strike, Hewson, & Gertzog (1982) explained a *general model of conceptual change* in learning which is largely derived from philosophy of science. They are known as initiators of *Conceptual Change Model* of learning *(CCM)* (Hewson, Beeth, & Thorley, 1998; Park, Hewson, Lemberger, & Marion, 2010). The central concepts of the CCM are status and conceptual ecology (Hewson, Beeth, & Thorley, 1998). The status is an indication of the degree to which a person knows and accepts his/her holding idea. Meanwile, conceptual ecology deals with all the knowledge that a person holds.

Posner, Strike, Hewson, & Gertzog (1982) argued that there are analogous patterns of conceptual change in science and conceptual change in learning. They

stated there are two phase of conceptual change in learning such as in science. The first phase they called as assimilation, that is when students use their existing concepts to deal with new phenomena. However, if the students' current concepts are inadequate to allow them to grasp some new phenomena, then the students must replace or reorganize his central concept. This second phase of conceptual change they called as accomodation, a radical form of conceptual change. Nevertheless, Posner, Strike, Hewson, & Gertzog (1982) only focus their work on the kinds of radical conceptual change, i.e. accomodation. They didn't discuss and no more information about assimilation. What happen? Indeed, Wardsworth (1984) stated that assimilation does not change the schemata, it places new stimulus events into existing schemata.

Posner, Strike, Hewson, & Gertzog (1982) expressed their theory about accomodation under two questions, (1) what condistions does central concept come to be replace by another? and (2) what are features of conceptual ecology which govern the selection of new concpts? The CCM assumes that learning is a rational process in which lerners use their existing knowledge (their conceptual ecology) to evaluate the status of new information and experiences, relative to the status of their existing knowledge (Park, Hewson, Lemberger, &Marion, 2010). Answering two questions above, Posner, Strike, Hewson, & Gertzog (1982) sated that there are four important conditions in order to accomodation take place. Fisrtly, the existing concepts must be dissatisfaction; students must have experiences which load them to lose faith in the ability of their current concepts to solve problems. Secondly, the new concept must be intelligible; the student must be able to understand sufficiently how experience can be structured by the new concept. Thirdly, the new concept must appear plausible; any new concept adapted must be least appear to have the ability to solve the problems generated by its predecessor. Finally, the new concept must be fruitful; it should have the capability to open up new areas of inquiry. There are five features of conceptual ecology related to the four conditions of a conceptual change above, i.e. (1) anomalies, (2) analogies and metaphors, (3) epistemological commitments, (4) metaphysical beliefs and concepts, and (5) other knowledge.

3. Method

The method of this research is education research and development). Research and development is a process to develop a product in the field of education with a validation. The study was conducted in three stages, namely 1) the preliminary stage or preparation, 2) the development stage of design, and 3) the testing phase (Nieveen&Plomp, 2007). The introductory phase is done with a qualitative descriptive approach, whereas the design development phase is in the form of validation and revision of Conceptual Change Text (CCT) of kinematics materials with expert validation and continued with limited testing. The testing phase will be done in year 2 by taking a sample of two groups to treatments with pre-test and post-test before and after treatment.

At the preliminary study stage or preparation of the research, the studies focused on: 1) the study of literature to analyze competence, essential materials, the analysis of the concepts and misconceptions experienced by respondents in Newtonian mechanics. 2) a field study to collect documents, materials, methods, media, evaluation techniques and other activities in the lecture Physics 1. 3) describe the findings of misconceptions in kinematics so far.

At the development stage design, the CCT for the material of kinematics was developed. Development begins with an analysis of the materials and concepts of Kinematics, followed by making a prototype of the CCT and then doing the next steps to gain a valid and practical CCT as recommended by Tessmer (1993).

The research was conducted in Science and Mathematics Department of Faculty of Teacher Training and Education of UniversitasSriwijaya. Subjects were student teachers who are taking courses Physics 1. The instruments used in this study are (1) Validation Expert Sheets: sheets granted to experts in order to validate the CCT products that are being developed. This sheet will be obtained from the assessment and the advice and recommendations from experts to improve the CCT, (2) Questionnaire: The questionnaire used to determine the opinions of students and lecturer about Kinematics materials supplement CCT of

Kinematics materials. In accordance with the research question in Introduction session, the data was analyzed to answer the research question by a qualitative analyst of the instrument used (Sheet Validation Expert, Questionnaire) with descriptive statistical analysis. Data were obtained through a questionnaire in the form of qualitative scale is converted into a quantitative scale.

4. Result and Discussion

The study was conducted in three stages. This article reports the research activities for some activities in stages 1 and 2 for kinematics topics.Based on the analysis of the Basic Competence and Competency Standards produced some changes in the Basic Competence and Competency Standards that must be mastered by students for Newtonian mechanics materials in the Physics 1 course. The new Competency and Competency Standards also emphasis on conceptual understandings besides mastery of knowledge/decrease equations. Number of Competency Standards also changed from 5 to 7. The new Basic Competencies are 1) Mastering the basic knowledge about relationships of physics with others knowledge and the development of physics and physical science structure, quantities and units, dimensional formula, vector operations in depth, comprehensively and correctly and be able to apply them to solve simple physics problems and to study the higher physics concepts, 2) Mastering the general equation of motion of point particles and its application in a one-dimensional motion in depth, comprehensively and correctly and be able to apply it to solve simple physics problems and to study the higher physics concepts, 3) Mastering the general equation of motion of a point particle and its application in two-and three-dimensional motion in depth, comprehensively and correctly and be able to apply it to solve simple physics problems and to study the higher physics concepts, 4) Students master the basic concepts of dynamics in depth, comprehensive, and correct and be able to apply to solve simple physics problems and to study the higher physics concepts, 5) Students are able to apply the basic concepts of dynamics in depth, comprehensively, and right to solve various more complex physics cases and be able to develop it to study the higher physics

concept, 6) Mastering the basic concepts of work and energy in depth, comprehensively and correctly and be able to apply it to solve simple physics problems and to study the higher physics concepts, and 7) Mastering basic concepts of linear momentum and collisions in depth, comprehensively and correctly and be able to apply them to solve simple physics problems and be able to develop it to study the higher physics concepts.

The indicators havebeen also change in the quantity from 24 items to 61 items and a change of quality from emphasis on equation mastery into conceptual mastery. As an example for Kinematics II: Motion in Two and Three Dimensions, the indicators are: 1) Describe and apply the equations of position, displacement, velocity and acceleration in two-and three-dimensional motion; 2) Formulate and apply the equations of projectile motion; 3) Explain that on the projectile motion, the horizontal and vertical motions are independent; 4) Create and interpret graphs of position, velocity, and acceleration as a function of time for projectile motion; 5) Analyze various cases of projectile motions; 6) Explain that the equations of projectile motion meets the parabolic equation; 7) Describe and derive the equations of uniform circular motion and changed uniform circular motion; 8) Distinguish radial acceleration and tangential acceleration; and 9) Describe and apply the equation for the relative motion.

Based on the analysis of the concepts obtained key concepts that must be mastered by students on Kinematics topic, namely terms of reference, position, displacement, distance traveled, time needed, average velocity, average speed, instantaneous velocity, speed, average acceleration, instantaneous acceleration, rectilinear uniform motion, uniformly accelerated motion, free fall motion, projectile motion, and relative velocity.

Furthermore, based on the study of literature from previous studies e.g. by Schoon (1995), Hestenes&Halloun (1995), Bayraktar (2009), and a preliminary study by researcher using the instrument of Indonesian version of the Force Concept Inventory (FCI)e.g.inSyuhendri&Mayanti (2013), Syuhendri, Jaafar, and Yahya (2014a), Syuhendri (2014), Syuhendri, Jaafar, and Yahya (2014b) can be

recapitulated the various forms of misconceptions that commonly held by students in kinematics. The misconceptions can be seen in Table 5.1 below.

Table4.1 Recap of misconceptions on kinematics

No	Dimension	Kinds of misconceptions
	Kinematics	
1		Position and velocity are considered equal
2		Velocity and acceleration are considered
3		Velocity is not as vector quantity
4		Ego-centered reference frame
5		Heavier objects fall faster
6		Grafity increase as object falls
7		Acceleration differs along the trajectory of a projectile motion
8		An object thrown vertically upward from alinier moving object will land behind the moving object.
9		The bullet will not hit the target if the target falls when the bullet was fired.

Misconceptions found above constitute the basis for the development of Conceptual Changes Text (CCT) for Kinematics materials.

At the development of design stagewas done drafting/prototype the CCT of kinematics. The prototype was developed for the Kinematics 1: Motion in one dimension, Kinematics II: Motion in two and three dimensions. The format of the CCT is:

- Case

- Question

- The empty space for answers and reasons

- Kinds of misconceptions

- Explanation of the right concepts

Draft 1 of CCT of Kinematics was developed based on the format above. Furthermore, based on self evaluation, researcher carried out improvements to the Draft 1. Improvements regarding content, language, and lay out. The results of revision are cited as Draft 2. The example of Draft 2 of CCT can be seen as below:

The configuration of like that texts are believed successful inincreasing theconceptual understanding toward thecorrect concept. The reasons are firstly, CCTwas credible sources of information for the students. The CCT informed various alternative conceptions that some may be equal tothe students' views orin linewith their thinking. Statements of alternative conceptions that are in the CCT remind learners that their ideas are wrong. Then the argument of scientific explanation given that guarantee why the replacement concepts are correct and explain the consequences that occur if the concept is not as described make students aware that these are indeed the new correct concepts. This helped students to see the difference between alternative conceptions and scientific concepts. Secondly, the CCT are powerful tool forl argeclass sizes. Lecturer will not beable to touch more deeply every problem that exists in the mind of every student if the number of students is large and the time is limited.

The successful of CCT have been reported for examples by Özmen (2007), Palmer (2003), Hynd, Mcwhorter, Phares, and Suttles (1994), Baser and Geban (2007), and Tekkaya (2003). Palmer (2003) found that conceptual change text instruction are effective increase students' understanding of photosynthesis, human circulatory system, and ecological roles. Meanwhile, Tekkaya (2003) investigated the effectiveness of combining conceptual change texts and concept mapping strategies on students' understandings of diffusion and osmosis and reported there was a statistically significant difference between experimental and control groups after treatment. In addition, Özmen (2007) also demonstrated that conceptual change texts based instruction was more successful in remediating students' alternative conceptions about chemical equilibrium than traditional instruction.

Yürük (2007) argued that CCTs can be used effectively in both large and small classrooms to facilitate conceptual change. In addition, CCTs do not demand additional and expensive materials to be used in the instructional environment. However, Syuhendri (2010) recommended to use the CCTs for large classes that are often encountered in Indonesia with the number of students of 35

to 50 or more to cover the limitations of the interaction among teacher and students.Teachers and textbook writers can easily incorporate CCTs into the science texts or teachers can use them in a worksheet format or as supplement classroom instruction materials. Unlike to the other instructional strategies, CCTs are flexible, they can be read by the students anytime and anywhere when needed. Although the implementation of the CCTs instruction needs the intensive teacher-student interaction (Balci et al., 2006), it supports flexibility in learning process.

5. Conclusion and Remark

Based on the description above, it can be concluded that it has been successfully carried out analysis of competencies, essential materials, and the dominant misconceptions experienced by students on the kinematics materials. Then, it was obtained the revision of basic competencies and competency standards for Physics 1 course qualitatively and quantitatively. Qualitatively, it was given the emphasis on mastery of concepts in addition to mastery of content knowledge and derivation of equations. In quantitatively, it do change the number of competence standards from 5 to 7. Furthermore, it has found 9 kinds of common misconceptionsin kinematics. These misconceptionsare the basis for the development of CCT.

The CCT for Kinematics topics has started to be developed with the format: case, question, answer and reasons, kinds of misconception, and explanation of right concepts. The CCT finally can be used to improve conceptual understanding and remediation of misconceptions on the kinematics.

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IMPROVING READING COMPREHENSION AND SPEAKING ACHIEVEMENTS OF THE EIGHTH GRADERS OF SMP NEGERI 18 PALEMBANG THROUGH SHARED

READING STRATEGY

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Abstract

This study aimedat investigatingwhether or not the use of Shared Reading Strategy was effective to improve the students' reading comprehension and speaking achievements. Quasi experimental research method was applied. The sample consisted of 44 eighth graders which were divided equally into experimental and control groups. The data were collected by using reading and speaking tests. Both groups were tested before and after the treatment. Using paired sample, the results of the experimental group showed that the two variables reading comprehension and speaking achievementssignificantly improved. Furthermore, the result of the independent t-test showed that the experimental group outperformed the control group with a significant mean difference of 9.545 (p=.000) on reading comprehension and 2.5000(p=.000) on speaking achievement. The results showed that the students who were taught by using Shared Reading Strategy had better improvement in their reading comprehension and speaking achievements. Thus, it can be concluded that Shared Reading Strategy could improve the students' reading comprehension and speaking achievements.

Keywords: Shared Reading Strategy, reading comprehension, speaking achievement

1. Introduction

English has been used globally either for communication or academic purposes. Therefore, it is introduced starting from elementary to university levels. Indonesian government has made a decision that English is one of the compulsory subjects to be taught to the students of Junior High and Senior High Schools (Depdiknas Kantor Wilayah Provinsi Sumatera Selatan, 2003). In order to reach the success of English teaching, the four language skills (listening, speaking, reading, and writing) must be taught integratedly. To help the students achieve these skills, it is worth it that English language teaching and learning process should be prioritized as much as possible, especially in terms of reading and speaking because one of the demands in living in the global era is having the ability to communicate with people of other countries in which reading becomes the prerequisite of any other productive languange skills (Geske & Ozola, 2008).

The process of communication may start with reading for getting informationand through speaking to share information with others. Speaking is the most common and important means of providing communication among human beings, it is one of the expressive language elements (Ulas, 2008, p.876).The students often get difficulties in speaking; because they do not know what they should talk about. It causes from lacking of reading. According to Mikulecky and Jeffries (1998), there are five reasons why reading is important, firstly, reading in English helps the reader learn to think a lot,secondly, reading in English helps the reader to build their English vocabulary, thirdly, reading in English makes the reader more comfortable because they feel enjoyable with language, fourthly, reading in English may be the only way for the reader to use English if they live in a non-English-speaking country, and finally reading in English is helpful if a reader plan to study in an English-speaking country. It indicates reading is important because it provides access to information due to the fact thatcan give valuable information to the readers and also the impacts of reading to enhance readers' understanding and discover new insights.

In addition, the problems found in terms of reading achievement of the Indonesian students. OECD/PISA (2013) reported the reading ability of Indonesian students in Bahasa Indonesia is still low. The score on the students' ability on the overall reading scale was 396 while the OECD average score was 496. This mean score puts Indonesia at 60^{th} place out of 65 countries and more than half of Indonesian students are proficient only at or below level 1. The result of some studies show the facts that reading comprehension is still low. It is proved by Diem (2011), which involved the elementary students in Palembang, found that literacy skills achievement in English of the fifth graders was still in the poor level. Particularly, the mean score of the students' reading comprehension achievement was only 28.83 in 100 scales. Similarly, Diem and Novitasari (2012) also found that reading comprehension achievement of fifth graders in Palembangwas still problematic. It was shown by the mean score of the reading achievement testthat was only 30.30and itwas below the standard score.This suggests that the students may get more difficulties in reading comprehension in

their later learning at junior high and senior high schools. This is in line with Grabe (2009) reading is not only a learning but also comprehending the linguistic process.

Not only reading comprehension should be mastered by students, but also speaking ability. Speakingability also plays prominent roles in learning and understanding the language. At least one billion people speak or are trying to speak English and about 300 million people are actively studying the English language (British Council, 2010). In line with that, it is one of the abilitieswhich isvery essential for the students to acquire. According to Egan (1999), speaking is at the heart of second language learning; it is arguably the most important skill for business and government personnel working in the field. Unfortunately,Richards (2006) reports that there are four reasons why speaking English is still weak. Firstly, the students lack of emphasis on speaking skill. Secondly, teacher'slimited English proficiency. Thirdly, students' limited opportunities to express their ideas. Fourthly, less of contributive factors such as environment, friend, and family. Kurniati (2011) did a research about speaking achievementat eleventh grade in SMA 12 Palembang; she found that 90 students (44.3%) of 203 students got score less than 67 as the passing grade (KKM). The mean score of all the students was 67.5. In line with that, a study proved by Nazara (2011) 90% of the students of the English Teaching Study Program of FKIP-UKI Jakarta responded that the time provided for practicing speaking in speaking classes is too limited.Itcan be implied that on one hand, most of the students in Indonesia still come across with those problems, it happens due to English is not spoken in Indonesian community and besides the studentsare not fully and actively exposed English in the classroom. Therefore, the ability to speak in Indonesia is still weak.

For the purpose of this study, the writer had done a preliminary investigation concerning the students' reading comprehension and speaking achievements. The eighth graders of SMP Negeri 18 Palembang were givenreading comprehension and speaking achievements tests in order to find out what problems they had in reading comprehension and speaking achievements. It was found that, the eighth graders of SMP Negeri 18 Palembang still had

difficulties in gaining their score. The results show that their reading level was in level 2 with the average 27.9. Since, speaking achievement still needed improvement. Based on the information gathered from teacher of English and the students, it was found that having little prior knowledge made the students have problems in comprehending an English reading text and braveness to talk in English. In connection with this situation, Hamra and Syatriana (2012) who state English reading comprehension of Indonesian students need improvement as out of the context of the curriculum standard for later education.

Teachers of English should consider any other resources that offer various types of text, values, and enjoyment as well as the instructional activities carefully. Based on some problems above, this study focuses on reading comprehension and speaking achievements through narrative text.Narrative text is a kind of text which has the purpose to entertain the readers or listeners with actual or imaginary experiences. The students are expected to have the ability in identifying and understanding the elements of the story. The elements are as follows: (1) plot refers to what happens in the story, (2) characters refers to who is involved in what happens in the story, (3) point of view refers to how the story is told, (4) setting refers to where and when the story takes place, (5) theme refers to the moral value from the story. Therefore, the story in narrative text consists of (a) orientation is who were involved in the story that consists of setting, characters and plot, (b) complication is a problem arises followed by other problem, (c) resolution is solution to the problem, and (d) reorentation is the ending of the story. A story provided a meaningful context in communication and gave pleasure by engaging reader' emotions with the text (Hill, 1994). According to Cameron (2001), stories can give learners information and a positive feeling about other countries and cultures. Furthermore, narrative text is one of materials that the students learnt in the eighth grade based on KTSP curriculum 2006.

Dealing with teaching and learning process, Zuraida and Diem (2001) found out that teaching English for the students through various media as well as techniques or strategy used in teaching and learning process. Since there are many techniques or strategy that can be used in teaching and learning process, the

teachers should apply the appropriate technique or strategy depends on the material or skill that will be taught to the students. It indicates that the strategy used by the students may influence the result of learning and determine the success or failure of learning activities. The writer believes that the appropriate strategy is using Shared Reading Strategy. Shared Reading Strategy is an interactive reading experience that occurs when students join in or share the reading of a big book or other enlarged text while guided and supported by a teacher or other experienced reader. In Shared Reading Strategy, children participate in reading, learn critical concepts of how print works, get the feel of learning and begin to perceive themselves as readers (Fountas & Pinnell, 1996). Shared Reading Strategy provides an excellent opportunity for teachers as a model that can be applied to unfamiliar reading. Pidgeon (1990) defines Shared Reading as "a text that is shared among the students for their mutual pleasure and understanding".

Considering the fact above, the writer was interested in conductinga study entitledImproving Reading Comprehension and Speaking Achievements of the Eighth Graders of SMP Negeri 18 Palembang through Shared Reading Strategy.The focus of this study was to answer the following questions: (1) Was there any significant improvement in reading comprehension achievement and its aspects of the eighth graders of SMP N 18 Palembang after they were taught by using Shared Reading Strategy?, (2) Was there any significant improvement in speaking achievement and its aspects of the eighth graders of SMP N 18 Palembang after they were taught by using Shared Reading Strategy?, (3) Was there any significant difference in reading comprehension achievement between the students who were taught by using Shared Reading Strategy and those who were not by using Shared Reading Strategy?, (4) Was there any significant difference in speaking achievement between the students who were taught by using Shared Reading Strategy and those who were not by using Shared Reading Strategy?

2. Method

This study applied quasi-experimental research method, specifically nonequivalent control group design. This study applied Shared Reading Strategy as the treatment for the experimental group. Nonequivalent classes are used; one class as experimental group and the other class as a control group. According to Creswell (2005), the steps for conducting the pretest-posttest non equivalent group method as follows: the researcher assigns experimental and control groups, administers a pretest to both groups, conducts experimental activities with the experimental group only, and then administers a posttest to both groups to assess the differences between the two groups.

To find out the students' reading comprehension and speaking achievements, the writer gave the students a pretest and posttest to experimental and control groups. The students of the experimental group got the treatmentintensively by using Shared Reading Strategy. Therefore, there were 26 meetings including pretest and posttests in this study. Each of which consisted of 2x45 minutes. It takes two teaching hours for each meeting due to various goals that need to be achieved.

Sample

The writer used a purposive sampling technique to select the sample based on the result of the test. In this study, the writer divided the sample into two groups. They are experimental group and control group. Cohen, Manion, and Morrison (2000) state it is a sampling technique in which the sample is selected based on the researcher' specific judgment and certain consideration. The writer considered the sample selected based on the criteria: the students taught by the same English teacher, they did not join an English course, the same age, and the students have the same numbers of levels of their reading achievement. The students selected based on the result of the IRI reading comprehension test (Burns & Roe, 1985).

There were some steps done in selecting the sample of this study. First, reading comprehension test was given to the students of VIII.G and VIII.H as they

were taught by the same English teacher. Second, the result showed that they were in below level 1, level 1, level 2, level 3 and level 4. To decide the students who in experimental and control group, the writer listed each name of the students' on a piece of paper. Next, the list divided equally into experimental and control groups. Therefore, the classification of the sample was 22 students for each group.

Teaching Procedure for Experimental Group

In conducting this study, the writer provided several of reading comprehension texts which the readability already checked by Flesch Kincaid and the result of the text showed each text is appropriate in each level. The writer used Flesh Kincaid (online) from http://www.readibilityformulas.com.

Shared Reading Strategy implemented to improve the students' reading comprehension and speaking achievements. The writer adopted the teaching procedure from Fountas and Pinnell (1996) modified the teaching procedures as needed for this present study. Meanwhile, the control group was only given pre and posttests with no treatment. The teaching procedure for the experimental group is

1. Pre-Activities

The writer introduced the story, talked about the title, cover, and title page. It is a good time to engage the students in what the students see in the cover picture, and what the students think it tells them about the story to be read and what will happen in the story. Next, The writer conducted a picture walk through the book, briefly pointing out specific character actions or events, asking probing questions to engage the students in thinking about the pictures and story, but not telling the story.

2. Whilst-Activities

The writer pointed to each word as it is read. Then, the writer asked to the students to follow along "with their eyes." Read the text as naturally as possible. After that, the writer might pause from time to time asking students to predict a word, phrase or to make predictions about what is happening.

3. Post-Activities

The writer could take the students back to the point of making predictions, whether at the word or story level, and ask how the students knew they were right or how they knew if their prediction wasn't quite correct. Then, the writer asked open-ended questions and helps students build connections to the text by activating students' prior knowledge to the theme or main idea of the book.

Validity and Reliability of the Tests

It is very important for the writer to have valid test in order to obtained the information based on her purposes. Wallen and Fraenkel (1991) point out validity refers to extent to which an instrument gives us the information based on the purpose. Informal Reading Inventory (IRI) of the study (Burns & Roe, 1985). It is used as the instrument consisted of five passages with the total questions are 50 questions. The purpose of the instruments is to give the text of reading comprehension varied in many levels of reading comprehension with the different difficulties in every level. Validity is an important thing in research in order to obtain the information based on her purposes. For the content validity of the test, the writer asked to the expert judgments to know the match between the questions and the contents or subject area that is intended to assess. Next, the writer has tested the reading comprehension test to non sample students. The reliability of the test has been measured by using *Cronbach Alpha.*A test is considered reliable if the reliable coefficient of the test is higher than 0.70. The result showed that there were 36 valid questions with the reliability of *Alpha Cronbach* coefficient was .908.

Next, for speaking test, the writer asked to the students told a story based on their interestsome for45 minutes. There were four aspects measured by the raters (1) main idea/gist, (2) organization, (3) element story, and (4) linguistic spillover. The writer has been checked the inter reliability from each rater. The result showed that there were significant correlations from each rater. In speaking tests, inter-rater reliability test for speaking using Pearson Product-Moment Correlation coefficient showed that there was a significant correlation between two raters' judgments. This means the two raters' judgments ware reliable.

Table 1. Inter-rater Reliability of Pretest and Posttest

Variable	Pearson Product Moment Correlation							
	Experimental Group				Control Group			
	Pretest		Posttest		Pretest		Posttest	
	r	Sig.	r	Sig.	R	Sig.	r	Sig.
Speaking	.988	.000	.871	.000	.987	.000	.806	.000

Data Collection

In order to get the data from the fields, the writer provided readingcomprehension and speaking tests.

Test

In order to find out what the students accomplished after the learning process, the writer provided a test in this study. A test is a method of measuring a person's ability, knowledge and performance in giving domain, (Brown, 2004). The purpose of this study is to know the students' improvement in speaking and reading comprehension achievements. In this study, before the writer gives the students pretest, the writer has given them the test (Informal Reading Inventory, IRI) and it was in level 2. By reading levels mean the comprehension levels into which category of the students in the sample belongs. The categories of reading levels, they are independent reading level, instructional reading level, and frustration reading level (Burns & Roe,1985). A student is categorized in independent level when they could answer 90% or misses no more than one question. In instructional level if they could get could get 75% or misses no more than two questions and the last in frustration level means only obtain 50% or misses more than five questions.

The writer provided reading comprehension test with five passages and 36 valid questions that already tested. All the questions cover main idea, cause/effect, vocabulary, inference, detail and sequence. The writer took the reading test from www.englishforeveryone.org. and Informal Reading Inventory (IRI).

The speaking test was conducting in the form of oral performance. The students told the information based on the material. It was recorded by the writer. The writer provided two raters based on threecriteria: a graduate from strata 2 of English study program, having teaching experience more than 5 years, and achieving TOEFL score above 525. The two raters involved to assess students' speaking test. Since, speaking rubric was provided in the form of narrative text and appropriate for level 2. There are two categories in the rubric. The categories are aspect and scale. The aspects consist of main idea/gist, story elements, organization, and linguistic spillover. Thescales of the score are 4, 3, 2, and 1. 4 means mature, 3 means capable, 2 means developing, and 1 means needs beginning. To be clear, see the Appendix J.

Data Analysis

To answer research questions, paired sample t-test and independent sample t-test wereapplied. Paired sample t-test compares the means of two variables of a single group. It is used to see significant improvement made by the students in pretest and posttest. Meanwhile, independent sample t-test is used to see the significant improvement between experimental and control group after the treatment. In nonequivalent control group design, "the effect of the treatment was assessed by comparing the gain scores (that is, posttest minus pretest) of the two groups on the dependent variables (Tuckman & Harper, 2012, p. 165).

3. Result and Discussion

Result

Before analyzing the data, the two assumptions of normal distribution of scores and homogeneity of variances had to be met. Since all the p-values of the normality and homogeneity tests exceeded .05, it can be concluded that the data on pretest and posttest of reading comprehension and speaking achievements were both normal and homogeneous (see Appendix L).

Descriptive Statistics

The pretest was given to the students both in experimental and control groups before the experiments were conducted and posttest was given to the students after accomplishing the treatments using Shared Reading Strategy. The score of reading comprehension and speaking achievements from the whole sample (N=65) were categorized into 5 levels of achievement.

For the purpose of categorizing the score into five levels of achievement, the writer converted the raw score into the score ranging from 10-100. Table 1 presents the score distribution of each group before and after the treatments.

Table 2 The Score Distribution of Reading Comprehension (RC) and Speaking Achievement (SA)

Category	Experimental Group						Control Group					
	Mean		Frequency (%)		SD		Mean		Frequency(%)		SD	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
RC E	-	-	-	-	-	-	-	-	-	-	-	-
G	-	75.92	-	6(27)	-	4.536	-	-	-	-	-	-
A	55.56	63.14	2(10)	15(68)	.000	4.511	58.33	-	2(10)	-	.000	-
P	47.77	52.77	10(45)	1(5)	3.885	-	46.52	47.72	12(54)	11(50)	3.768	3.688
VP	32.77	-	10(45)	-	4.863	-	34.37	31.56	8(36)	11(50)	3.618	6.367
TOT	41.66	66.16	44(100)	44(100)	9.508	7.793	43.18	39.64	44(100)	44(100)	8.343	9.705
SA E	-	-	-	-	-	-	-	-	-	-	-	-
G	72.92	76.56	3(14)	12(55)	1.801	4.317	75.00	-	3(14)	-	3.125	-
A	63.54	64.68	6(27)	10(45)	6.145	4.670	63.54	59.37	6(27)	13(59)	6.145	4.773
P	43.49	-	12(55)	-	6.027	-	46.87	50.00	9(41)	9(41)	3.828	.000
VP	25.00	-	1(4)	-	-	-	32.81	-	4(18)	-	5.983	-
TOT	52.13	71.16	44(100)	44(100)	14.31	7.466	52.70	55.54	44(100)	44(100)	14.66	5.939

Note:
E : Excellent, G: Good, A: Average, P: Poor, VP: Very Poor
RC : Reading Comprehension   SA : Speaking Achievement

It can be seen from Table 1 that after giving the treatments RC_{Tot} of the students (N=22) in experimental group improved from Poor level ($\bar{X}$ = 441.66) to Average level ($\bar{X}$ = 66.16). Meanwhile, RC_{Tot} of the students (N=22) in control group was still on Very Poor level ($\bar{X}$ = 39.64). Another result showed SA_{Tot} of the students (N=22) in experimental group improved from Poor level ($\bar{X}$ = 52.13)

to Good level ($\bar{X}$ = 71.16). Meanwhile, SA_{Tot} of the students (N=22) in control group was on Poor level ($\bar{X}$ = 55.54).

The Results of Paired Sample and Independent Sample t-Test

The result of total score of each variable and its aspects were analyzed using paired sample t-test and independent t-test. The score that the writer used was raw score.

Table 3 Result of Paired and Independent Samples t-test of Reading Comprehension and Speaking Achievements and the Aspects

Aspects	Pretest		Posttest		mean diff pre and post exp within	mean diff pre and post cont within	mean diff of posttest between exp and cont	-value and sig. et eenpre and post exp within	-value and sig. et een re and post cont within	-value and sig. posttest between exp and cont
	mean exp	mean cont	mean exp	mean cont						
Reading (total) Main Idea	5.00	5.55	3.82	4.27	.82	1.28	.545	0.445	2.231	.992
								000	037	000
Detail	.73	.32	.05	.55	.32	.23	500	.084	.418	.653
Inference								050	171	011
	.09	.09	.95	.32	.86	.23	636	.078	961	.546
Cause Effect								000	348	000
Vocabulary	.18	.68	.36	.32	.18	.64	.045	.144	.993	.862
Sequence								005	059	000
	.18	.27	.68	.32	.5	.05	.364	.651	568	.315
								000	576	000
	.00	.45	.95	.32	.95	0.13	.636	.690	.617	1.63
								000	544	000
	.82	.73	.82	45	.00	2.28	.364	.317	7.689	0.15
								003	000	000

Speaking (total) Main Idea	.34	.43	1.39	.89	.05	.44	.500	.645 000	4.545 343	.682 000
Element Story	.18	.14	.09	.27	.91	.13	8182	.684 000	1364 378	.804 000
Organization	.11	.07	.05	.36	.94	.29	6818	.098 000	2955 120	.524 000
Linguitic Spillover	.64	.73	.55	.02	.91	.29	5227	.924 001	2955 091	.343 000
	.41	.50	.70	.23	.29	0.27	4773	2.409 025	.2727 130	.479 001

a. Reading comprehension

The mean difference within the experimental group was 8.82, t value 10.445, Sig. =.000 while within the control group was -1.28, t-value -2.231, Sig. =.037. For each reading aspect, the improvements made by the experimental group were as follows: (1) *detail*, with the mean difference = 1.86, (2) *sequence*= 1.00, (3) *cause and effect* = 1.5, (4) *vocabulary* = 2.95, (5) *main idea* = 0.32, and (6) *inference* = 1.18. Meanwhile, the control group were as follows: (1) *detail*, with the mean difference =0.23, (2) *sequence*=-2.28, (3) *cause and effect* =0.05, (4) *vocabulary* = -0.13, (5) *main idea* =0.23, and (6) *inference* =0.64. did not show any significant improvement.

Furthermore, there were also significant differences between the experimental and the control group in terms of the posttest result with t obtained =9.992 and p<.000.

b. Speaking achievements

Among other variables, the improvement achieved by the experimental group was in speaking achievement. The mean difference was 3.05and Sig. = .000. Unlikely in the experimental group, the control group had no significant improvement with the mean difference0.44 and Sig. = .343. Then, for four aspects of speaking, experimental group also showed significant improvement in all aspects.

Besides, the results of posttest between the experimental and the control group show significant difference with t value of posttest = 7.682, p<.000.

The Analysis of Stepwise Regression Result of Reading Comprehension and SpeakingAchivements

The stepwise regression analysis was used to describe the statistical contribution of the students' reading comprehension and speaking achievements to all aspects of reading comprehension and speaking achievements.

Table 4. The Results of Model Summary of Multiple Regression Analysis of Reading Comprehension and Speaking Achievements to Its Aspects

Variables	Aspects	R Square	R Square Change	Sig. F Change
Reading Comprehension Achievements	Cause Effect	.530	.530	.000
	Cause Effect, Main Idea	.703	.173	.004
	Cause Effect, Main Idea, Inference	.841	.138	.001
	Cause Effect, Main Idea, Inference, Vocabulary	.935	.094	.000
	Cause Effect, Main Idea, Inference, Vocabulary, Detail	.962	.027	.004
	Cause Effect, Main Idea, Inference, Vocabulary, Detail, Sequence	1.000	.038	.
Speaking Achievements	Main Idea	.723	.723	.000
	Main Idea, Organization	.879	.156	.000
	Main Idea, Organization, Lingusitic Spillover	.975	.096	.000
	Main Idea, Organization, Lingusitic Spillover, Element Story	1.000	.025	.

In reading comprehension, the result indicated that the students' reading comprehension achievement was contributed by the aspects of sequence (3.8%), vocabulary (9.4%), main idea (17.3%), cause effect (53%), inference (13.8%), and detail (2.7%). Meanwhile, in speaking achievement, the aspect of main idea (72.3%) made the highest contribution toward students' improvement of speaking achivment. The other contributions were from element story (2.5%), organization (15.6%), linguistic spillover (9.6%).

Discussion

The fact that the mean of English reading comprehension of the whole sample was still below the school standard score of at least 75 (SMP N 18 Palembang) is quite dissatisfying. It seems that the students of this study were not used to practicing their English reading and speaking in their regular school hours. They only did the taskswhen they had certain purposes, such as for getting information needed and for accomplishing tasksgiven by teachers. In other words,

insufficient exposure to English reading and speaking practice might affect to this problem. In line with that, Andreson, Wilson, and Fielding (1998,pp. 21-22) state the amount of time spent on reading correlated significantly to gain in students' reading achievement. Therefore, to increase their English reading and eventually speaking need more time and continuous practice.

Concerning to the significant improvement on English reading comprehension of experimental students, there were some affecting factors that need to be explained. First, reading in English texts through digital devices increased the students' interest and stimulate in reading. As National Council of Teachers of English (2006) confirms that giving the students diverse texts (including electronic and visual media) and self-selection texts is effective to foster students to gain reading comprehension because reading materials which are related to students' interests can help them make connections of texts and their own worlds. The exposure of reading material is a factor that influences reading comprehension (Kush &Watkins, 1996).And, the easiness in catching reading information also caused improvement of students' reading comprehension as they had chance to read theinformation of the story provided on digital devices (big book). In addition, every student in the classroom could catch the information through big book. It is proved by the condition of the whole sample (N=40) from very poor to poor levels for reading comprehension in the posttest.

There was improvement in all aspects of reading comprehension achievement.During the intervention, the writer also introduced new vocabulary to the students before showing the material. So, the students did not have any difficulties when they did the reading. If they had, they asked their friend who knew the meaning of the words. This finding was in accordance with Kats and Boran's finding (2004); Shared Reading succeeded increasing the student's achievement in reading comprehension. Shared Reading also succeeded increasing all components of the reading comprehension: main ideas, details, cause/effect, inferences, and vocabulary.

Another aspect of reading that was least improved significantly in control group was, *inference*. It indicates that the students only did the reading, they just

focus on the easy one likevocabulary. Struggling readers just focused on figuring out the unknown words and not on attending to the text which help them to make inferences (Cain & Oakhill, 1999). The result of stepwise regression analysis showed that cause/effect gives the most contribution to the students' reading achievement. This means, during the intervention the students dealt mostly with the element of the story such as the characters, the setting, the plot and the problem and the solution of the story. As Huitt (1992) convinces that when people deal with an information problem, they tend to gather information relevant to overcome the problem (making a decision in order to reach the point of the story).

The intention of the students in reading the texts in this study was reading followed by brainstorming activity before speaking. As the result, they tried to get information only as they needed it. In other words, reading was only used to search for information which is beneficial to add some supporting theoretical framework of their speaking task.

Correspondently, in terms of the speaking achievement, the findings also showed that the eighth graders' speaking achievement in experimental group was improved. The students had worked very hard to be in average and goodlevels since their score in pre-test was in very poor and poor level. Not only individually but also in group, Shared ReadingStrategy could help the students in gaining thescore of the students' speaking achievement.It is believed that a big book is more effective to improve students' speaking achievement. According to Aziz (2013), discussion is a useful strategy for students in communicating to the members of groups through oral interaction. Therefore,the students felt challenging to speak and share their ideas freely, and it made them enthusiastic to learn through digital devices (a big book).Through such activities, students had opportunities to improve their compositions and be motivated to speak better. As Piaget and Vygotsky's statement, using computer as an expert pee or collaborative partner to support skills and strategies that can be internalized by the students and using computer as a tool to link the students to more knowledgeable and scaffold the student's learning.

Furthermore, the improvements in all aspects of speaking indicate that oral performance of the students in this study was getting much better. As the result, the quality of the content was also improved. The process of participation and interaction among students during discussion section has made learning atmosphere become interactive and collaborative.

In detail, the significant improvement of all speaking aspects reveal that during speaking process, students tend to be more focus on their speaking of the organization such as the beginning, middle and ending of the story. Furthermore, *gist/main idea* like the setting, the characters, moral value, and plot was most significantly improved because most of the students did not include the gist/main idea in their previous speaking pretest. They did not sum up their speaking at all. This means that at the beginning of the study, students' knowledge about speaking aspects especially in narrative text for level 2 was still weak. Furthermore, reading before speaking really helped students in getting the ideas. Input from reading helped the students elaborate about the ideas that would be expressed into oral performance. As a result, they could produce the ideas correctly.

The results of independent sample t-test of reading comprehension and speaking achievements showed that there was a significant difference between the post-test in experimental and control groups. It was shown by students' scores after being given a treatment in the experimental group which was higher than students' scores in the control group. The result of stepwise regression analysis also gives much contribution to the students' reading comprehension and speaking achievements. The students could be active readers and obtain the best result to comprehend the reading comprehension through the students' work in their team (Slavin, 1990). In addition, Aziz (2013)argues that discussion is a useful strategy for students in communicating to the members of groups through oral interaction. Therefore, the students felt challenging to speak and share their ideas freely, and it made them enthusiastic to learn through digital devices (a big book). This is in line withPidgeon's statement (1990) thatShared Reading as "a text that is shared among the students for their mutual pleasure and understanding".

4. Conclusion and Remark

To sum up, it was found that there was a significant difference in reading comprehension between the students who were taught by using Shared Reading Strategy and those who were taught with no treatment. In addition, experimental group showed a significant improvement for reading (total) and all its aspects. The improvement of the aspects from the highest to the lowest was described as follows:*vocabulary, detail, cause effect, inference, sequence, and main idea.*Meanwhile, there was no significant improvement in reading comprehension(total)and its aspects in the control group, except *inference*. Next, there was a significant difference in speaking achievement between the students who were taught by using Shared Reading Strategy and those who were not. Furthermore, there was a significant improvement made by the experimental students in speaking (total) and its aspects. The improvement of the aspects from the highest to the lowest was described as follows: *element story, main idea, organization, and linguistic spillover.* However, the students in the control group did not improve on their speaking achievement(total) and its aspects, except *element story and organization*.

In short, Shared Reading Strategy is effective to improve reading comprehension. There was significant difference in speaking achievement between the students who were taught by using Shared Reading Strategy and those who were not. Furthermore, speaking had the highest significant improvement among other variables. This means that Shared Reading Strategy is appropriate to gain speaking achievement. Besides, all its aspects also significantly improved.

As there were still some shortcomings found in this study, it raises some important points that need to be suggested for further research both for EFL teachers and students. For teacher, using Shared Reading Strategy for learning purpose in classroom is effective as long as the facility and teacher's guidance support the learning process. Second, it is suggested to a researcher who is interested in this study to have more sample size for experimental group and control group. It is better to have big number of each group in order to know

whether Shared Reading is applicable to be applied in Indonesia. Third, it is also suggested to a researcher who is interested in this study to use other genres of English text, such as procedure text, descriptive text, and so on, in order to know whether Shared Reading is effective to develop the students' comprehending an English text in general or in narrative text only. Finally, some obstacles could not be avoided but it could be anticipated. Therefore, teacher should be well prepared before integrating ICT into EFL learning. Meanwhile, for students, they have to use digital devices effectively for learning purpose so that they can optimize their EFL learning. Moreover, they have to be creative and innovative because they can be active and independent learners when they know how to operate digital devices properly. In addition, they have to upgrade their ICT skill as technology develops rapidly in this era.

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IMPLEMENTATION OF CHARACTER EDUCATION LOCAL WISDOM CHARGED IN BASIC EDUCATION LEVEL IN SOUTH SUMATRA

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Abstract

The aims of this study is to analyze the implementation of character education charged local wisdom in Basic Education in South Sumatra province and its obstacle factors. This study used a combination of quantitative and qualitative approach with descriptive methods. The study is conducted in three cities (Palembang, Prabumulih and Lubuk Linggau), and three regencies (MusiBanyuasin, Lahatand OganKomeringIlir), withtotal respondentsare 190 teachers. The data collection by using focus group discussions and questionnaires, while data analysis was done descriptively. The results showed that the implementation of character education local wisdom charged in basic education level in South Sumatra province in general already performing well but is not maximized. The majority (76.84%) of schools have implemented character education charged with quite good local wisdom. In junior high schools have done a good (13.04%) compared with SD (9.92%). In Prabumulih, most schools do it well (16.67%), while most schools do it less well in Lahat (18.42%). The elements of the local wisdom that is used is the poem, folklore, or aphorisms typical South Sumatra, utilization of used goods, the use of distinctive arts areas such as *sarofalanam*, tambourine, weaving mats and sewed roof, making conblock, literacy *Al-Qur'an*, and gardening (pineapple, mango, litchi).Not maximal implementation of character education charged local wisdom is influenced by factors: a lack of understanding and commitment of teachers with a lack of training, limitation of infrastructure of the schools, lack of cooperation of parents and the community, and lack of human resources teachers.

Keywords: *character education, local wisdom, basic education level, South Sumatra*

1. Introduction

Nowadays, moral decadence has become a common phenomenon that plague humanity in various parts of the world, including in Indonesia. Many cases have occurred moral and adorn various media almost every time, ranging from cases of corruption, violence, sexual abuse, pornography, prostitution, drug abuse, and even murder (kholid arifin,2013; Vance, 2014). In accordance with the phenomenon of moral decadence, the Government represented by the Ministry of National Education since 2010 has launched a program of character education. Even in the next five years, one of the six priorities Ministry of Education and Culture program is to improve religious education, moral and character formation

(http://news.oke zone.com/read/2015/03/25/65/1124206/enam-Priority-program-Kemendikbud). The purpose of charactereducation is to encourage birth and growth of children with good character, so grows the good characters of children will grow up with the capacity and commitment to do things the best and do everything right, and they tend to have a purpose in life (Kepennas, 2010:11). In order to further strengthen the implementation of character education has identified 18 values derived from religion, the basic country Pancasila, culture, and national education goals.In connection with the implementation of character education is, since 2010 the Center for Curriculum has conducted a pilot program implementing character education, entrepreneurial, creative economy, with active learning approach. school as an educational institution must play an active role in imparting values to students and give attention to the value of education in order to shape the character according to the character of Pancasila (Chotimah, 2010; Ridhahani dalam Budimansyah, 2012; Chotimah, 2015).

The program is intended to build competitiveness and national character in several regencies/cities in all provinces in Indonesia which includes early childhood, elementary school, junior school, high school and vocational school. Planting was carried out with the aim to improve the quality of national education that supports the creation of creativity and entrepreneurship in students as early as possible and implementation methodologies that are no longer teaching but for the sake of passing a thorough education that takes into account social skills. In 2010 the implementation of a pilot school program curriculum and character education conducted in 16 regions. Then in 2011 increased 17 regions and in 2012 added 11 regions, so that the total area used as pilot schools a total of 44 regions in Indonesia. In South Sumatra, the initial pilot schools character education, entrepreneurial, creative economy, with active learning approach is SDN 87, SDN 114, SMPN 17 Palembang, SMAN 1 Palembang, and SMKN 3 Palembang.

Even though character education has been issued for years, but in reality, shows that most of schools not fully meet education goals. A few instruments character education plan, but also has not reached the level of implementation on

character education is expected.Besides the weaknesses, character education implemented by most schools also have advantages. There are schools that incorporate local wisdom in the practice of planning and implementation. Research conducted by TrisnaSukmayadi (2012), entitled "Development of Character Education-Based Values Local Wisdom Sunda: A Case Study in SMAN 2 Cimahi" of which indicates that the character education program at SMAN 2 Cimahi through the values of local wisdom Sunda implemented using a model of integrated curriculum in all subjects and models supplement. While learning models using a model example and habituation, but not explicitly contained the values of local wisdom Sunda (Sundanese values not use Sundanese language text), just merely implied.Diversity in the implementation of education, including character education is in line with the agenda of the current government, which eliminates uniformity in education. In the Government's priority agenda contained in nawa ideals 9 stated: "strengthen the diversity and strengthening social restoration Indonesia through policies to strengthen the education for diversity and create spaces of dialogue between residents".

It is necessary that the implementation of local wisdom-laden character education in South Sumatra. Given the large number of existing schools, the focus of this research is only limited to schools at the basic education level with the consideration that the cultivation of good character should have been implanted since as early as possible.Activity this study also supports the vision and mission of the construction of South Sumatra years 2013-2018 contained in the Medium Term Development Plan (RPJMD), namely South Sumatra Prosper, More Developed and International Competitively. Based on the vision of development that has been set, the mission Development of South Sumatra Province Year 2013-2018 are: 1) boosting economic growth; 2) strengthening the stability of the region; 3) improving equitable justice; and 4) improve the sustainable management of the environment and disaster relief.This study aims to provide policy advice on improving the quality of character education and entrepreneurship. The specific aims of this study were: 1) analyze the implementation of character education charged local wisdom on basic education

in the province of South Sumatra; and 2) to analyze the factors that constrain the implementation of character education charged local wisdom on the basic education level in the province of South Sumatra.

2. Theoritical Background

Character education is intended in this study are all efforts that are designed and carried out systematically to instill the values of the behavior of learners associated with the Almighty God, ourselves, our fellow human beings, the environment, and nationality embodied in thoughts, attitudes, feelings , words , and actions based on religious norms , laws, manners, culture, and customs. Implementation of character education in schools and aims to improve the quality of educational outcomes in schools through the character formation of students as a whole, integrated and balanced, appropriate competency standards .

Implementation of character education in primary schools is done through the realm : learning (learning activities), development of school culture and learning centers, and co-curricular activities or extracurricular activities, and daily activities at home and in the community. The implementation of character education in the implementation of learning is implemented using the right strategy, the strategy that uses a contextual approach which includes : 1) problem-based learning, 2) cooperative learning, 3) project-based learning, 4)learning services , and 5) work-based learning (Puskur , 2011:9). Cultural development of schools and learning centers is done through self development activities, ieroutine , spontaneous activities, exemplary, and conditioning. Routine activities are activities that are routine or steady done at any time, student activities continuously and consistently every time (Puskur, 2011:8).

Local wisdom is derived from two words namely wisdom (wisdom/genius), and local (local). In general, the local wisdom/genius (local wisdom) can be understood as the ideas of local (local) that are wise, full of wisdom, good value, embedded and followed by members of the community. Local wisdom is formed as the excellence of local culture and geographical conditions in the broad sense. Local wisdom is a product of the cultural past that

should continuously hold onto life. The value of local wisdom in this research is the local wisdom that is created from the adaptation of a community that comes from life experiences are communicated from generation to generation. Local wisdom can be used as a builder of the nation's character. Jim Ife (in Permana, 2010, p 4) dividing the dimensions of local wisdom into: a) local wisdom, b) a local value, c) local resources, d) local skills, e) mechanisms of local decision-making, and f) local group solidarity.

Wisdom can be a learning tool for every human being to become a smart, intelligent, and thoughtful. According Rahyono (2009:3) points out: "Wisdom is something that is produced from a human intelligence that can be used by neighbors as a means smart. Wisdom resulting from the process of thinking and decision-making wise, not detrimental to all parties, and are helpful for anyone who related by that wisdom. Although local but worth the value contained in it is considered very universal. So by integrating local wisdom in the design of the formation of character, indirectly, the child will get a full picture on her identity as an individual and his or her identity as a member of society who are bound by a superior culture and have long been the line taken by his previous. Factors that make the learning of local wisdom has a strategic position are: 1) local wisdom is forming an inherent identity from birth; 2) local wisdom is not a strangeness to the owner; 3) the emotional involvement of the community in the strong appreciation of local wisdom; 4) learning of local wisdom does not require coercion; 5) local wisdom is able to foster self-esteem and confidence; and 6) local wisdom can improve the dignity of the Nation (Rahyono, 2009:8).

In character education based on local wisdom, guidance values local wisdom the criteria that determine the quality of children's actions. As a decisive criterion, the values of local wisdom can be a foothold for the development of a learning more character. Meaningfulness of learning with the scope of local wisdom will show a dimension of learning that inspires scholarly person, also at the same time the scientific dynamic can be contextual and friendly culture of the area. Dig and replant local wisdom is inherently through learning, can be said to be a movement back to the base value of its own regional culture, as part of an

effort to establish the identity of the nation and as a sort of filter in selecting the cultural influence of "other".

The process of integration of the values of local wisdom in learning in primary schools this can be done for all fields of study. In integrating the values of local wisdom in teaching in an elementary school teacher would have to adjust to the level of development of primary school children, adapted to the material / subjects are delivered, the learning method used. It becomes very logical because it is recognized or not the values of local wisdom which incidentally is the sedimentation of the virtues practiced in a region, will give a positive color for the character development of children.

3. Method

This study uses a combination of quantitative and qualitative approaches. The method used is descriptive method. This research was conducted in six regency/cities that belongs to the province of South Sumatra province, Palembang city, MusiBanyuasin, Prabumulih, Lahat, LubukLinggau, and OganKomering Ilir (OKI). Respondents research is the principal and teachers of all schools. Total 190 schools as sample of this study.The data collection by using a focus group discussion (FGD) and questionnaires. FGD used to explore initial data related to character education charged local wisdom held in each district/city. FGD involving school principals (ElementarySchool/ES and Junior High Schools/JHS, public and private), UPTD head, and the head of the Department of Education. A questionnaire was used to collect data on character education charged local wisdom that is implemented in schools and the factors that constrain implementation. The data were analyzed descriptively with the aim to describe the implementation of character education charged local wisdom and the factors that constrain implementation.

4. Result and Discussion

The results of data analysis implementation of character education charged local wisdom collected through questionnaires filled out by the principal, obtained

a mean value of 19.11 with a median of 20 and 20 mode, standard deviation of 3.27 , and a minimum score of 9 and a maximum score of 27. Specifically visits of each school level and district/city demonstrates the value that varies. Judging from the level of the lowest mean school in junior (19.01), while the views of the regency/city is lowest mean in OKI (16.70) and the lowest mean there Prabumulih (21.44). Descriptive statistics data is implementation of character education can be seen in Table 1.

Table 1. Descriptive Statistics Character Education Implementation Local Wisdom charged in South Sumatra Province

	Level			Regency/City					Total
	EPS	JHS	Plg	Muba	Prabu	Lahat	Linggau	OKI	
N	121	69	40	38	18	38	23	33	190
Mean	19.13	19.01	19.78	19.55	21.44	19.21	18.52	16.70	19.11
Median	20	19	20	20	21,50	20	19	17	20
Modus	20	21	21	21	20	20	19	17	20
Standard Deviation	2.986	3.562	2.577	2.638	2.833	3.146	3.591	3.097	3.237
Minimum	9	10	11	13	15	12	9	10	9
Maximum	26	26	24	26	26	25	23	22	27

Furthermore, based on the categorization of the implementation of character education show that of the total 190 schools as sample of this study, the majority (146 schools , or 76.84 %) have implemented character education charged local wisdom fairly well , 23 schools (12.11%) carry with less good, and only 21 schools (11.05%) who carry it out properly. Thus, it can be said that the implementation of local wisdom as character education in the province of South Sumatra are generally categorized quite good, although some have execute poorly (Table 2).

Table 2. Frequency Distribution Character Education Implementation Charged Based Local Wisdom School Level

Category	ES		JHS		Total	
	F	%	F	%	F	%
Good	12	9,92	9	13,04	21	11,05
Enough	93	76,86	53	76,81	146	76,84
Less	16	13,22	7	10,15	23	12,11
Total	121	100	69	100	190	100

If compared to the implementation of character education at the elementary and junior high, conditions are not much different from the situation in general. At primary school level, of the 121 schools sampled as many as 93 schools (76.86%) have implemented character education charged with quite good local wisdom. The remaining 16 schools (13.22%) do it poorly, and 12 schools (9.92%) carry it out properly. In junior high school, from 69 schools into a sample of 53 schools (76.81%) perform well enough, 9 schools (13.04%) perform well and 7 schools (10.15%) carry poorly (Table 2). Furthermore, when compared to the implementation of character education in each district/city, looks too similar circumstances, where the majority of schools have implemented character education uncharged local wisdom quite well, as well as small parts that hold it well, while doing it with unfavorable numbers quite significantly. Even in Lahat, schools implementing character education charged less good local wisdom with a significant percentage (18.42%) (Table 3). A more detailed comparison of character education implementation indigenous charged by Regency/City and school level can be seen in Table 4.

Table 3. Frequency Distribution Character Education Implementation
Local Wisdom charged by District/City

Category	Palembang		Muba		Prabumulih		Lahat		Lb.Linggau		OKI	
	Tot	%	Tot	%	Tot	%	Tot	%	Tot	%	Tot	%
Good	2	5	3	7,89	3	16,67	5	13,16	3	13,04	3	9,09
Enough	34	85	32	84,22	13	72,22	26	68,42	18	78,26	25	75,76
Less	4	10	3	7,89	2	11,11	7	18,42	2	8,7	5	15,15
Total	40	100	38	100	18	100	38	100	23	100	33	100

Table 4. Frequency Distribution Character Education Implementation
Local Wisdom Charged by the City / Country and School Level

Category	Palembang		Muba		Prabumulih		Lahat		Lb.Linggau		OKI		Total	
	ES	JHS	ES	JHS	ES	JHS	ES	JHS	ES	JHS	ES	JHS	Jml	%
Good	3,33	10	8	15,38	8,33	0	10	16,67	20	12,5	5,26	14,29	21	11,05
Enough	83,34	80	80	61,54	83,34	83,33	75	72,22	66,67	75	84,21	64,29	146	76,84
Less	13,33	10	12	23,08	8,33	16,67	15	11,11	13,33	12,5	10,53	21,42	23	12,11
Total	100	100	100	100	100	100	100	100	100	100	100	14	190	100

The frequency distribution of respondents' answers to the questionnaire, it is known that the majority of schools have implemented character education quite well, although a small portion is still not good.For the implementation of character education through regular activities, the most widely implemented is picket grade (89.58%), praying before class begins and ends (88.54%), a ceremony Monday (87.5%), and the inspection body cleanliness (80.21%). For the implementation of character education through spontaneous activity, the many activities carried out are collecting donations when there are friends in the affected areas (70.83%). For

the implementation of character education by example, that many teachers be implemented is a personal example that is clean, tidy, friendly, and sociable (46.88%). For the implementation of character education through conditioning, which many activities carried out include the bins in each room (81.25%), the toilets were clean (78.13%), and their words of wisdom posters are on display in the halls and in the grade (70.83%). For the implementation of character education through co-curricular activities and extracurricular activities that are carried out many scouts (76.04%) and sport (43.75%). For the implementation of the realm of character education through collaboration with parents and the community, a lot of cooperation undertaken include environmental hygiene (22.92%), saluted (16.67%), and invites parents committee meeting (15.63).

Figure 1: Sample Students activities in connection to character education

In connection with the charge of local wisdom in the implementation of character education many forms. One is the use of rhymes, folklore, or aphorisms typical South Sumatra in the learning process. A total of 16.67% of the schools that the research samples have been using various forms of local wisdom as a medium of learning, because it contains a moral message that is important for character education. In addition, there are also schools (11.46%), which utilizes second-hand goods as a form of local wisdom, 10.42% of schools using typical regional arts like sarofalanam, 7.29% using a tambourine, 6.25% to weave mats and sewed roof, 4.17% making conblock, 3.13 implementing learning to read and write the

Qur'an as co-curricular activities and extracurricular. There are also schools that conduct gardening (pineapple, mango, litchi) (2.08%). To analyze further on the implementation of character education in the learning process, the following will describe the results of the questionnaire teachers. As for character education integration charged local wisdom in lesson planning in elementary and secondary schools 89.0% Palembang already performing well, and 11.0% has not done well. For the integration of character education charged local wisdom in the planning of learning in elementary and secondary schools 97.4% Muba district already performing well, and 2.6% have not done well. For the integration of character education charged local wisdom in the lesson planning in elementary and secondary schools 87.8% Prabumulih city already performing well, and 12.2% has not done well. For character education integration charged local wisdom in the planning of learning in elementary and secondary schools 86.8% Lahat already performing well, and 13.4% has not done well. For character education integration charged local wisdom in lesson planning in elementary and secondary schools 78.1% LubukLinggau already performing well, and 7.4% have not done well. Furthermore, character education integration charged local wisdom in lesson planning in elementary and secondary schools 89.5% OKI has been performing well, and 10.5% has not done well.

Based on the results of the questionnaire regarding the implementation of character education teacher charged local wisdom in the learning process in elementary and junior schools, high schools in Palembang city, the implementation of character education in the learning process (57.8%) have been implemented and (42.2%) have not been implemented. Based on the results of the questionnaire regarding the implementation of character education teacher charged local wisdom in the learning process in elementary and junior high schools in the district Muba, then the implementation in learning (63.0%) has been implemented, and (37.0%) have not been implemented. Furthermore, based on the results of the questionnaire in the implementation of character education teacher charged local wisdom in the learning process in elementary and junior high schools in Prabumulih city (70.7%) has been implemented and (29.3%) have

not been implemented. Based on the results of the questionnaire regarding the implementation of character education teacher charged local wisdom in the learning process at the elementary and junior high Lahat regency, then the implementation of character education has been carried out (50%) and (8.7%) have not been implemented. For urban areas LubukLinggau already implemented (47%) and (10%) have not been implemented. Furthermore, to the district of OKI (45.3%) have been implemented and (8.4%) have not been implemented.

The following will be presented in succession on the implementation of character education charged local wisdom in the assessment of learning in elementary and secondary schools in the city of Palembang, Muba, Prabumulih, Lahat, LubukLinggau and OKI. For Palembang, based on teacher questionnaires, it is known that an assessment has been carried out in character education (59.2%) and (40.7%) have not been implemented. In Muba district, based on teacher questionnaires, it is known that an assessment has been carried out in character education (59.6%) and (40.4%) have not been implemented. In Prabumulih city, based on a questionnaire that teachers, it is known that an assessment has been carried out in character education (54.9%) and (45.1%) have not been implemented. In Lahat district, based on teacher questionnaires, it is known that an assessment has been carried out in character education (45.4%) and (11.7%) have not been implemented. Further to the implementation of character education charged local wisdom in the assessment of learning in elementary and junior high school inLubukLinggau, then vote in character education has been carried out (47.7%) and (11.1%) have not been implemented. Last,for the implementation of character education charged local wisdom in the assessment of learning in elementary and junior, high school in OKI, then the assessment has been carried out in character education (57.5%) and (17%) have not been implemented.

From the above description, based on the results of the questionnaire teachers on the implementation of character education charged local wisdom in lesson planning, processes, and assessment in a row in the city of Palembang (89.0%) (57.8%) (59.2%), Muba Regency (97.4%), (63.0%) (59.6%), Prabumulih (87.8%) (70.7%) (54.9%), Lahat regency as much (76.1%) (78.1%) (68.3%),

while in LubukLinggau (50%) (47%), (45.3%), and in OKI (45.4%) (47.7%) (57.5%). For more details can be seen in Table 5.

Table 5. Integration of Character Education Charged Local Wisdom inLesson Planning, Implementation and Evaluation

Aspects	Palembang (%)	MUBA (%)	Prabumulih (%)	Lahat (%)	Lubuk Linggau (%)	OKI (%)
Lesson Plan	89.0	97.4	87.8	76.1	78.1	45.4
Learning Activities	57.8	63	70.7	78.1	54.7	47.7
Assessment	59.2	59.6	54.9	68.3	45.3	57.5

Based on the results of the questionnaire regarding the implementation of character education teacher charged local wisdom in planning, processes , and assessment in six districts /cities result (78 %) the implementation of the implementation of character education in South Sumatra has been running well .

Factors that affect the implementation of character education charged local wisdom gathered through FGD with principals and interviews with teachers. FGD is known that all schools have to implement character education, not only some schools are entering the charge of local wisdom in the implementation of character education. In addition, character education charged local wisdom held not maximized due to various constraints. Among the obstacles encountered is the lack of understanding and commitment of teachers in implementing character education, so that only some teachers who have a reasonable understanding in implementing character education, but also the commitment of the teachers themselves are lacking. In addition, the implementation of character education that lasts not maximized because only incidental without planning in earnest and became a common awareness for all teachers to be responsible for developing it.Another constraint is the limited infrastructure that is owned by the school. For example to carry out a religious character education but prayer room and perform ablutions advice in schools do not exist, to the character of honesty there is no honesty canteen, to the character of hygiene means trash is still limited.The next obstacle is the lack of cooperation of parents and communities in the process of habituation characters that have been developed at the school. FGD in Prabumulih known that lack of parental supervision at home in terms of the application of

Islamic doctrine that has been taught in school. FGD in Palembang is known that there is no control of the parent to a child's everyday behavior.

Especially for the implementation of character education uncharged local wisdom, the main constraint is the lack of human resources master teachers of regional culture. FGD results in MusiBanyuasin showed that problems in the school in incorporating elements of local content in character education is the lack of a cultural area and understand fluent Muba distinctive art, such as literature says to teach art in schools. FGD in Palembang also shows a lack of teachers of art that can be said art Palembang.According to interviews with teachers showed that the factors that constrain the implementation of character education that charged local wisdom is the teachers themselves. As Chusorn, Pornpimona Ariratana, Wallapha, Chusorn, Prayuthc (2013) stated that factors in the local wisdom application of a sustainable school emphasis onthe role of teachers. Many teachers do not understand the nature and implementation of character education in the learning process. Most simply interpret the implementation of character education was limited to incorporate character education into the lesson planning format without understanding how its implementation in learning. This is because of lack training. Moreover, the lack cooperation of parents in monitoring children's behavior at home is also an obstacle in the process of the formation of habits taught in schools.

5. Conclusion and Remark

Based on the results and the above analysis, it can be concluded as follows;

- The implementation of character education uncharged local wisdom on education basic education (primary and secondary) in the province of South Sumatra in general already performing well but is not maximized. The majority (76.84%) of schools have implemented character education uncharged local wisdom quite well, but there is still 12.11% who execute poorly. A number of obstacles encountered in the implementation of character education uncharged local wisdom. If the comparison between elementary and junior high school, then in junior high school more and more schools

have done a good (13.04%) compared with SD (9.92%). If compared between district/city, then in Prabumulihmost schools hold it well (16.67%), while most schools that carry less well in Lahat (18.42). The elements of the local wisdom that is used is the poem, folklore, or aphorisms typical South Sumatra, utilization of used goods, the use of distinctive arts areas such as *sarofalanam*, tambourine, weaving mats and sewed roof, making conblock, literacy Al -Qur'an, and gardening (pineapple, mango, litchi).

- The maximum implementation of character education yet charged local wisdom on basic education in South Sumatra is influenced by a number of factors, which include: 1) a lack of understanding and commitment of teachers in implementing character education due to lack of training, 2) limitation of infrastructure owned by school, 3) the lack of cooperation of parents and communities in the process of habituation characters that have been developed in schools, and 4) lack of human resources master teachers of culture/arts area.

Based on these results, then some of the proposed suggestions are as follows: 1). For the central government, in this case the Ministry of Culture, Primary and Secondary Education, and local governments, in this case the Department of Education provincial and regency/city, there should be more intensive training for teachers so that they can have the commitment, understanding, and skills sufficient to implement character education both in the realm of learning as well as outside the realm of learning. In addition, it should also provide support of funding for the provision of infrastructure and human resources needed. 2). For schools, should give more attention to the implementation of character education through well-planned programs, either through short-term, medium term and long term. In addition, the need to involve the participation of parents and communities in the implementation of character education uncharged local wisdom. 3). For teachers, should always learn to improve understanding and skills in applying local wisdom-laden character education by involving themselves in various activities debriefing and training,

and are committed to implement it in order to produce students who have the character to be expected.

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THE EFFECTS OF QAR STRATEGY, DATA CHART STRATEGY, AND CRITICAL THINKING ON READING COMPREHENSION ACHIEVEMENT OF THE TENTH GRADE STUDENTS OF SMK NURUL IMAN PALEMBANG

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Abstract

This study aimed to investigate the effects of QAR strategy, data chart strategy, and critical thinking on reading comprehension achievement of the tenth grade students of SMK Nurul Iman Palembang. The method used in this study was factorial design. Fifty students of the tenth grade students of SMK Nurul Iman Palembang were selected as the sample in this study based on some criteria, namely, they were on the same reading level (level 3), were on the same level of critical thinking (high= 9 students, medium= 7 students, and low = 9 students) for each group, and taugth by the same English teacher. The instruments used were (1) reading comprehension test, and (2) critical thinking test. In analyzing the data, two statistical analyses were used: (1) independent sample t-test, and (2) two way ANOVA. The result of the study showed that there was no significant difference in reading comprehension between the students who were taught using QAR strategy and data chart strategy (t-value= -.171, $\square$= .865). Besides, there was a significant interaction effect between QAR strategy and students' critical thinking level on reading comprehension achievement ($\square$= .034, (<0.05). Meanwhile, there was no interaction effect between data chart strategy and critical thinking ($\square$= .998).

Keywords : *QAR, data chart, critical thinking, reading comprehension achievement*

1. Introduction

Reading is an active cognitive process of interaction with printed and monitoring comprehension to establish meaning (Bromley, 1992). People usually read the text to find the message or information. Whether or not they can understand about the text they read, it depends on their reading comprehension ability. Kosanovich (2013) adds that reading comprehension as the process of simultaneously extracting and involment with written language is very important since it supports students' academic performance.

Students think and try to comprehend the reading text when they read. This means, thinking skill cannot be separated from reading comprehension. NICHD (2002) states that comprehension is the process of deriving meaning from

connected text. It involves word knowledge (vocabulary) as well as thinking reasoning.

Additionally, Mohammadi, Heidari, and Niry (2012) state that one factor that may influence students' reading comprehension is critical thinking. Maurer and Arnett (2001) add that the influence of critical thinking skill is it can influence someone's success in academic life. The cultivation of critical thinking has been the focus of education for years. In line with this, UNESCO (2011) states that it is one of the most important life skills to survive in the future life.

Unfortunately, some facts also revealed that there was still a problem with Indonesian students' reading comprehension achievement and students' critical thinking. Based on PISA result in 2013, Indonesian students were in the second lowest rank in their reading literacy which was lower than the rank of the PISA in 2009 in that Indonesia was 57th out of 65 countries. This finding supported by the IAE (2003) revealed that reading score of Indonesian students in East Asia was low. Indonesian students were just capable of mastering 30 % reading material, and found difficulty in reading items that were in the form of commentary requiring cognitive process. In line with this, according to EGRA (2014, p.17), the second grade students' reading achievement in Indonesia was on the lowest category and 26.3% of them was reading with comprehension. Then, based on previous research done by Yanti (2013, p. 30), the result of the reading comprehension of senior high school students in Palembang was also still below average, in which there was 70 % of students who were poor in reading comprehension. Moreover, Sudarmi (2008, p. 20) found that 43,33% of the students in Palembang were in below average critical thinking.

In this study, the writer had tenth grade students of SMK Nurul Iman Palembang as the participants. For the purpose of measuring the reading level of the tenth graders, the writer administered a reading level test using Informal Reading Inventory (Roe and Burns, 2011). The result of the test was that their reading level was on level 3 (primer level).

This was in line with what was found by Haris and Sippay (1980) that many factors influence the difficulty in reading including the mastery of vocabulary,

and ability of analysis aspect of reading comprehension (main idea, inference, supporting detail, cause effect, and sequences).

Teachers need to find out appropriate strategies for teaching reading comprehension because without proper reading strategy, it is difficult for students to understand a reading text. Afflerbech, Pearson, and Paris (2008, p. 368) state that it is important to note that reading strategies are indeed needed to help students decode and understand text successfully. In line with this, question-answer relationship and DC strategies are very helpful for students of reading comprehension achievement.

The objectives of this study were to find out whether or not: (1). There were a significant difference in reading comprehension achievement between the tenth grade students of SMK Nurul Iman Palembang who were taught by using QAR strategy and those who were taught by using DC strategy., (2). There was a significant interaction effect between QAR strategy and critical thinking on reading comprehension achievement of the tenth grade students of SMK Nurul Iman Palembang. If there was a significant interaction effect, whether or not there was any significant difference among the students who had high, medium, and low level of critical thinking., and (3). There wa a significant interaction effect between DC strategy and critical thinking on reading comprehension achievement of the tenth grade students of SMK Nurul Iman Palembang. If there was a significant interaction effect, whether or not there were any significant difference among the students who had high, medium, and low level of critical thinking.

2. Theoretical Background

Question-Answer Relationship (QAR) promoted its benefit for students in solving some students' reading problems. Raphael and Au (2005, p. 206) have asserted "the potential of QAR for helping teachers guide students to higher levels of literacy." Peng, Hoon, Khoo, and Joseph (2007) also report that QAR was appropriate reading strategy in helping students to classify question types, and monitor their comprehension. In line with this, Fisher and Frey (2004) add that QAR empowers students to think about the text they are reading. It inspires them

to think creatively and work cooperatively while challenging them to use literal and higher-level thinking skills.

Antonacci and O'Calaghan (2012, p. 281) also promoted the benefits of Data Chart (DC) that provide students with a method to organize information. Due to its benefits, the writer was interested in conducting the present research using Question-Answer Relationship and DC as strategies.

3. Method

In this study, a factorial design was used. There were two groups in the study; the first experimental group was given a treatment using QAR strategy and the second experimental group was given a treatment using DC strategy. A factorial design was used to study the independent and simultaneous effects of two or more independent treatment variables on an outcome (Creswell, 2005, p. 298). Fraenkel and Wallen (1990) also state that factorial design extend the number of relationship that may be examined in an experimental study.

Referring to the problems and objectives of this study, there were four variables. The first was QAR strategy as the independent variable. The second was DC strategy as the other independent variable. The students' reading comprehension achievement was the dependent variable, and students' critical thinking was the moderator variable.

Cornell Critical Thinking form X was used to find out the level of critical thinking in selecting the sample. From 50 students, the sample was selected based on the following criteria;(1) the students were taught by the same teacher, (2) the students relatively had somewhat the same age (15-16 years old), (3) the students had the same numbers of category (low, medium and low). To score the level of students' critical thinking, Cornell Critical Thinking Dispossition form X was used. The students who scored high, average, and low in doing the test were equally divided into two groups. Therefore, the first group consisted of 9 students who scored high, 7 students who scored average, and 9 students who scored low, and the second group consisted of 9 students who scored high, 7 students who scored medium, and 9 students who scored low.

Reading comprehension test was administrated to know about students' English reading comprehension before the treatment and post-test was administered to know about the students' reading comprehension after the treatment. The test items in the pre-test were the same as those of a post-test because the purpose of giving them was to compare between students' reading achievement before and after the treatment. Before doing pre-test, the students were tested to see their reading comprehension level by using *Informal Reading Inventory* test (IRI). IRI was a standard reading level test made by Roe and Burns in 2011. It was found that the reliability of the reading comprehension test with Cronbach Alpha was .881.

4. Result and Discussion

Pair Sample T-Test Analysis

Paired sample t-test was used to find out wheteher or not the reading comprehension achievement of tenth graders of SMK Nurul Iman Palembang academic year 2014/2015 was improved after they were taught using QAR and DC strategies. The students' reading comprehension achievement was improved if t_{table} is higher than $\square$ values (sig 2-tailed) from the two groups which are less than 0.05.

Based on the result of paired sample t-test, it was found that the mean difference between pretest and posttest scores within QAR group was 16.76, the $t_{obtained}$ was 5.137 with df 24 and significant value was .000 (<0.05). QAR strategy significantly improved reading comprehension achievement and its four aspects (main idea, inferences, cause effect, and sequences), but there were two aspects (detail questions and vocabulary) which were not significantly improved. Furthemore, within DC group, it was found that the mean difference between pretest and posttest scores was 10.00, the $t_{obtained}$ was 4.382 with df 24 significance value was .000 (<0.05). Therefore, from thre result of pair sample test, DC strategy also significantly improved reading comprehension achievement (total) and its three aspects (main idea, vocabulary, and sequences), but there were three aspects (inference, detail question, cause effect) were not significantly

improved (see Table 4). From those findings, it can be stated that the null hypothesis (H_0) was rejected and alternative hypothesis (H_a) was accepted which means there was a significant difference in reading comprehension achievement of the tenth graders of SMK Nurul Iman Palembang who were taught by using QAR strategy and those who were taught by using DC strategy.

Independent Sample T-Test Analysis

To test whether or not there was a significant difference between QAR group and DC group, independent sample t-test was used. There was a significant difference if the □ value (sig 2-tailed) was less than 0.05. Independent t-test result showed that the mean difference between posttest score between QAR and DC groups was -.560, the $t_{obtained}$ (-.171) with df 48 and significant value was .865 (<0.05). From those findings, it can be stated that the alternative hypothesis (H_a) was rejected and null hypotheses (H_0) was accepted which means there was no significant difference between QAR and DC groups in term of posttest results; there was no significant difference in total score, but two aspects (main idea and inference) were different significantly.

Two-Way ANOVA Analysis

In this study, students' critical thinking levels were used as moderator variable that was considered as another factor that might influence the students' reading comprehension achievement.

Two-way ANOVA test was used to analyze whether there was a significant interaction effect between QAR strategy and critical thinking and whether or not there was a significant interaction effect between data chart strategy and critical thinking. There was a significant difference if the □ value (sig 2-tailed) was less than 0.05. Two- way ANOVA result showed that the mean square between QAR and critical thinking was 29.485 with df 4 and significant value was .034 (<0.05). From those findings, it can be stated that there was a significant interaction effect betweeen QAR strategy and critical thinking. Based on the second research problem, if there was a significant interaction effect,

therefore there were any significant differences among the students who have medium, high, low level of critical thinking on reading comprehension achievement. Two-way ANOVA result showed that there was a significant difference in reading comprehension achievement between students who were on high critical thinking level and students who were on low critical thinking level with Sig= 0.004 (<0.05) and it was also found that there was a significant difference in reading comprehension achievement between students who were on high critical thinking level and students who were on average critical thinking level with Sig= 0.004 (<0.05). On the contrary, result showed that there was no significant difference in reading comprehension achievement between students who were on average level and students who were on low level with sig.753.

Meanwhile, it was found that there was no interaction effect between DC strategy and critical thinking. Two-way Anova result showed that the mean square between DC strategy and critical thinking was 1.981 with df 3 and significant value was .998. Therefore, it can be stated that there was no significant interaction effect between DC strategy and critical thinking.

5. Discussion

Based on the result of paired sample t-test, it was found that QAR strategy significantly improved reading comprehension achievement and its four aspects (main idea, inferences, cause effect, and sequences), but there were two aspects (detail questions and vocabulary) which were not significantly improved. DC strategy also significantly improved reading comprehension achievement (total) and its three aspects (main idea, vocabulary, ans sequences), but there were three aspects (inference, detail question, cause effect) were not significantly improved.

Furthermore, the researcher took critical thinking level as moderator variable that might give contribution on the students' reading comprehension achievement. The result of students' critical thinking showed that these students were divided into three categories, ie; high level (36%), average level (28%), and low level (36%). In total, the result showed that there was a significant interaction effect between QAR strategy and critical thinking. Besides, it was found that there

was a significant difference in reading comprehension achievement between students who were on high critical thinking level and students who were on low critical thinking level, between students who were on high critical thinking level and students who were on average critical thinking level. Thus, it could be concluded that QAR strategy and critical thinking significantly affected reading comprehension achievement of the tenth grade students of SMK Nurul Iman Palembang. Raphael and Au (2011) state that the benefits of QAR strategy that elicits students' prior knowledge of the topic of the text, sets a purpose for critical thinking, and helps students to monitor their comprehension. From those findings, researcher interpreted that the students on high critical thinking were easier to apply QAR than others because of their high critical thinking. Rayhanul (2015) explains that students have high critical thinking think more logically, more systematicaly, and "outside the box" so that they can apply QAR easliy. Then, students on average critical thinking needed more time to apply and more understand the purposes of QAR strategy on reading comprehension achievement. Meanwhile, the students on low critical thinking were interested enough in QAR strategy as a new strategy for them so that they were challanged to apply it.

In DC strategy result, it was found that there was no significant interaction effect between DC strategy and critical thinking. It could be concluded that DC strategy significantly affected reading comprehension achievement meanwhile critical thinking did not affect students' reading comprehension achievement.

5. Conclusions and Remark

Based on the result of the pair sample t-test and independent sample t-test, it can be concluded that both QAR and DC strategies can significantly improve students′ reading comprehension achievement. QAR strategy was as good as DC strategy in improving the students' reading comprehension achievement. QAR strategy can help the students to think about a text they read critically, while DC strategy can help the students to build their vocabulary base effectively.

Based on two-way ANOVA result, it is not only QAR strategy that significantly affected reading comprehension achievement of the tenth graders of

SMK Nurul Iman Palembang but also students' critical thinking. DC strategy also significantly affected reading comprehension achievement although students' critical thinking did not affect students' reading comprehension achievement.

In conclusions, QAR and DC strategies are good strategies which can be used to teach reading comprehension. Especially for QAR strategy, it was a good strategy to teach students to read critically. These strategies are not only good for teaching reading comprehension but also for teaching science, and mathematics.

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FUNCTIONING LOCAL CULTURE IN EFL READINGS

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Abstract

Curriculum has mandated that communicative competence is the main objective of teaching English in Indonesia. Therefore, target culture is embedded with language in classroom. Globalization, in other hand, has imposed teachers to reconsider the inclusion of local culture. Reading material is one of the medium to promote local culture. This paper elaborates schemata theory and cultural aspects included in reading materials utilized by students.

Keywords: local culture, reading materials, schemata

1. Introduction

The objective of teaching English as stated in national curriculum is achieving communicative competence. This competence is defined as the ability to communicate appropriately. Several models of communicate competence are proposed, and one of the popular model is described by Celce-Murcia, Dornyei, and Thurrell (1995) in which communicative language ability is composed by five competences, namely discourse, linguistic, actional, strategic, and sociocultural competence. It further explains that in order to communicate accurately, students have to concern with the knowledge of arrangement and structure of words, phrases, and sentences, ability to harmonize actional intent with linguistic form, knowledge of communication strategy, and awareness to appropriately convey massage in the context of sociocultural.

To achieve communicative competence, in addition, implies that language and culture is interconnected. Culture is the basis of communication since the

meaning conveyed in language used depends on society where they live, and the communication is delivered through language (Rajabi & Ketabi, 2012; Shahed, 2013). Culture rules, promotes, or even obstructs the communication. The knowledge of culture will later determine language forms in different conditions and circumstances. It is not surprising that Zu and Kong (2009) declare the unfeasibility of foreign language acquisition with the absence of cultural understanding. In other words, teaching language is never been done without the elements of culture.

Before the trend of communicative competence is spread over, cultural knowledge has been introduced implicitly in language classroom. It is reported that the teaching of culture was started in early 1950s when the grammar translation method was applied in classroom. It aimed to facilitate students' comprehension toward literature readings. The trend of teaching culture shifted in the era of audio-lingual method. Cultural elements were introduced by exposing students with phrases used for daily conversation. Thus, students were expected to be able to communicate appropriately (Xiao, 2010). Since people from different culture are contacted each other in the era of globalization, the nature teaching English and culture is affected. The function of English as lingua franca is not associated to particular culture of those who speak it as a first language (Clouet, 2006; Rajabi & Ketabi, 2006). Moreover, cultural context is always attached with the region in which English is taught and used (Rattanaphumma, 2006). Andarab (2014) further explains *English for Specific Culture* that shifts common paradigm in language pedagogy which he mentions as *English of Specific Culture*. It implicates the culture brought in classroom that is not longer the domain of either British or American culture as target culture. Local culture is highlighted. The need of local culture in EFL learning setting is in the basis of developing students' awareness toward their own culture to socialize with global citizen. In other words, the terminal aim of local culture involvement is students are able to communicate effectively through their own culture and beliefs (Clouet, 2006).

The culturally localized reading material is beneficial for students, mostly for beginner students. Local culture is preferred by students, and it directs to

employment of local culture as the theme of reading materials (Rattanaphumma, 2006; Liu & Laohawiriyanon, 2013; Thinley & Maxwell, 2013; Ningtyas, 2016). Moreover, a study by Erten and Razi (2009) revealed that local culture which is familiar to students is more comprehensible. In short, the familiarity of the content of reading materials leads to enjoyment and comprehension due to schemata theory.

This paper attempts to describe the inclusion of local culture in EFL context and its benefits in grasping students' affective and cognitive domain.

2. Theoritical Background

The Aspects of Culture in Language Pedagogy

Culture depends on society who lives in particular area. Rajabi and Kertabi (2012) identify culture as systems of knowledge, such as values, beliefs, and attitudes, notions of appropriate behaviour, statuses, role expectations, and worldview, shared by a group of people. In addition, Adaskou, Britten & Fahsi (1990) defines culture in four levels based on senses, namely aesthetic, sociological, semantic, and sociolinguistics. Aesthetic sense relates to beauty, consequently, it includes cinema, literature, music, and media. Sociological one refers to the organization and relation covering the nature of family, interpersonal relations, customs, material conditions, and so on. Conceptualization system which conditions perceptions and thought processes is the domain of semantic sense, while sociolinguistic sense refers to linguistic ability needed to convey communication.

Defining culture is challenging so that there is no single definition of culture since the concept culture itself is too broad and dynamic (Liu & Laohawiriyanon, 2013; Xiao, 2010; Clouet, 2006). Therefore, the concept of culture is classified into two terms, namely big "C" culture and little "c" culture (Xiao, 2010). Big "C" culture refers to depiction of a set of facts and statistics and achievement or products of certain society (Lee, 2009; Xiao, 2010). The themes under the Big "C" culture are arts, history, geography, economy and business, education, festivals and customs. Little "c" culture, on the other hand, focuses on

minor themes of culture covering every aspect of human life, such as living style, customs, rules, opinions, viewpoints, preferences or tastes, gestures, body posture, use of space, clothing styles, food, hobbies, popular music, and popular issues, and certain knowledge (Peterson, 2004; Xiao, 2010).

Relating the culture to language pedagogy, question appearing is which C employed (Clandfield, 2008). Neither Big "C" nor little "c" is an option to previous question. Both have to appear in language pedagogy to contribute appropriate communication among speakers from different nationalities (Liu & Laohawiriyanon, 2013). However, some studies indicated that the interest toward which elements of culture is somewhat different. In his study, although Xiao (2010) found out students preferred more big "C" elements, i.e history, education, and politics, the most popular element chosen was lifestyle which is under little 'c' culture. In another study, big 'C' was also slightly prefered over small 'c' culture. However, the most favored elements of big 'C' culture were geography, science, and holiday. Students' preference seems individual, and it cannot be generalized. Thus, Clandfield (2008) suggests teachers to do survey aiming to recognize elements of culture that are interesting for students.

Familiarity of Local Culture Reading Materials and Learning Domain

McKay (2000) categorizes three types of cultural materials: target culture materials, local culture materials, and international target culture materials. Target culture materials belong to cultural aspects of intended language being learnt. It can be British or American culture. On the other hand, local culture is students' native culture, either regional or national culture. Lastly, international target culture materials involve culture other than target and local culture. Culture in language teaching has been always linked with culture of target language, international and local culture are somewhat less favoured and neglected (Xiao, 2010; Kirkgoz & Agcam, 2011; Shahed, 2013). The paradigm of language pedagogy has transformed from formal aspects of language into students as language users (James, 2000). As a result, local culture gains more attention.

Regarding to learning domain, local culture is alleged advantageous to affective and cognitive domain due to its familiarity to students.

Affective domain relates to attitude, motivation, or anxiety in learning foreign language (Henter, 2014). Language teaching with local culture influences attitude and motivation (Clouet, 2006). In a study done by Shahed (2013), teachers revealed that students are reluctant to read any materials which are culturally alien. The culturally alien reading materials are contextually irrelevant, uninteresting, or confusing, even for undergraduate students. In contrast, culturally familiar materials provide a comfort zone for students (Sinhaneti, 2015). A study by Thinley & Maxwell (2013) strengthens the previous statement. Since students emotionally felt safe, their interest to learn English trough folklore reading increased. Therefore, culturally familiar reading material made students actively participated in discussion and learning.

Comprehension is the ongoing cognitive process of extracting meaning from the written passage. Students comprehend local culture texts better because they are familiar with the content of texts. The theory of schemata explains this phenomenon. Ajideh (2003) defines schemata as hypothetical mental structure for representing generic concepts stored in memory. Past experiences associated with community, entity, or event take role in generating schemata. The schemata are distinguished in three different dimensions, namely linguistic, formal, and content schemata. Linguistic schemata are the knowledge of language, while formal schemata deal with knowledge of the rhetorical structures of different types of texts. The knowledge or familiarity of text is the part of content schemata (Gilakjani & Ahmadi, 2011; Brantmeier, 2004; Chou, 2011).

Familiarity takes role in comprehending the text. Constructing meaning of the text is not done just by decoding word-by-word meaning or relying on the text. Content schemata stored in memory assisting to build contextual clues which are beyond the text, and meaning construction entails thinking process with reasoning beyond the text derived from schemata (Chou, 2011).

Comparing local and target culture reading material, Erten and Razi (2009) found out that the local one was more beneficial for students'

comprehension. Four groups of students compared read the same short story, however two groups had the story nativized into Turkish. The nativization process included the changes of some cultural elements, such as characters' names, local places, and conceptual cues. Groups of students who read localized culture material gained significantly higher score. Having sufficient background knowledge of the text, students' cognitive load on memory was slighter to focus on linguistic and organizational feature of the text. This finding is in line with Li & Lai (2012) who found out culturally familiar text facilitated comprehension. It was also found out that students spent less time to read local culture-based text. Regarding to comprehension, familiarity of local culture relates to top-down processing that enables readers to make inferences from implicit statements. As the result, students participating in the study read faster the text related to their own culture.

Local Culture Reading Materials

Reading materials appear in commercially sold textbook seem limited when it comes to familiarity of the topic chosen (Kanoksilapatham, 2015). It can be said that the number of local culture materials are still inadequate. Analyzing three different textbooks, Dehbozorgi, Amalsaleh, and Kafipour (2014) uncovered the emphasis on target than source or local culture. Cultural content is another concern because the mismatch occurred between the content and students' interest. In relation to these phenomena, teacher can either adapt or develop local culture reading materials to assist students' comprehension. The concerns of either adapting oot developing reading materials rely on the topics and format.

That culture is categorized into big 'C' or small 'c' culture affects wide range of theme selection. Exposure to of local culture can be referred by cities, geography, cuisine, or drink in a story description (Erten & Razi, 2009). Thinley and Maxwell (2013) employed folklore as reading material in Bhutanese context. Culture can also be represented by performance art, historical site, or traditional fabrics (Utami, Nitiasih, & Artini, 2014; Kanoksilapatham, 2015; Ningtyas,

2016). Thus, teacher can survey students' interest by listing the elements of both big 'C' and small 'c' culture.

There are various possibilities of the format of reading materials. Rajabi and Ketabi (2006) suggest that local culture reading materials can be in form of informative or descriptive text, attitudes and opinions texts, human-interest texts which are authentic of fictitious with details of everyday life. To sum up, the format chosen is varied depended on the objective of language teaching.

3. Conclusion

Communicative competence mandated by national curriculum obligates the attendance of local culture. The emphasize of local culture in global era, furthermore, aims to get EFL students ready to mingle with other native or non-native speakers of English. Different linguistic and cultural norms help students understand how language works with culture and provide students chance to use English in different cultural context (Andarab, 2014). Elements of culture appearing have to represent both big 'C' and small 'c' culture.

Local culture reading material is valuable in the context of learning English as foreign language. Familiarity of the reading material boosts students' interest and motivates them to read. Moreover, active participation during learning is achieved due to the use of local culture reading material. It is also proven that culturally familiar reading materials are beneficial to assist students' comprehension. As students have background knowledge of the content, they can focus more on linguistics and generic structure of the text or passage being read. Considering the advantages, finally, it is suggested to teachers to either adapt or develop of local culture reading materials that match students' interest and fulfil pedagogical goal.

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DECISION-MAKING IN SOLVING MATH PROBLEMS ON ELEMENTARY SCHOOL STUDENTS

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Abstract

Mathematics is one of the subjects given to the basic and high education level with a view to achieving the national education goals. Learning mathematics are given to students not only focused to develop cognitive and psychomotor aspect, but there are also aspects of affective in it. As for the affective aspects of learning mathematics that is reflected, namely to train the student's independence stance and attitude to appreciate the usefulness of mathematics. Learning math is perceived by some students is the abstract subjects, whereas mathematics is related to daily activities. This impact to students being not serious in answering and resolving a given math teacher. Not looking back the question after answering became one of the reasons students are wrong in making decisions when completing a math problem. Level of the primary school became the primary focus in the writing of this article.

Keywords: *Decision Making, Math, Elementary School*

1. Introduction

Ability of problem solving is one of the very important students since elementary school, as with problem solving abilities students possess, can train students to be ready to face the issues that later they find in everyday life. This is supported by the demands of the Standard curriculum in Mathematics Learning Graduate Competence in elementary school (Permendiknas, 2006) that the ability of solving problems (problem solving) is one of the aspects that should be owned by every student as a result of the process of learning math. So also with the demands of new curriculum Curriculum 2013, troubleshooting remains the ultimate goal of the learning process through the use of several methods that became an option, among others, Saintific, Discovery Learning and other (Permendiknas, 2013).

But the reality on the ground is different, with evidenced from some results of the research in increasing the ability of mathematical problem solving of students who have a lot to do and we meet, but the results still have not been fullest. One study conducted Report (2013:109) his chosen approach aims to

improve the ability of the mathematical problem solving of students, research results are obtained, namely there is an increase compared to conventional learning. But an increase that occurred is still low in the category that is less than 50%. This shows that still the low ability students against mathematics problem solving.

2. Theoretical Background

Math problem solving abilities also did not escape from the role of teacher. However, teachers are not yet in a position comfortable in training the ability of problem solving in students. This is supported by the opinion of Prabawanto (2011: 12) that teachers often provide a strong reason to not include the activity of problem solving in learning math in school.

Problem-solving ability in mathematical learning in primary schools will be achieved the goal, if we as educators customize process analytical study with the level of its development. As the opinion of Piaget (Kusmiyati, 2007) that the age of elementary school children is the level of the beginning of rational thinking. The child has a logical operations applied on concrete issues. In the mind and its perception of students has more logical decisions rather than perceptual. Primary school age children not yet able to deal with the material asbtrak, according to Adjie and Maulana (2006: 37) the subject matter of Mathematics including abstract material, therefore the only people who can think abstraks can learn Mathematics. For elementary school students have trouble learning math, if his teacher does not correspond with the students thinking ability.

To get a good solution in solving problems such as problem solving, can use the settlement consists of four stages of the problem-solving process expressed Polya (1973: xvi) that understand the issues, planning problem solving, problem resolution plan and carry out the examination again.

From the statement of the Polya, students develop from how they were able to solve the problem in every Stride and his chosen problem-solving strategies. Suherman (2003:94) a problem can be seen as "a problem" for a

student, but for other students it is probably just a mere routine. Therefore need to be careful in making problem-solving for students. To overcome this, Suherman provide solutions, one of which is to know the level of difficulty experienced by students.

The Polya step 4 also has a role in achieved or whether a problem solving. Conduct a review, can avoid confusion even errors in completing a math problem, sependat with Suryadi, et al. (2003:91) that by way of doing pengecekkan for what has been done, then the various errors that do not need to be corrected again, so that the students can arrive at the correct answer in accordance with a given problem.

3. Method

The type of research that has been carried out using a qualitative approach to research. Moleong (2009:6) stated that the research is qualitative research to understand the phenomenon of what is experienced by the subject, behaviours, perceptions, motivations, actions, and others, in a holistic (whole) and a description of the way in the form of words and language, in a special natural context and by utilizing a variety of natural methods. Qualitative research design used i.e. case study is descriptive, with the design of inductive research, where the withdrawal of the conclusions are General (general) of the cases are special. According to Denzin and Lincoln (2009:595) inductive design would be very useful, especially for a case study in a location that is still foreign and really complicated, and more descriptive eksploratis.

The subject has been chosen, namely grade V in one elementary school in Bandung. The subject which will be analysed the results of the answer in solving problem-solving is selected by purposif. The technique of data collection by observation, question form, test, awancara and triangulation of the data. Data analysis technique that is use a descriptive qualitative data analysis techniques with the stages consisting of data reduction (reduction), the presentation of the data processing is continued with a set of information that has been retrieved and

arranged neatly in order to give the possibility of withdrawal of conclusions and taking action. And the last stage, namely draw conclusions and verification

Miles and Huberman (Denzin and Lincoln, 2009:592) describes the process of data analysis with interactive model as follows:
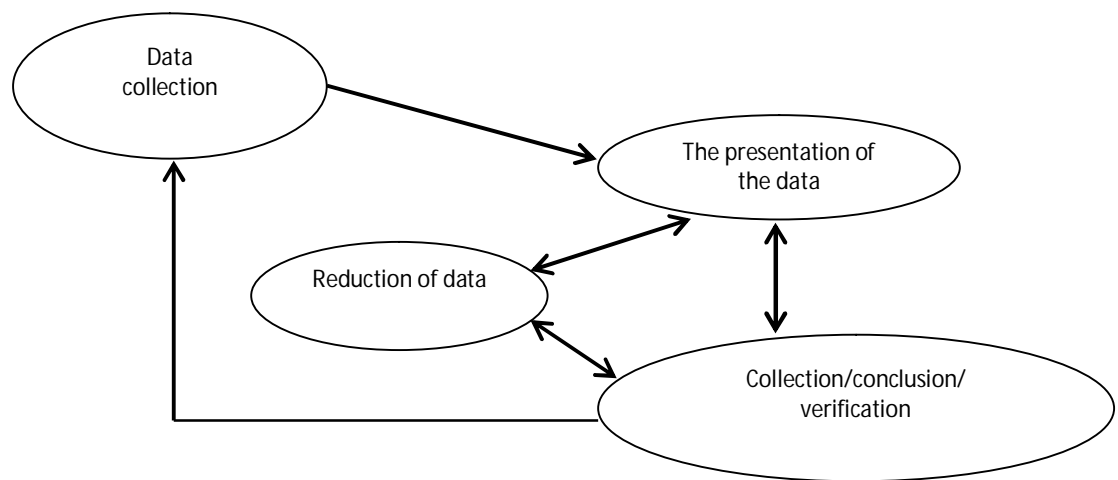
Figure 1. Component Data analysis

From the description, data obtained from the results of the observation, the now attitude, test, interview in the form of recordings and documentation collected and then simplified with sorting out which data can answer questions or research can support what is wanted is in this phase, researchers called the reduction of data. Of this reduction process, then the data is already sorted are defined and examined in the process of presentation of the data. Denzin, Norman k. and Lincoln declared that a researcher needs to examine the data reduction process as the basis for the definition of. From the presentation of this data allows the retrieval of a conclusion that is an overview of what difficulties experienced by students in problem solving and solve the causes of the emergence of such difficulties.

4. Result and Discussion

The research results obtained by beginning with the granting of a math problem to the students to know the ability of early mathematical (KAM). Then the students were divided into three groups, namely the results of students with low level of KAM, medium and high. The Division of this group also with additional confirmation of teachers of mathematics majors in the class as well as of the observations of the researchers during the process of learning mathematics took place. The following table levels KAM students.

Table 1. Grouping Students of class V based on KAM

Category of KAM	Percentage (%)
High	15
Middle	74
Low	12

Then the analysis of the difficulty in resolving the problem student problem-solving will be discussed from each indicator. In this case one of the indicators of the ability of problem solving will be discussed that is understanding the problem. The following discussion of the analysis of the difficulty students who discovered from a matter that has been given.

Soal 1

Di suatu kelas banyak siswa laki-laki adalah $\frac{2}{3}$ dari banyak siswa perempuan. Diketahui bahwa banyak siswa perempuan adalah 75, maka tentukanlah:
  a. Perbandingan banyak siswa laki-laki dan siswa perempuan di kelas tersebut? Nyatakanlah jawabanmu dalam bentuk gambar!
  b. Selisih antara banyak siswa laki-laki dan perempuan di kelas tersebut?

As for the results answer the students in each group (high, medium and low) towards the question above, so that it describes the difficulties experienced by students will be discussed as follows.

Table 2. Percentage (%) The Difficulties Students

Type of trouble	Category of KAM		
	High	Middle	Low
Understand the problem in terms of language or math sentences.	60	68	75

Table 2 above shows that on a matter of this number-two students allegedly had difficulty in understanding the problem of reading skills and math sentence word comparison and difference. These results indicate that students answer these difficulties.

Student Answer:
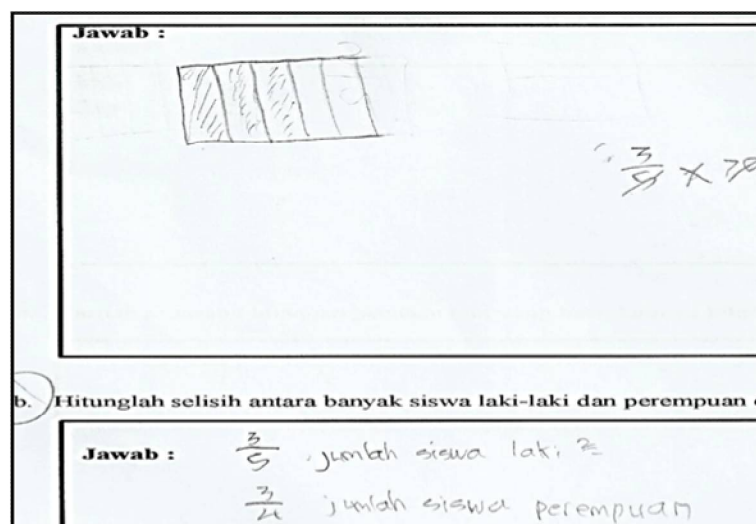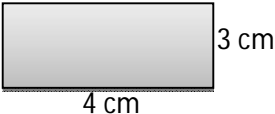
Figure 2. Student answer

Students answer the result image above shows that the answer of the students does not correspond to the question asked on the matter. This is allegedly due to students experiencing barriers in reading. Reading is the action that is triggered by the thought process and expressed by the appearance, this process requires: General motor skills, visual mempersepsi, mempersepsi sound, the speed of the language, concepts and keterpadan formations between the remote. The resistance reading could be caused by disturbances on the intellectual aspects of
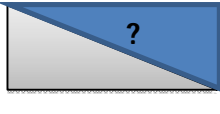
Physiology, social and emotion (Kuswana: 77). Agreed with Kuswana (2011:118-119) that the language is closely associated with the development of thinking individuals. The development of the mind of the individual in the development of the language, namely the ability to form understanding, build an opinion, and draw conclusions.

The question or issue the two indicators, including characteristics of the structured language regularly. Brown et al. (Sternberg, 2008:290-291) stated that there are six things that characterize the language, one of which is regularly structured language i.e. language have a structure; only the order of the terpola in particular of symbols that have meaning, because different arrangement will produce a different meaning. From the statement, reading skills greatly affect students ' ability in resolving the matter of solving the problem, because the ability to read is related to thought processes of each individual.

Soal (Materi Bangun Datar dan Bangun Ruang) Perhatikan gambar persegi panjang dibawah ini.

3 cm

4 cm

(a)   (b)

Apabila persegipanjang (a) dibagi menjadi 2 bagian sama besar seperti gambar (b). Berapakah luas daerah yang berwarna biru pada gambar (b)?

Table 3

The percentage (%) of the difficulties students

Type of Trable	Category of KAM		
	High	**Middle**	**Low**
Understand the difficulties	20	24	25

Table 3 above illustrates that only a handful of students who are having difficulty in understanding the issue at question number 4 flat-wake up and wake

up material space. The following answers students detect trouble in understanding the problem

Student Answer:
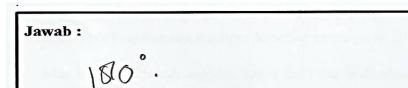
Figure 3. Student answer

The above answer is the answer from the students mathematical ability is low. The reason why students answer though, the newly acquired after interviews with the students. The results of the interview are still not finding the reason, however, researchers obtain answers from other students as well as students answer mathematical ability is low. The reason why they get answered so, because they assume the problem is the same with the material learned previously that is about determining the big corner of wake up. If researchers remember back, the problem-solving ability is given on April 8, 2014, and indeed earlier students discuss about the large number of angles and determine the wake.

Muhibbin (2010:171) someone misbehaving students will be retroactive if the subject matter newly brought conflict and disruption to callbacks the subject matter that was first stored in the student's permanent sense of substance. In this case, the subject matter of the old will be very hard to remember or produced again.

It also showed that students and other students who answered the same as the students are accustomed to low mathematical ability to troubleshoot routine or a matter of routine. Suherman (2003:94) stated that the matter of routine typically includes application of a mathematical procedure that same or similar things recently learned. Efforts to ensure returns are students already understand the problem with R is true or not is not made, so wrong in referring to the issue. The difficulty students question b is namely understood the problem.

Soal (Materi Bangun Datar dan Bangun Ruang).

Perhatikan gambar berikut.

Perhatikan gambar berikut.
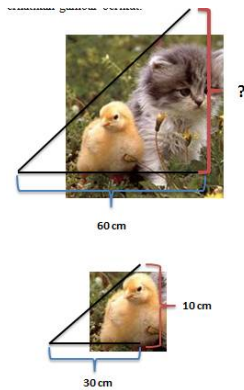
Seekor anak ayam berdiri di samping seekor kucing. Jika panjang bayangan anak ayam 30 cm dan tinggi anak ayam 10 cm. Berapakah tinggi kucing tersebut, jika panjang bayangan kucing 60 cm?

Table 4

The percentage (%) of the difficulties students

Type of Trable	Category of KAM		
	High	**Middle**	**Low**
Understand the difficulties	0	12	25

Student Answer:
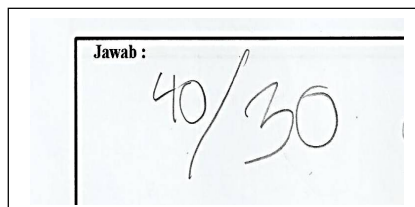
Figure 4. Student Answer

The results of the student's answer above wrong, students R doesn't resolve the problem correctly. The difficulties the students detected when

researchers conduct interviews with the students. The results of the interview illustrates that the students allegedly had difficulty in understanding the problem. This is because the student shows he unfamiliar get questions not directly provide information about the use of what material can get the right solution.

Suherman (2003:93) States that if a problem is given to a child and the child instantly know how to finish it properly, then the problem could not be said to be a problem. A transcript of the interview above also shows that new students can understand the problem when the researchers gave the sign or code regarding material that is related to the problem.

Kuswana (2011:85) stated that the encoding is one of the structures and processes of the theory of working memory. Kuswana also stated that working memory support "human cognitive processes" by providing an "interface" between perception, short-term memory, long-term memory, and action. Working memory is indispensable for decision-making and awareness and aims as well as behave openly.

5. Conclusion and Remark

Based on the results of the analysis and discussion of the data of the research, then the conclusion that decision erred in students solve the math problem solving caused found difficulties in the process of taking its decision. Difficulty understanding the problem, in terms of the ability of reading and math expressions into one of the difficulties found. This is presumably due to which students had to interpret an ambiguous form of visualization student support issues , obstacles reading is also one of the causes of this difficulty occurs in low mathematical ability students.

Other causes of the difficulties the students do not perform the review or make sure again whether his understanding of a given problem is just right or not. This is the case in students mathematical ability is high. Where, some students who do not apply high-capable looking back, dikarena felt it was satisfied with the answers he got without checked it out again if the answer is just right or not.

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THE EFFECTIVENESS OF POE (PREDICT-OBSERVE-EXPLAIN) BASED TEACHING STRATEGY IN IMPROVING STUDENTS' CONCEPTUAL UNDERSTANDING ON HEAT AND TEMPERATURE IN SMAN 9 PALEMBANG

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Abstract

The objective of this research is to determine the effectiveness of POE (Predict-Observe-Explain) based teaching strategy in improving students' conceptual understanding on Heat and temperature in SMAN 09 Palembang. The research was conducted on even semester in Academic Year 2015/2016. The research used the quasi experimental method with non-equivalent control group design. The sample comprising of 80 students was selected by using purposive technique sampling. The learning process in the experimental group used POE (Predict-Observe-Explain) based teaching strategy and in the control group used conventional one. The instruments used are the Thermal Concept Evaluation (TCE) consisting of 20 multiple choice questions to measure student's conceptual understanding and observation sheet to observe the students' activities during the lesson. Based on the data analysis using Z-test on significance (α) = 0.05, it was found that Z_{count} = 4.16 and Z_{table} = 1.645 showed $Z_{count} > Z_{table}$. The result was H_o was rejected and H_a was accepted. The conclusion is the POE (Predict-Observe-Explain) based teaching strategy was effective to improve learners' conceptual understanding on Heat and temperature topics.

Keywords: *POE, Conceptual Understanding, Heat, Temperature.*

1. Introduction

One of aim from physics subject are student capable to understanding the concepts and physics's principle and also have a skill to develop their knowledge as a stocks to continue to higher education (Depdiknas, 2006). From physics aim's explanation show that student's consept understanding become an important key to reach the aim itself.

Conventional learning model in one class will making a passif class and meaningless. It can be happen because the student do not have a chance to express their ideas or doing a demonstration. Then, it will block concept understanding's student.

Ndraka (in Wirtha and Rapi, 2007) explain, concept understanding in learning process should preparing the students to higher education. Moreover,

preparing the students for: 1) capable to solving the problem with saintific concepts, 2) capable to taking a appropriate decision with saintific concepts, and 3) having saintific attitude to solving the problem which making them to thingking and acting saintificly.

A lot of researcher have been researched about concept understanding that low in some subjects. One of them is heat and temperature. The result, heat is not energy, heat and temperature are something same, heat can not measured, human body in cold situation is not contain heat, temperature can be transferred, temperature is special characteristic which haved a matter or things, water can not reach in temperature 0°C (Sirait, 2009).

Researcher had an interview with teacher in SMAN 09 Palembang. In there, teacher teachs with talk method. To raise the concept understanding, teacher need to staking a strategy. One of factor which being guarantee to make conceptual change happen according to Posner on Syuhendri (2010) concept that wiil be substitute must on status dissatisfied and the substitute concept must plausible, intelligible, dan fruitful.

Developing Science concept understanding can do with develop a special strategy in learning process. Predict-Observe-Explain (POE) base teaching strategy is one of teaching strategy that can develop the students' concept understanding. Base on the background, researcher want to research about effectiveness of POE (Predict-Observe-Explain) based teaching strategy in improving students' conceptual understanding on Heat and temperature in SMAN 09 Palembang.

2. Theoretical Background

The effectiveness's word come from effective means there's an effect (influence, consequence, impression), powerfull, effective (Purwadarminta, 1986). Base on Indonesian big dictionary effective's word means having an effect,consequence, and can bring a result. Then, we can conclude that effectiveness is an event that show how far our planning could reach. If there's so many decision success, it means the learning process more effective.

Base on Depdiknas on Suryono (2012) in learning physics, first demanded to capable to understanding the concept, principal, laws, then students can rearrange using their own language base on their intellectual development. Physics is branch of science that learning and giving quantitative understanding for some indication or natural process and matter characteristic and the application (Mundilarto, 2013).

Rosser in Dahar (2011) declare that concept is an abstraction that representative a whole objects class, events, activities, and relations which having same attributes. Someone's description about one concept according to expert called conception (Nakhleh in Talakua, 2013). Beside that, misconception is one of terminology to explain that something that we understand is different with expert's understanding, or someone's conception is different or contradiction with scientist's conception (Syuhendri, 2010).

Piaget (In Syuhendri, 2010) look the Conceptual Change Model process start from assimilation process and then accommodation. According to Piaget, assimilation happen because the students's early knowledge linier with the phenomenon and there's no scheme change or conceptual change (Posner et al., 1982). Meanwhile, Posner et al., (1982) has a larger point of view where aacomodation is conceptual change process because student's concept is not suitable with the new phenomenon: different context. According to Posner (In Syuhendri, 2010) there are four condition to make conceptual change in students through accommodation process, they are :

1. There's dissatisfaction for concept which already exist. Student will change their concept if their feel the old concept can not be using to response new phenomenon and experience.

2. The new concept must intelligible, rational and can solve the problem or new phenomenon.

3. The new concept must plausible, can solve the old problem and consistent with some teories or the knowledge that already exist.

4. The new concept must fruitful on developing the research or new discovery.

There are two things that have a relation about how this accomodation happen, 1) in what situation this accomodation can happen, and 2) concept ecology. As we know, there are five conditions to make conceptual change. Beside that, connecting with concept ecology, Posne et al explain that there are five concept ecology, 1) Anomali, 2) Analogy and Metaform, 3) Epistemology commitment, 4) Believe and metaphysics concept 5) Another knowledge (Syuhendri, 2014).

There's so many teaching strategy that developed for conceptual change. Scott et al., (In Syuhendri, 2010) divide two groups conceptual change. base on teaching strategy : 1) kognisi conflict base strategi, and 2) students's early concept base strategy.

Prediction, Observation and Explanation is one of teaching strategy that started with giving a problem to students then the students asked to guess or making a prediction, then continue to doing observation about the case to find the truth or fact from the early prediction according to explanation (Indrawati and Setiawan, 2009). Predict-Observe-Explain introduced by White and Gusnstone in 1995 on their book namely Probing Understanding. Strategi pembelajaran Predict-Observe-Explain merupakan langkah yang efisien untuk menciptakan diskusi para siswa mengenai konsep ilmu pengetahuan.

The characteristic of Prediction, Observation and Explanation based teaching strategy is digging students's science consept understanding by three steps, according to Indrawati and Setiawan (2009) :

1. Predict is one of prosess that making a guess or prediction about some phenomenon. Students predict the answer of problem that giving by the teacher, then students write the prediction with the reason. Students arrange the prediction base on their knowledge

2. Observe is one of process that students doing an observation. Students observe directly or indirectly. Students record what they observe, then related their prediction with what they get form observation.

3. Explainis one of process of students that giving an explanation about relation about prediction and observation result.
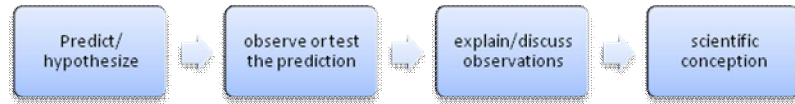
Figure 1 POE base teaching strategy (Tlala, 2011)

Prediction, Observation and Explanation based teaching strategy is one of conceptual change domain. Four conditions according to cognisi development teory (Piaget) to make conceptual change happen should present in teaching processs.
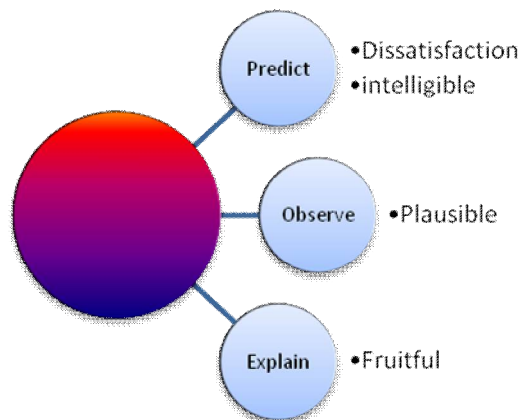
Figure 2 Relation POE Teahing Process with Four Condition Conceptual change.

3. Method

This research was conducted in senior high school 09 Palembang. This research was quasi experimental with non equivalent control group design. The class divided two class which is experimental and control class.

instrument used thermal concept evaluation and student work sheets on every learning process. Observation in this study used to see student and teacher activities. The observer of this researcher was physics teacher and researcher itself.

Data analyze technique using N-gain and Z-test. According to Hake (1999) Gain normaliz tion could describe improvement learners's concept understanding. The normalized gain (N-gain) was calculated by using the following equation:

$$\% \, N - Gain = \frac{S_{post} - S_{pre}}{S_{maks} - S_{pre}} x100\%$$

(Hake, 1999)

To know the meaning of N-gain values whether they belonged to high, medium or low
categories, a criteria proposed was used.

Table 1 N-Gain Criteria

N-Gain $<g>$	criteria
$(<g>) > 0,7$	High
$0,3 \leq (<g>) \leq 0,7$	middle
$<g> < 0,3$	Low

Beside analyzed N-Gain, data analyze pre-condition testing should do to know wether hypotheses existing in this study will accepted or rejected (Stalin, 2012.) Data analyze pre-condition testing using normalization test, Homogenity test, as a requirements to use Z-test parametic statistic. Z-test used because the sample consist more than 30 students uji Z digunakan (Gunawan, 2005). If standard deviation exist, the formula used:

$$Z = \frac{\bar{x}_1 - \bar{x}_2}{s\,\bar{x}_1 - \bar{x}_2}$$

(Gunawan, 2015)

Which,

$$S\,\bar{x}_1 - \bar{x}_2 = \sqrt{(S_1^2 / n_1) + (S_2^2 / n_2)}$$

Information :

s_1^2 and s_2^2 = varians values group 1 dan group 2

$\bar{x}_1$ and $\bar{x}_2$ = group 1 dan group 2 average

n_1 and n_2 = students

Testing criteria are accepted H_0 if $Z_{count} < Z_{table}$, otherwise H_0 be rejected if $Z_{count} > Z_{table,}$.

4. Result and Discussion

The study was carried out for five weeks, starting 09 February, 2016. Two weeks used for pre-test and post-test. Three weeks used for learning activities. In the next session, it would explain about students and teacher activities in the experiment and control class.

4.1. Description of Learning Process

Learning process in this research held three times, the topic is heat and temperature. Learning time was suitable with KTSP syllabus. The objective in every learning process attached on learning process planning. Learning process in experiment class held on every thursday using Predict observe explain based teaching. Learning process in the control class held on every Friday using conventional teaching model.

4.2. Description and Discussion of Findings

Based on the analysis orf pre-test and post-test data, the researcher found N-gain values from experiment class and control class. As shown in tabel 2,

Table 2 Pre-test, Post-test, and N-gain Values average

Information	Pre-test Data		Post-test Data		N-Gain Values	
	Experiment Class	Control Class	Experiment Class	Control Class	Experiment Class	Control Class
Highest values	55	55	95	85	0,92	0,8
Lowest values	15	15	60	40	0,33	0,21
Average	31,87	31,75	76	64,25	0,63	0,47

Based on table 1, in pre-test experiment class and control class almost had same scores, it showed that they came from same condition. The average score of pre-test increased from 31,87 become 76 in experiment class. In control class The score of pre-test increased from 31,75 become 64,25. From that scores, we got the average of N-gain values 0,63 and 0,47.

After researchers got N-gain values, researchers found normalization test, Homogeneity test, and hypotheses test to answer our researchers's hypotheses.

Based on analyze, the data from both of class was normal and homogeny. The hypotheses testing showed on table 3.

Table 3 Hypothese test using N-gain values average

Z_{count}	Z_{table}	ioninformat
4,16	1,645	H_a accepted

Hypotheses test used significance level $(\alpha) = 5\%$. From table 4.2 showed that Z_{count} bigger than Z_{table} which 4,16 > 1,645. Because $Z_{count} > Z_{table}$ The result was H_0 be rejected and H_a accepted. So we can conclude that the POE (Predict-Observe-Explain) based teaching strategy was effective to improve learners' conceptual understanding on Heat and temperature topics.

4.3. Observation Data Analyze

Observation divide two activities in experiment class, they are teacher activities and student activities. Teacher activities observed by colleague and physics teacher.student activities observed by researcher. The student activities will show in figure 3.
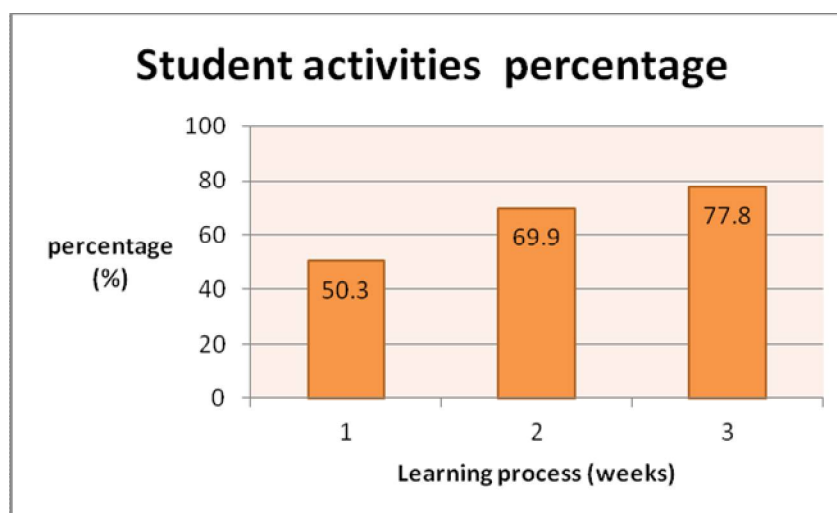
Figure 3 Student activities percentage

Based on figure 1 showed percentage observation of student activities in learning process. Each class having 40 students. In experiment class, students

divided eight groups which consist of fives students. In the first meeting, the percentage was 50,3 %. In the next meeting, the percentage was 69,9%. And the last meeting the percentage reached 77,8%..

5. Conclusions

Based on the analysis above, it can be concluded that (1) POE (Predict-Observe-Explain) based teaching strategy was effective to improve learners' conceptual understanding on Heat and temperature topics, and (2) POE (Predict-Observe-Explain) based teaching strategy could raise the student activities in class.

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ANALYSIS RUBRICS CONSTRUCTION OF SCIENCE CONTENT THEMATIC BOOKS GRADE VI

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Abstract

Rubric is an integral part of the assessment. The advantage of using the rubric of teachers more focused in giving reciprocity to student learning outcomes. Principal component within the rubric are the criteria and levels of achievement. Both components must be written in language that is operational and free ambiguous. The criteria should be limited in number to efficient use. Still found a section with a lot number of criteria and operational bias in sixth grade teacher books , especially science payload. Rubric integrated with Indonesian charge less to accommodate the ability of science. The necessary simplification of the construction section in the book. Simplification was related to the teacher as a user maind set.

Keywords: *Rubric, construction, teacher*

1. Introduction

The assessment activities needed to run directional reference. The reference in question should load any aspect assessed and level the scores with a description. Rubric, the reference is usually termed. Sections must be adapted to the learning objectives. It was solely to adjust between what would be measured by determining the criteria for student achievement that can be achieved. So that rubric will be able to distinguish the level of the students said to be capable and incapable. This is similar to writing Nurgiyantoro (2008) that the rubric is the subject of a reference in determining achievement of students. Determination of criteria achievement, aiming to facilitate teachers to provide treatment to ythe students concerned.

Rubric many forms. There is a list of checks, spreadsheet, and others as needed. Main things that must exist within a rubric are: 1) the criteria, and 2) the level of achievement with its description (Mueller, 2010). According Nurgiyantoro (2008), can be understood as a rubric scoring scale (scoring scale) were used to assess student performance on each criterion to specific tasks.

Description of the level of achievement is usually limited by a sentence which is termed the degree. Degree created should not double, to avoid confusion when the process of use. The criteria set should also not contain 2 competence, because it also gets confusing when the process of use. As defined by Nurgiyantoro (2008), contains the criteria essential matters of competency to measure the level of achievement and performance is concrete and operational.

Dilemma use of rubrics for now is still centered on the user or teacher. The mindset that is still growing in assessing just rely on 'paper and pencil test' (paper and pencil test). Rarely found the questions that have open answers. Teachers only create an answer key that is single. It directs the conclusion that most of the problems created by the teacher still memorizing. A matter which requires students to analyze very less favored by reason teachers take a lot of time in the correction process. The reason could be justified because of the students' answers to the type of analysis would be highly heterogeneous matter. This requires teachers to spend more time in the correction process of having to understand every word written by the students.

The above constraints can be minimized with the rubric. Rubric good will facilitate scoring teachers in students' answers. It also will familiarize students to megerjakan about this type of analysis. Problem analysis will train high-level thinking skills of students (High Order Thinkhing). Teachers will also be trained to make the problem better, so the problems are not monotonous annually.

Research that is directly rubric as the object of study is still rare. A discussion of the sections in the study, usually a complement in the study of the assessment. The existence of a section is a marker that an assessment can be said to be authentic (Rustaman 2010; Nurgiyantoro, 2008; Muller, 2010). Authentic assessment types classified by Kemdikbud (2013), namely, 1) portfolio, 2) performance, 3) projects, and 4) writing (analysis).

2. Theoritical Background

Rubric is paraphernalia score that lists the criteria for a job or task (Andrade in Zainul, 2001: 19). Furthermore, according to the American Association for the

Advancement of Science : rubrics is a scoring guide that differenciates, on an articulated scale, Among a group of simple behavior, or Evidences of thought that are responding to the same prompt (available: http://stone. web.brevard.k12.fl.us/html/comprubric.html).

Briefly scoring rubrics consist of several components, namely: the dimension (i), definitions and examples (ii), scale (iii), and standard (iv). Dimension will be used as the basis of assessing student performance. Definitions and examples of an explanation of each dimension. The scale is set it will be used to assess the dimensions, whereas the standard specified for each category of performance.

Although a rubric or scoring rubrics has been prepared as best as possible, but it must be realized that there may be sections that are constructed it is perfect or the only criterion for assessing the performance of students in a particular field. From one task could have been drafted more than one section. Therefore it is necessary to also develop tools to assess a rubric. The following questions can be used as a benchmark for assessing a rubric (Zainul, 2001: 29-30).

i. How far these sections (obviously) relates directly to the criteria assessed?

ii. How far these sections covers all dimensions of performance assessed?

iii. What criteria have been used standards generally applicable in the field of performance assessed?

iv. The extent to which the dimensions and scales used well-defined?

v. If using a numeric scale the extent to which the figures used were indeed justly have described the differences of each category of performance?

vi. How much difference scores generated by the different rater?

vii. Do rubric used understood by the students?

viii. Do rubric fair and free from bias?

ix. Do rubric easy to use, practical and easy enough diadministrasikannya?

Rubric also involves descriptors. Descriptors explicit the performance level of students at each level of an appearance. Examples such as the formulation of minimum standards in the formulation of specific learning objectives. Descriptors used to clarify expectations or aspects assessed. In addition descriptor also help an

evaluator (rater) more consistent and objective. For teachers who are implementing authentic assessment, feedback descriptors help obtain better.

3. Method

This study uses the description. According Sugiyono (2008) study of this kind is intended to describe in detail the construction rubric IPA charge contained in a book the teacher. Descriptive data retrieval is done through collecting section IPA charge on the books teachers selected as research subjects. Researchers will make a descriptive account of the results of the analysis of the data that has been collected. The data collected is the science payload section contained in the book of teachers. There are 9 themes taught in the sixth grade. Each theme is made in one book. Selection of books that will be analyzed columns been done randomly. By using the principle of representation, obtained five themes to be analyzed, the theme of 1, 2, 3 , 6 and 9 .

Research carried out through the following stages:

1. randomization of the book that will be analyzed columns. Randomization follow the principle of representativeness of the study results. Obtained theme 1, 2, 3, 6, and 9 or 5 books from 9 theme yanng there.

2. Books that have been grouped into special sections samples were then collected for scientific payloads. Found 24 rubric for science payloads in 5 sample books.

3. Sections that have been collected are then analyzed. The analysis is limited to: 1) determination of the criteria, 2) hubugannya with learning objectives, 3) degree is used, and 4) the effectiveness of the use of grammar.

4. The results of the analysis are then discussed. The discussion will link point-point analysis is expected to produce a full understanding.

5. The last step is to formulate constructive suggestions based on the results of the discussion. Suggestions are made are expected to completely contextual and led directly to the problems found. Here is a chart of the steps of research has been carried out. Here is a chart of the steps of research has been carried out.
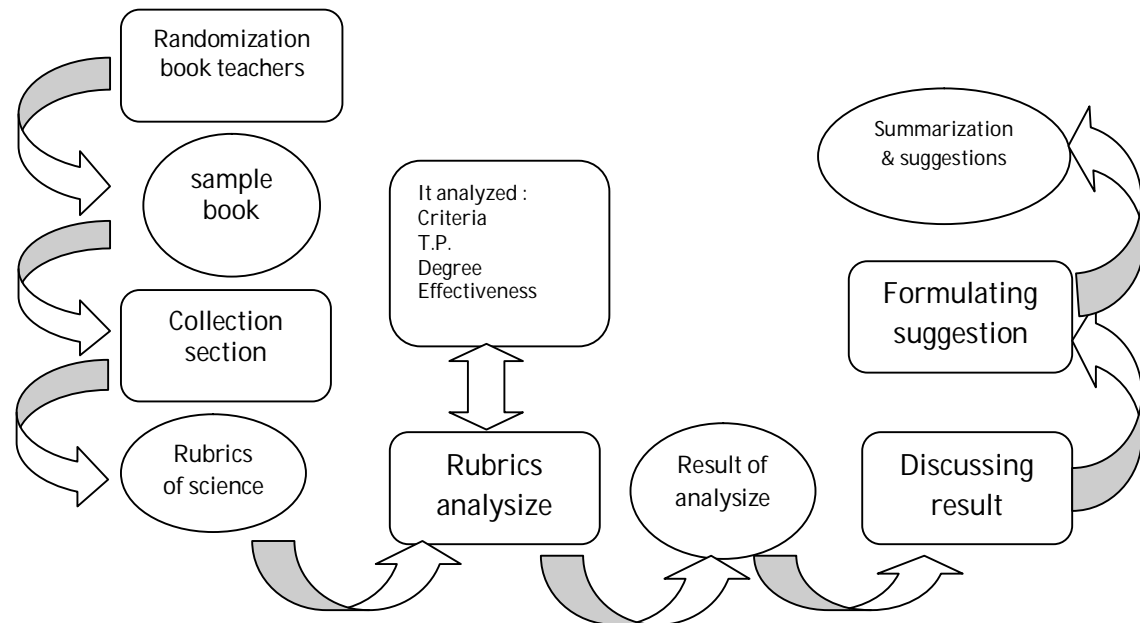
4. Result and Discussion

Components that are discussed in this article include; 1) criteria of competence, 2) the level of achievement, and 3) degree. The benchmark is based on the premise that the principal component within the rubric are three things (Mueller, 2010; Rustaman 2010; Wulan, 2008). Found 24 rubric charge IPA in 5 books (theme 1, 2, 3, 6 and 9) that the research sample. Rubric found can be grouped into three types. Grouping is based on the components contained in the section. Among the types rubric found is,

1) there is a component of criteria and levels of achievement with descriptors as many as 21

 pieces,

2) there is a component criteria and stuffing (eg animals) only one section, and

3) there are criteria and selection yes/no 2 pieces numbered sections.

Also found a section that is integrated with the charge Indonesian (BI) as 6 pieces. Moreover, not all charge indicator IPA accompanied by rubric for assessing the guidelines. Found 3 times of learning where science indicator only

assessed without scoring rubric. Also found are two sections in one lesson is on the theme 9 subthemes 3 learning I (first).

There are 10 basic competencies (KD) that learned in the five themes. The overall theme is a combination of three core competencies and core competencies 4 by the same amount. Basic competence of both KI above are presented as follows

**Table. 1 Detils KI 3 and KI 4 in theme 1, 2, 3, 6 and 9**

KD	Explanation
	Core Competencies 3 (KI.3)
3.1	Identifying the usefulness of electric energy , electric energy conversion , transmission of electrical energy, and participates in the savings in everyday life. (T.3)
3.2	Describe the solar system, the sun as the center of the solar system, as well as the position and characteristics of the solar system. (T.9)
3.4	Distinguishing mixtures and solutions through observation (T.6)
3.6	Describing the proliferation of living beings. (T.1)
3.7	Identify how living things adapt to the environment. (T.2)
	Core Competencies 4 (KI 4)
4.1	Designing and conducting experiments to distinguish mixtures and solutions using materials known in everyday life. (T.6)
4.2	Carry out an experiment about conduction and body changes due to temperature effects , and to identify independent variables and the dependent variable in the experiment.(T.9)
4.4	Report the results of experiments on electrical conductivity which includes data collection , data presentation , and conclusion. (T.3)
4.6	Following the procedure of breeding plants and report the results in writing. (T.1)
4.7	Presenting the report on the results of observations about the adaptation of living things are found in the neighborhood . (T.2)

Criteria

Criteria are statements that describe the level of achievement and tangible evidence of student learning outcomes with certain desirable qualities (Mueller, 2012). Criteria typically also been formulated before the implementation of learning. In the 2013 curriculum criteria better known as assessment indicators. Besides referring to the standard (KI and KD), the manufacture of the criteria should also refer to the provisions that have been expressed, both in the sense effective for the purposes of assessment of learning outcomes. The provisions, among others, (i) must be clearly defined; (ii) a concise; (iii) can be measured, and therefore must use the words of the operational work; (iv) refers to the behavior of

learning outcomes, what to do and how quality is demanded; and (v) should be written in a language understood by the subject students (Kemdikbud, 2013).

It was found that the number of different criteria in each of his columns. The number of criteria on each section varies from 2 to 7 points. And details of the criteria in each section.
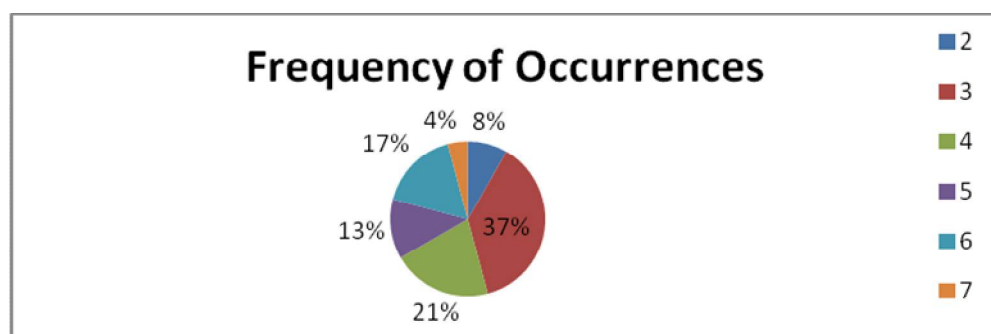
Figure. 1 Variations Number of Criteria in each rubric

The number of criteria that often arises is third (37%), while the most rare is 7 (4%). This is quite reasonable because it involves the use of technical. Criteria in sections of three points is sufficient to represent the learning objectives will be measured achievement. When the number of points the criteria of more than 3, then the problem will arise is a reluctance to use the rubric because it is too much. In addition, teachers are less 'familiar' for use in the assessment rubric.

Determining the criteria of more than 3 points are found to be comparable to the learning objectives to be measured. Each learning objectives generally insert the competence to be covered to students. Competence in the learning objectives are then to be used as the basis for measuring student achievement. With reference to the new standard ratings that assess what is important not to assess what is assessed (NRC, 1996), then every teacher should be able to sort anything what an important achievement for assessment of a competency.

Number of criteria most rare is a 6-7 point. Usually to measure the charge IPA content is integrated with BI charge (Indonesian). Competence to charge BI focus of the report, so there are a lot of things that was suggested to be measured. Among the aspects that are measured are: 1) writing letters and punctuation, 2)

grammar and vocabulary, 3) form and neatness of writing, 4) completeness of the information, 5) the truth of the information, and 6) attitudes.

Several aspects need to be simplified given the state of the user (teacher). Teachers practice should be facilitated in understanding the design of the rubric. Based on the research results Wiono (2014) piloting teachers still use rubrics in assessment. Many teachers who use the system "shoot" the value in measuring the competence nontes like domain skills and attitudes. This must be addressed wisely by education providers, given the importance of teachers' role in guarding the course curriculum.

Simplified form offered the author presented in tables 2 and 3. Table 2 outlines the aspects that form of simplification. Table 3 describes the limits of scoring and descriptor.

Table 2. Simplification aspects of assessment

Aspect (repair)	Aspects siplified
Writing	- Capitalization and punstuation - Grammar & vocabulary - Shape and neatness of handwriting
Information	- Completeness of information - The accuracy of information
Attitude	- Is not necessary because the existing form its own assessment .

Table 3. Descriptors criteria suggested

Aspect	4	3	2	1
Writing	Error writing no more than 5 points	Error writing no more than 10 points	Error writing no more than 15 points	Error writing no more than 20 points
Information	The information includes the development of leaves, roots and stems of the day III , IV & V clearly.	Information is one of the criteria is not complete in the III , IV and V.	Information is two of the criteria is not complete in the III , IV and V.	Information is three of the criteria is not complete in the III , IV and V.

Simplification of form rubrics should be due attention to the suggestions of the expert assessment. Expert advice and then modified according to the needs of the field. The use of expert advice to be modified according to the conditions of

teachers and classes have been advised by Wulan (2010) in making assessments of performance.

1. Level of achievement

Gradation level of achievement is the ability to subject students to the best level in a predetermined competence. The results showed that the level of achievement in section spanning a number of 1-4, each of which means: 1) less, 2) enough, 3) good, and 4) good. Each number has a meaning other than that is also accompanied by a corresponding description of the criteria specified. The size of the figure also shows the high and low achievement.

The focus of the study that the authors observe from the level of achievement of student performance are: 1) activity was measured, 2) assurance of competence is measured, and 3) use of the word. Rationale used is the principle of simplicity and effectiveness rubric for the user. It is undeniable that most elementary teachers are still rarely used in the assessment rubric. Recognizing that fact, it would need to streamline the sections in the book the teacher, even just an example.

Found some sections still omit more than one activity in one level of performance achievements. The activity in question is: "find and write", "describes and gives an example". To be seen whether it is really both of these activities are equally important or desirable in fact only one of them. If you want only one thing, it means there needs to be a correction in writing, for example, "scientific paper", "description using their own language and the right", "another example of the dibuku or the teacher's explanation"

There are also several sections that inserts competency measurement gauge attitudes in the competency skills. This is evident from the word "curious", "spirit ", "passionate", "independent" and "confidence". This is a technical assessment of the overlap. Has made referrals that each competency has its own method of assessment (Kemdikbud, 2013).

The use of words that are common as well , including one of the obstacles the use of rubrics. meaningful words commonly found in some of the sections are: "all", "small part", "most", " partial" and "expected".

2.   Degree

Degree commonly interpreted as a limitation of the established criteria. Usually using adjectives. Based on observations, the words that are often used are:

- Right,	- complete,	- true,
- Detailed	- objectively,	- legible,
- Clear	- understandable,	- trace,
- Appropriate paragraphs,	- appropriate,	- logical,
- Sequence.		

Confusion seen, if two or more words are used to restrict only one criterion . It will confuse the use of rubrics. For example, there is a degree "complete and trace". Results of student performance looks complete but not continuous, then the students' scores are not perfect.

5. Conclusion and Remark

There are some things that are not discussed in this article. Writer formulated to be a reference for further research or for other researchers who have an interest in research on scoring. Here are the things that need to be investigated further results of the study authors.

a.   Need to do a study of the users in this case the teacher. As known, the teacher is a milestone in the success of any educational policy. Including the implementation of new curriculum in which there are new forms of assessment. Studies for teachers include how often teachers use rubrics, the views of teachers to the teacher rubric in the book, and how good rubric by the teacher. So that the review would give birth to a section in accordance with the rules of the experts and is easy to use by teachers.

b. Rubric integrated with other subjects charge needs to be studied comprehensively. The criteria set should be able to accommodate two charges that are integrated lessons.

As the conclusions, it can be drawn as follows:

a. Each of the themes/book is actually just membelajarkan competency knowledge and competency skills. Competencies dibelajarkan ie 1, 2, 4, 6, and 7.

b. Found 24 sections in five selected themes. Sections were found three forms. From the number of sections that are found there are 6 units rubric integrated with the Indonesian cargo. Rubric integrated between the charge IPA with BI criteria between 6-7 points .

c. The criteria in each section were found in number spans of 2-7 points.

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DEVELOPMENT BLENDED E-LEARNINGSTRATEGY TO IMPROVE PRE-SERVISE BIOLOGY TEACHERS' PROFESSIONAL EDUCATION SKILL

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Abstract

Mastering of Science Biology and learning professionals Biology to carry out the study of Biology is one of Biology education program goals.The rapid growth ofInformationand technologyare increasingly demanding high ICT skills of every citizen.Efforts to meet these needs by combining e-learning and konvensional (blended learning) strategy.Through this research, students can not only improve their professional ability but also gradually increase their ability to use ICT both in accessing, managing, integrating, and creating information. This research is used the principle ofDevelopmental Research Design.Application of blended learning is equipped with a media that is valid and practical so that it can be used independently of students.Improved preservise learning outcomes seen after implementation of blended learning program. The Student Professional Ability (PCK) also increased, though both were still in the category of pre PCK, but after the application of blended learning, the student has reached the upper limit of the pre PCK categories.This suggests that blended learning can improve learning outcomes and the professional ability of student teachers.

Keywords: Biology, ICT, E-learning Blended Model, Pre PCK, Teachers' Professional

1. Introduction

Indonesian education futures is expected to produce human resources that can Compete in the global market.In the Ministry of National Education Strategic Plan 2005-2009 period on the policy of improving the quality, relevance and competitiveness.To be Able to compete internationally Indonesian human resources would have to mastery of a foreign language (especially English) and Also technology.Biology is a subject that is important to the mastery of technology.Therefore the quality of biology needs to be improved in order to provide the basis of technological development.Both the poor quality of learning is strongly influenced by the quality of teachers.

The rapid development of information and technology can not be separated from human life. The world in the future willincreasingly high demand of ICT skills of every citizen.ICT literacy is not just capable of using ICT

equipment, but includes the ability to access, manage, integrate, evaluate, and create information to be Able to play a role in the science community (International ICT Literacy panel, 2002).Through this study they graduallyreviews their enhanced professional capabilities by utilizing ICT, students can not only improve their professional abilities but also skilled in accessing, managing, integrating, and creating information.Currently educational institutions in almost all over the world, especially in developed countries increasingly use theinternet for educational activities (Urhahne, Schanze, Bell, Mansfield & Holmes, 2010).Many countries, includingIndonesia, that advocated using of the Internet for learningtherefore today many schools have internet facilities.

The problems that need to be observed in the implementation of teaching biology in Indonesia, that is related to the use of ICT facilities.Most universities have ICT facilities, but its utility is very limited, for example, to type and search for information.Many Indonesian people who have ICT skills, but simply used for social communication, has not reached the utilization to support learning (Suharno, 2008).One of the things that can be done to maximize the use of ICT by developing a web-based resource center that can Facilitate faculty and students to learn biology more completely.Based on some of reviewsthese reasons, it is necessary to research on the development of general biological based on blended e-leaningmodels.

2. Method

The research is based to development research cycle. Activities undertaken by the principle of the cycle of *Developmental Research,* which comprises: 1. Phase analysis of the conditions and needs of professional biology teachers; 2. Stage of development and testing of products; and 3. The testing phase in the field and continued with the improvement of the product (Borg & Gall, 1989). The study was planned in three stages, plan of research activities at each stage are as follows. Model ICT-based lecture is applied to students taking courses in general biology. ICT-based teaching materials that have been developed can be used by

all students that taking courses in general biology. Content and media developed is applied to students who take courses inGeneral Biology.

The first stage

The measures to be taken at this stage are: 1). Perform analysis SAP and syllabus General Biology lectures and student activities 2). Specifies the web-based competency standards. The results are set in the mapping program.

Second stage

The second stage is the stage of development and testing based teaching materials *blended e-learning* 1). Developing materials and lectures models; 2). Develop teaching materials and web-based training; 3). Setup website.

Third stage

Stage	Study	Method	The Steps of Research		
I	Theoretical	Study documentation	Theoretical analysis of the Syllabus and SAP		
	Empirical	descriptive Study	Analysis of the needs of general biology lecture		
		descriptive Study	Selection of Content		
	Theoretical	Development Study	Development blueprint lecture -based models of blended e-learning		
	Theoretical, Empirical	Development Study	Development of lectures a blended e-learning -based models		
II	Theoretical	Development Study	development of web-based teaching materials	Development quiz program	Setup web -site (consulting services)
	Empirical	pre Experimental	Limited Trial		
		Descriptive	Analysis and improvement		
	Empirical	experimental Study	Testing in the field		
III	Empirical	descriptive Study	Data Analysis		
			Improvement		

Figure 1.Procedures and steps to implement research

The third stage is the stage of testing the effectiveness of the products developed and continue to improve products. At this stage it will do the following things: 1). Field test; 2). Analysis of the outcome; 3). Improving models of all the accessories; and 4). dissemination of web-based learning resources. The third

stage of the study can be seen in the study flow chart in Figure 2 and 3 activities at this stage include the testing of products (implementation of blended learning) can be seen in Figure 1 below. In the picture it appears that the activities developed during to 16 times the activity, which includes the sharing of material (pdf, ppt, video, animation, links you tube), quiz / test online, and discussion forums .

3. Results and Discussion

Development Content and Media

In this research, there are two activities, the development of media and implementation blended e-learning. Development of instructional media is done through the stages of Research and Developmentthatmodified, the needs analysis, planning and media development, validation expert constructs and content, small group testing, revision, the final product.

Planning and Development Learning Media

Planning and development of instructional media for e-learning were adjusted according to the needs. Based on the needs of students and the materials that are difficult to learn, learning media will be made include interactive Power Point Slide, namely evolution, metabolism, heredity, cell, ecology. Before the development of the media created first storyboard (sketch making the media) (one of them on the attachment). Once the storyboard, then this design will be realized with the use of specific computer programs, namely Microsoft PPT slides, Macromedia Flash 8, Camtasia. Media that has been made then performed the evaluation stage, the expert validation and testing of a small group. The tests showed that for materials rated an average of 4, 35, and construction rated 4.29. This shows that the media were made already in the category of good (valid) and a decent test. Media tested on a group of students of the same age, in this case the media is tested on students taking courses in general biology.

Application of *Blended Learning*

Application of *Blended leraning* done after midterms (UTS). Through this *learning blanded* students in addition to gaining an understanding of the material,

are also beginning to understand how to teach the material. Student Guidance and Counseling is not only required to understand the material but also to understand how to deliver the material. For such needs, require more time. Implementation e-learning will give students the opportunity to re-focus on learning outside the hours of face to face, so that learning is done after the midterms is open pages of e-learning. Through e-learning-based learning is intended that 80% of students gained grades A larger or equal to 86. At the end of thebiologycontent, students are asked to start thinking about strategies to teach the material.

The Result of Test before Implications *Blended Learning* Program (pre-test)

During early lectures, students were asked to complete a test regarding the material of cell metabolism, followed by plans to teach the material. The topic chosen is the material of the cell metabolism is the process of photosynthesis and respiration. Based on information from peers, e-learning provides the opportunity for students and professors to interact though outside the hours of face-to-face. Then the lecturer of the course prepares instructional media such as PPT, learning videos that can be downloaded and studied students of e-learning that has been prepared. At the end of learning (given a grace period to reexamine the topic that has been downloaded), the students will answer a quiz which was prepared deadline to do it. Results of tests before deploying blended learning program can be seen in Figure 2.
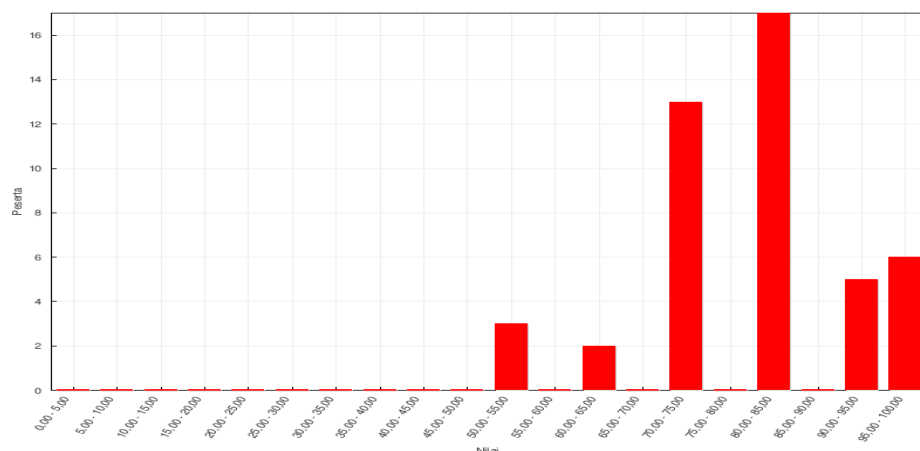
Figure 2. Results of pre-test on the topic of cell metabolism

In Figure 2 shows that the students' scores were in the range of 50-100 values. The average value in dominance at a mean value 70. This indicates that the student is still around enough range even still not enough. The mean value obtained by the students after participating in blended e-learning. Students who reach a value of 86 is only 40% of the time, which is reached only 45%. Based on these results, carried reflection that need additional treatment time of learning with e-learning.Results of reflection explains that learning a given video has not provided a clear explanation for the students.

The Results ofprospective teacher learning outcomes (Post test)

Once implemented blended learning program, significant improvements occurred. Results of tests / quizzes can be seen in Figure 3.
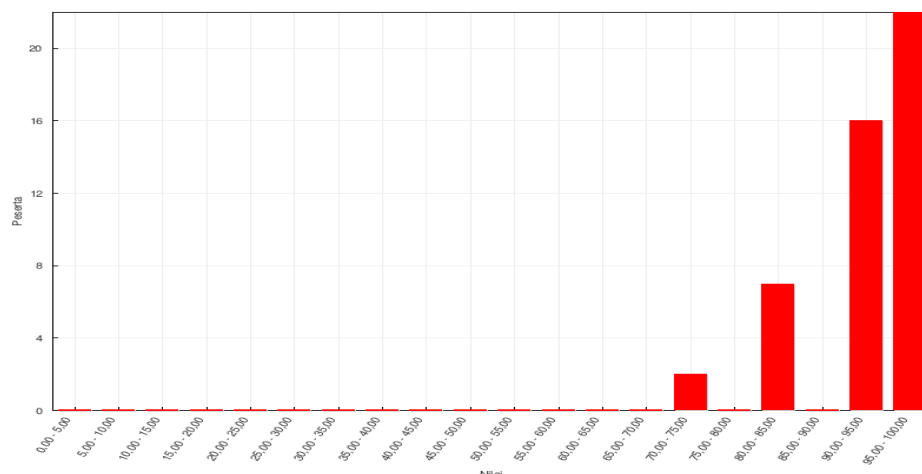

Figure 3. The results of the quiz / test on the topic of metabolism (post test)

Figure 3 shows that the student has been in the range of 70-100 values, but there are still students who received a score of 70, which is only about 3 students. This shows that there are effects caused by the application of *e-learning blended* learning general biology. The results of the test / quiz shows an increase in average student results. The average value obtained after following student learning *blended learning,* students who complete the above KKM increased from 40% to 88% after a learningbased e-learning. This increase was appropriate as expected, ie 85% of the students scored 86. The gain value is 40, its indicates that

there is high increase. Based on these results it can be concluded that learning with blended learning can improve student learning outcomes.

The Results of the professional ability of prospective teachers

Professional ability prospective teachers are seen from the results of measurements the*Pedagogical content knowledge* that they make on the sheet CoRes and Pap-eRs. The ability of prospective teachers PCK can be seen from their capabilities related to the development of the number of concepts that are valued by prospective teachers, the ability outlining important concepts and the ability to choose the appropriate pedagogy to teach the concept. Their ability of the structure of the material can be detected from the consideration of prospective teachers in identifying important concepts to be taught. The ability to master the concepts and capabilities describe concepts can be seen from the representation of the content. While the ability of pedagogy can be seen from the consideration of the pedagogy used prospective teachers as measured by using Pap-eRs.

Table 1.The concepts that students appear before implementation

No.	Concept	Percentage emergence of the concept	
1	understanding photosynthesis	√	√
2	chloroplasts	√	√
3	thylakoids		√
4	Grana		√
5	mesophyll		√
6	chlorophyll		√
7	equation of photosynthesis		
8	Pigment		
9	Wavelength		
10	light spectrum	√	
11	photosystem I		
12	photosystem II		
13	Light reaction	√	√
14	Calvin cycle		
15	Understanding fototosintesis	√	
		65%	35%

Total concept that emerged is still very low, most students only raises four important concepts, the rest there are some concepts that are not essential concepts. Student teachers have not been able to determine the concepts that are essential concept mapun attribute concept. The ability of teachers to determine the essential concepts and attributes of the concept is very important that the teacher can determine concepts ordinate and subordinate concepts (Novak, 1977). The number of concepts that appear likely to focus not seen with the emergence of sub-sub concept and attributes of the concept. Some students actually very minimal raises essential concept to be taught. Understanding of the content and pedagogy is still limited cause prospective teachers can not pick and choose the essential concepts to be taught to high school students. The competence of pedagogy can be seen from the strategy used to teach photosynthesis concepts, and 50% of prospective teachers with a practical answer. The strategythat used was limited to one method. Students are not able to explain the reasons for the selection of methods, not be linked to the characteristics of the material and students.

The results of teacher professionalismcompetences

Professional ability prospective teachers are seen from the results of measurements The *Pedagogical content knowledge* that they make on the sheet CoRes and PaPers., Given in the form of on-line tasks. Giving and collection of duties provided online as a pdf.

Their ability of the structure of the material can be detected from the consideration of prospective teachers in identifying important concepts to be taught. The ability to master the concepts and capabilities describe concepts can be seen from the representation of the content. While the ability of pedagogy can be seen from the consideration of the pedagogy used prospective teachers as measured by using Pap-eRs. The number of concepts that emerged has led to essential concepts, as indicated by 75% of student teachers who bring up the concept of the understanding of photosynthesis, chloroplast, photosystem I, photosystem II, the light reaction, cycle calvin, most students only raises four important concepts , the rest there are some concepts that are not essential concepts. The ability of the student determine the essential concept is already better than the pre test (Table .2)

Table 2. Number of students essential concept that emerged after treatment

No.	Concept	Percentage emergence of the concept	
1	understanding photosynthesis	√	√
2	chloroplasts	√	√
3	thylakoids		
4	Grana		
5	mesophyll		
6	chlorophyll		√
7	equation of photosynthesis		
8	Pigment		
9	Wavelength		
10	light spectrum	√	
11	photosystem I		√
12	photosystem II		√
13	Light reaction	√	√
14	Calvin cycle		√
	The percentage of students	25%	75%

In the test results after implementation of blended learning programs, the ability of the student determine the learning strategies have been better. Lectures by using *blended learning* increased pedagogical students in designing learning as has been done by supported by Osgusthorpe& Graham (in Uzun&Senturk, 2010; Yoon & Lim, 2007) that *blended learning* can improve pedagogical, increased access to knowledge, foster social interaction, increase personal presence, cost effectiveness, and ease to revise.

Students have to combine multiple learning methods, such as lectures and lab methods, methods of discussion and practicum. Ability is not accompanied by precise reasons why using such methods. The ability of students' PCK still minimal, as shown by the ability to identify objectives with consideration still limited and not in accordance with the standards set out in the curriculum, students are still not able to distinguish the methods, media and learning model, important less relevant to the material. From the results,the PCK's students teacher are in the pre PCK category but has entered the upper limit (Anwar, 2014).

4. Conclusion and Remark

Application of blended learning is equipped with a media that is valid and practical so that it can be used independently of students. Improved student learning outcomes seen after implementation of blended learning program. Learning outcomes of students increased from only 35% of students who received grades greater than or equal to 86, 80% of students gained grades greater than or equal to 86. The Student Professional ability (PCK) also increased, though both are still in the category of pre PCK, but after the application of *blended learning,* the student has reached the upper limit of the PCK pre categories. This shows that blended learning can improve learning outcomes and the ability Profesional student teachers.

The lecture-based *blended e-learning* is expected to enhance student motivation and improve the quality of learning, the effect on improvement of professional abilities of students' biology education, it is recommended to be developed on different subjects.

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INTEGRATING NURSING CONTEXT AND TECHNOLOGY USAGE FOR ENGLISH SPEAKING EMPOWERMENT

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Abstract

English for specific purposes (ESP) must be taught to meet particular needs of non-English language students (Hutchinson & Waters, 1987, p.21). It gives direct suggestion that learning process should be designed in such away not only to meet the learning objectives of the students but also to give the students meaningful and enjoyable learning experiences (Crawford, 2013, p.181). The condition becomes more challenging when the ESP teachers are only having English language background. It implies that learning context, which meets the students' needs, should be carried out in learning process along with the suitable and enjoyable learning strategies where the students can feel the pleasure instead of pressure. By considering the three steps of ESP course designing suggested by Nitu (2002, p.154), this paper aims at proving the effectiveness of integrating the students' learning contexts and the students' pleasure to empower the students' speaking performance in Health Science Faculty of Musi Charitas Catholic University Palembang. This study belongs to experimental research with pre- and post-design. By the end of the study, it was proven that integrating the nursing field context and the usage of technology in the classroom can help the students improve their English speaking skills. For evidential information, some videos of learning process are presented.

Keywords: *nursing context, technology, speaking skills*

1. Introduction

Technology development in nursing science gives challenges for any nursing science educational institutions in Indonesia to boost the quality of their nursing students. The quality comes from many aspects of the students, not only nursing skills but also other skills which the students are expected to be able to compete in this globalization era (MacKay & Mountford, 1978; Hutchinson & Waters, 1987). The other skills commonly cover the ability of using technology, having good character, solving problems, and also using a foreign language actively (Kay, 2010; Lam, 2014).

Why English for Nursing? Phillipson (1992, p.6) argued that globalization has made English spoken all over the world to communicate in business, technology, education, entertainment, medical, and sports. It emphasizes that English language is used widely over the world.

Why should it be English Speaking? Mitra (2014, p. 130) in his research entitled *The role of need analysis in teaching ESP for nursing* tried to rank the four skills in terms of their importance for nurses in a hospital in Surabaya. Her 2014 study gained that "Speaking was ranked as the most important skill by (95%) of respondents followed by Reading at 50%, Writing at 25%, and Listening at 20% (p.132).

Other evidence is derived from BNP2TKI's data. TIM BNP2TKI (2012) reported that the most problem of Indonesian nursing staffs when they work abroad did not lie on their skills but meanly on the English language competency as the means of communication. Similarly, Suwandono (2006) and Marwati (2010) summed up that the most problem of Indonesian nurses was on the ability on English speaking and writing.

What is happening in the real teaching and learning at Health Science Faculty of Musi Charitas Catholic University Palembang? Firstly, it is very important to get to know the viewpoints of the faculty about the importance of English mastery. The faculty has regulated the importance of English in its academic guidelines book as the main additional competence (STIKes Perdhaki Charitas Palembang - Fakultas Ilmu Kesehatan, 2012, p. 52). The second program, of four programs, of English courses for nursing students focuses on speaking. The second reason of it is that the most problem of the students in that class is (how) to formulate sentences and to speak about certain topic especially about medical field context in general and nursing field context in specific.

Hereby, this study aims at empowering the students' speaking skills through integrating nursing field context and the technology usage. Other focus to discuss is on discerning the aspects that improve well by having this treatment – referring to Experimental Research - in the classroom.

2. Method

This study belongs to quantitative research. One characteristic of quantitative method is "collecting numeric data from a large number of people

using instruments with preset questions and responses" (Creswell, 2012, p. 13). The numeric data were shown by the instruments, i.e. test and questionnaire.

Experimental Research, Between-Group Design, Quasi-Experimental Research Design, and Pre- and Post-test Design were implemented in this study. The basic schema of the study is explained as follows:

$$E \quad = O1 \quad X \quad \quad O2$$

$$C \quad = O3 \quad -- \quad \quad O4$$

= Experiment Group
C= Control Group
O1= Pre-test for Experimental Group
O2=Post-test for Experimental Group
O3= Pre-test for Control Group
O4= Post-test for Control Group
X= Treatment for Experimental Group
--= No treatment

Population and Sample

There were 110 students as the population of the study, due to the data on the third semester students of two nursing study programs of Health Science Faculty Palembang in academic year 2013-2014. The data were presented in the following table:

Table 1. The Third Semester Students in Academic Year 2013-2014

No.	Study Program	Class	Male	Female	Total
1	Strata I Nursing Science	I A		29	38
		I B		28	36
2	Diploma III Nursing Science	IA		25	33
		IB		25	32
Total			2	107	139

There were some reasons on selecting those students as the population of the research. Firstly, they had a chance to practice in hospital in

semester IV where the study was done. Second, they were Graduate Program, where they were required not only to build the nursing skills, but also to improve their scientific competences, as the curriculum concerns on (TIM KBK AIPNI, 2010).

Sample

The sample of the study was the students of Strata I Nursing Science Study Program. Those students were selected due to the difference on the graduates' competences; Diploma III Nursing Science focuses on the vocational nursing competences and has a paper for final paper, while Strata I Nursing Science focused on academic nursing competences where thesis is as the final project. In addition, Strata I Nursing Science purposely carried out the role of being a researcher based on the nursing disciplines. This role was supposed to be different from the role from Diploma III.

Another condition of selecting Strata I Nursing Science Study Program as the sample was the fact that the fourth semester students were already divided into two classes, Class IA and Class IB. It really gave a help to arrange the teaching schedule easily with the secretariat of the study program.

Since this study belongs to quasi-experimental research, the sample needed to be divided into two groups, one for experiment and another for control. In order to decide which class or which students belong to each group, the average score of the pre test about writing and the average score of the English score in the previous semester of the students were required.

Technique and Procedure of Learning

There are some teaching-learning steps in the procedure.

Table 2 Teaching and Learning Procedure

No.	Step(s)	Instrument(s)
	Pre-Test	Speaking Test
	Modeling (Crystal, 2003) 1) Reading : Procedure Text 2) Listening : Giving Suggestions	Teaching Materials 1) "Hand Washing" 2) "How to stay healthy"
	Drafting : "How to make Soursop Leaves Tea"	Writing Draft
	Post-Test	Speaking Test
	Questionnaire	Questionnaire sheet

3. Results and Discussion

The pre- and post-test were given to the students in both control and experiment group. Besides, the purposed questionnaire was distributed to the experiment group after the treatment.

Speaking Test Results

The test instrument in this study was used to measure the students' writing skill. in this study, the speaking skills were assessed through a speaking test rubric adapted from Rahman (2010). There were two test results; one result was from the control group and another was from experimental group. Since those two groups had pre-test and post-test, there were two results for each group, which were pre-test result and post-test result.

Pre-test and Post-test Results of the Students in the Control Group

The following table showed the frequencies of the pre-test and post-test score of control group. The frequency indicates the comparison between the students' score before and after the class.

Table 3. Frequencies of the Pre-test and Post-test Score of the Control Group

Score	Symbol	Description	Pre-Test Frequency	Post-Test Frequency
> 80	A	Very Good	3	5
68 – 80	B	Good	9	10
56 – 67	C	Fair	11	14
45 - 55	D	Poor	11	9
< 45	E	Very Poor	4	0

On the pre-test, there were 4 students of the control group got score under 45, which was very poor score. After the class, or on the post-test, no students got E. It means that there was not student who got score under 45. On the pre-test, 11 students got D, or between 45 to 55. After the class, it decreased into 9 students only. Then, the post-test found that there were 11 students who got C and it increased after the treatment.

On the pre-test, there were only 3 students who got very good score or A, while after the class, the frequency improved to 5. The last, from the data of the pre-test, there were 9 students who got good score, or the score above 80. Otherwise, on the post-test, there were 10 students got B, or good score.

From the data above, the percentages of the score could be drawn. The following chart would like to describe the percentage of the students' score.
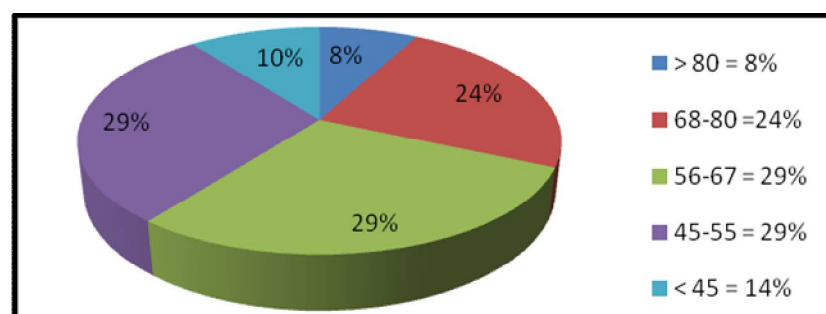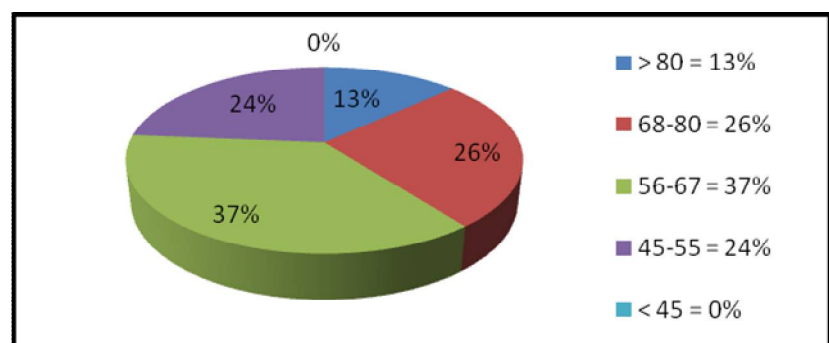

Chart 1. Percentage of Pre-Test Result of Control Group

The following chart shows the data percentage of the post-test of the control group.

Chart 2. Percentage of Post-Test Result of Control Group

The students in the control group showed better score after the class rather than before the class. The following table was the frequency of the pre-test and post-test results of the students in the experimental group.

Table 4. Frequencies of Pre-test and Post-test Score of the Experimental Group

| Score	Symbol	Description	Pre-Test Frequency	Post-Test Frequency
> 80	A	Very Good	0	10
68 – 80	B	Good	5	15
56 – 67	C	Fair	15	8
45 - 55	D	Poor	10	3
< 45	E	Very Poor	6	0

The following charts and the descriptions show the percentage of the score in the experimental group before and after the treatment.
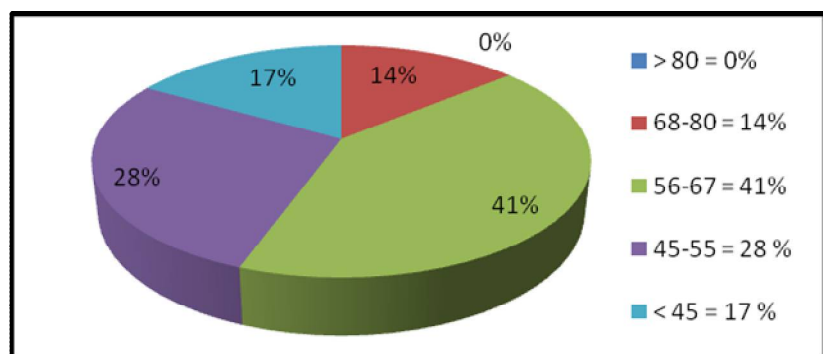
Chart 3. Percentage of Pre-Test Result of Experimental Group

The chart above showed that before the treatment, most of the students, 41% of the total students got C. The second big percentage lied on those who got D, which was around 28%. Meanwhile, 17% students got E and the rest, 14% of the students, got B. The data showed that the total students who got A was 0%.

After the treatment, the score improved well. The following chart elaborates the score percentage of the experimental group after the treatment.
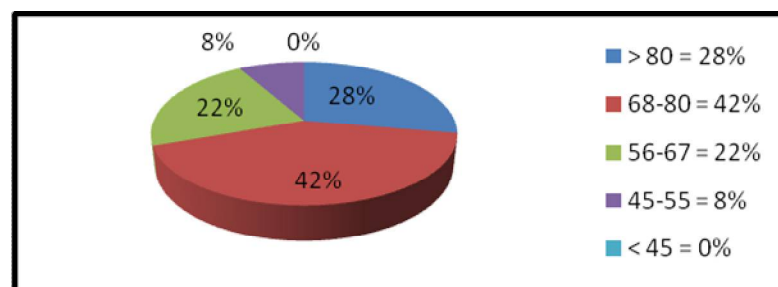
Chart 4. Percentage of Post-Test Result of Experimental Group

The chart above seemed to give obviously the improvement of the result of the students' speaking after the treatment. It clearly showed that most of the total students, 42% of the total students in the experimental group got B. Then, there were 28% of the total students got A. Meanwhile, less than 30% of the students got C and D.

Statistical Analysis Results

There were two kinds of analysis, i.e. paired sample t-Test and independent sample t-Test analysis. Paired sample t-Test was used to find out whether or not there was a significant difference after the students in the experimental group were taught through the use of nursing context and technology usage. Meanwhile, the independent sample t-Test was to find out whether there was a significant difference in writing skills between the students who were taught through the integrated activities of nursing context and technology use and those who were not.

Paired sample t-Test was used to compare the results of pre-test and post-test both in the experimental group and in the control group. The table below asserts the summary of paired sample t-Test statistical analysis.

Table 5. Summary Statistics of Paired Sample t-Test

Variable	Class	Sig. (2-tailed)	Mean
Speaking Skill	Experimental	0.000	33.1245
	Control	0.000	25.7356

The results of paired sample t-Test in the experimental class showed that the significant level was 0.000 or P < 0.05 in two tailed testing. The data stressed that there was a significant difference in writing skill before and after the experimental group was taught by the use of nursing care reporting as implemented contextual learning.

Meanwhile, the following was the summary statistics of the independent sample t-Test. The detailed independent t-Test was attached in Appendix XVII.

Table 6. Summary Statistics of Independent Sample t-Test

Variables	P < 0.05	Mean Difference
Speaking	0.000	11.5824

The table of the independent samples t-Test above shows that the mean difference of the post-tests of each group was 11.5824. Meanwhile, the significant level was P 0.000 < 0.05 in two tailed testing. As a result, there was a significant difference between those two groups.

Questionnaire Result and Other Findings

English Speaking skill and its importance

This part of the questionnaire is mainly to gather information on the necessity to mastering English Speaking skills. The findings show that more than 90% of the students agree English Speaking skill is the most skill to enhance during the time they learn the language. Some reasons of its importance are that Speaking is the measurable indicator on how to assess the students' English productive skill. As it is compared to another productive skill, which is Writing, they mostly (90%) said that Speaking is quite easier. The reasons behind this statement might lay on the character that Speaking as the spoken form of language does avoid spelling and, for another reason, strict grammar and structure.

Speaking aspects improved

The second focus in the questionnaire is to assess the students' English speaking aspects which improve better. The findings show there are some speaking skills components the students improve well. Most of the students responded that the usage of technology which are integrated with nursing context help them in building creativity and anxiety (89%) and grammar or sentencing (83%). Otherwise, some students are helped at learning words stress and articulation (31%).

Pleasure or Pressure

The next question emphasizes on evaluating the learning process of integrating of nursing field context and the technology usage for the English speaking skill empowerment. More than 84% of the students state that the activities are likely to be contextual. This setting can help them in enhancing their enthusiasm and anxiety to doing the instructions during the class. Otherwise, some students (10%) still have problem with their own ways of learning.

English for nursing purposes and technology brought in the classroom

This session is to find out their further responses on the implementation of this treatment – referring to Experimental Research. The students argue that having video taking in the classroom gives them the experience on not only how to get deal with cameras, audio recording, and even self confidence, but also on how to get familiar with video editing. This experiences where are combined with English nursing context can arouse the eagerness to learn English more and the literacy on technology.

4. Conclusion and Remark

In brief, it generally indicates that the use of the technology, which is integrated with nursing field context, can effectively empower the student's English speaking skills. This implementation can help the students in some ways: in enhancing the students' anxiety towards English learning, in building their English basic grammar, structure, and patterns which are frequently used among medical workers especially nurses, and, last but not least, in their role performance in their daily life especially in how to use technology and in how to have better English communicative competences.

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FOSTERING STUDENTS' WRITING ACHIEVEMENT THROUGH WEBLOG

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Abstract

To support students' academic success, it is essential to equip them with good ability in writing. However, most of students encounter some problems in writing since writing involves essential, constructive, and complicated process. There are several ways to facilitate students to develop their writing. Due to many students inherent interest in technological things, thus implementing an online tool can be an alternative way to foster students' writing achievement. One of the choices is using weblog. As many studies revealed that weblog could enhance students' writing skills. Therefore, this study integrated weblog into students learning activities. Furthermore, it involved forty eleventh grade students that divided into two groups; experimental and control groups. At the end of the study, the students in experimental group gained better writing achievement than those who were in control group. It points out that learning through weblog could help students to enhance their writing achievement.

Keywords: *writing achievement, weblog, online tool*

1. Introduction

Writing is a necessary skill for students' success in learning. This skill has to be possessed by students because it is an academic success predictor and basic requirement for participation in social and global life (Graham & Perin, 2007). However, most of students encounter some problems in writing since writing involves essential, constructive, and complicated process. Moreover, writing is regarded as a difficult skill in learning English and students who lack writing skills are de-motivated to write in English. Furthermore, Tuan (2010) asserts that in theEFL classroom, numerous students occasionally cannot accomplish their tasks as they don't have any ideas to write but they tend to be forced to finish their writing tasks within a certain length of time.

Dealing with writing problems, Mettaningrum, Dantes, and Suarnajaya (2013) point out that ideas organization and language structure are the most common problems that can be found in students' writing. Furthermore, students

also have problems in developing their ideas, expressing their feeling, and stating their opinions. Additionally, insufficient exposure to English also contributes to students' poor performance in English writing skill. As the result, many non-standard sentences commonly appear in most of Indonesian students' scientific writing as they are affected by local languages and various forms of other nonstandard language usage (Kholiq & Ningsih, 2011). In addition, Chen (2002) mentions four major problems faced by EFL students in writing. First, lack of vocabulary contributes to difficulty in writing the ideas properly. Second, difficulty in generating ideas make students frustrated in developing ideas and providing supporting details in writing a paragraph. Third, grammatical errors include mistakes in tenses, parts of speech, and subject-verb agreement. Forth, problem with mechanics includes punctuation, capitalization and spelling.

Considering the problems above, teachers have to do some efforts to develop their students' writing skill. Computer-assisted instruction and interactive media technologies can be used in EFL classroom. As a large number of recent researches revealed that technology yield positive outcomes for educational purposes especially dealing with increasing motivation, facilitating active learning, providing efficient resources, and giving better access to information (Kizil, 2011). Moreover, implementing an online tool can be an alternative way to foster students' writing achievement due to many students inherent interest in technological things. One of the choices is by using weblog. Many studies (Murray & Hourigan, 2008; Klages & Clark, 2009; Palombo, 2011) found out that weblog could enhance students' writing skills.

Weblog is a medium of learning in which the students can post and comment their writing tasks on it. This medium is becoming increasingly popular to be used in process writing approach since it can optimize students' participation and maximize their level of motivation to write in English. In addition, teachers can systematically monitor students' writing skills (Sampath & Zalipour, 2009). For those reasons, this study used weblog to foster students' writing achievements.

2. Theoretical Background

2.1 Technology in EFL Learning

In recent years, the use of technology has become an essential element in foreign language learning. The integration of technology into teaching and learning process can increase student involvement into meaningful and deep understanding about language studied. Frank, Golonka, Bowles, Becker, Freynick and Richardson (2008, p.1) conclude that there are five primary functions of technology use in foreign language learning and teaching. They are: (1) Organization; Technology enables learners and teachers to organize learning and instruction outside of the classroom, and it enables learners to reflect on and take control of their own learning. (2) Input; Technology expands access to a broader range of rich target language input than is available in the classroom and/or provided by the curriculum, and it creates opportunities to individualize input. (3) Output and interaction; Technology expands opportunities for learners to create their own output and to interact synchronously or asynchronously with native speakers and more proficient peers outside of the classroom. (4) Feedback; Technology creates opportunities to give and receive individualized, maximally effective feedback. And (5) Collaboration; Technology enables collaborative, social learning synchronously or asynchronously outside of the classroom.

Furthermore, Moqbel and Rao (2013) state that the use of technology along with its various tools (like computer with the help of multimedia and internet) engages EFL learners in motivating and enjoyable learning environment as they have more opportunities and exposure to practice and to learn English and its culture. In addition, technology helps EFL learners to get realistic and authentic resources (Al-Maini, 2011). Therefore, they can be exposed to learning materials and activities that are relevant to the real situation of target language. Within such an approach, this condition is potential to experience them to have comprehensible input from those resources.

However, lack of skill and competence to use technology in the classroom becomes the main reason for not integrating this learning tool in EFL teaching and learning process(Abrami, 2001). Besides, Dashtestani (2012, p.62) findssome

barriers to the implementation of technology (CALL) in EFL courses: (1) lack of technology-based facilities, (2) low availability of computers in EFL courses, (3) lack of educational authorities' support to include CALL, (4) low levels of teachers' and students' computer literacy, (5) lack of EFL teachers' CALL methodological knowledge, and (6) teachers' lack of knowledge and intervention in producing CALL materials. Therefore, those technical and practical problems must be taken into consideration before technology is implemented in EFL learning process.

2.2 Overview of Weblog

A weblog comes from two-word phrase *Web log*. This two-word phrase was compressed into a single word, *Weblog,* and subsequently shortened to *blog*. Weblog is an effective communication medium that is more structured than an e-mail list and more focused than a discussion board (Bull, Bull, & Kajder, 2003). It refers to an online journal posted on the web that consists of a series of entries (text, audio, video, images, and files) arranged in chronological order, often updated frequently with new information about particular topics. The information can be written by the site owner, gleaned from other websites or other sources, or contributed by other blog users. It can be used to share information with the public or with only a selected group of individuals. Moreover, weblog also has interactive features which allow readers to directly publish comments about the posts on the blog.

In addition, the writers of weblog (called webloggers) can embed some links of references that have been used in completing their posts. Those embedded links serve as online resources that are useful not only for webloggers themselves but also for readers. Webloggers can save the used references on each post while readers can directly go to the source just by clicking the links given. Furthermore, based on the purpose of this study, this feature is also useful for teacher to monitor students' writings.

2.3 The Effects of Weblog on Students' Writing

A survey conducted by Blackstone, Spiri, and Naganuma (2007) indicate that students perceived various blogging activities positively. They were motivated to improve their blog posts in content and organization and correct their careless mistakes as their writings were posted online and could be accessed and read by the classmates, the teacher, and anyone around the world with an internet connection. In addition, Zhang (2009) states that blog can be considered as an effective medium to improve students' writing for some reasons; 1. It facilitates students to foster their critical thinking by encouraging them to evaluate their writing. 2. It provides students more examples, thus they can learn better. 3. It affects the quality of students' writing as students can learn from the feedbacks received. 4. It creates meaningful learning for students since they can explore other blogs and links to learn about many things. 5. It gives students purpose for writing by increasing students' interest and ownership in learning. 6. It motivates students to write especially for those who want to give impact and gain responses from audience. In spite of the various benefits promoted by weblog, it is necessary to note that the integration of web based tool doesn't automatically make the students learn and improve their language skills. Therefore, the involvement of teacher is very essential to control students' interaction and provide effective intervention (Sun & Chang, 2012)

3. Method

In conducting the study, the writers used quasi-experimental design in terms of pretest-posttest non equivalent group design. The population of this study was the eleventh grade students of a state senior high school in Palembang with the total number of the population was 344 students. Forty students were selected as the sample of this study by using purposive sampling technique. They were divided into two groups; experimental and control group. Each group consisted of twenty students.

The writers administered writing test in form of composing a paragraph of report text before and after giving treatment to assess students' writing

achievement. The test was valid and reliable since it was adjusted to the school curriculum and checked by two raters. The results of the test were analyzed by using paired and independent sample t-tests. In addition, observation was conducted to obtain clear information about the students' writing progress. The objects of the observation were students' posts on their blogs. The writers observed three blog posts of the students (in the beginning, middle, and final meetings).

During the treatment, teaching learning activities in experiment group were conducted through following certain steps namely; (1) Teacher introduced the topic of the meeting, (2) Teacher and students visited class blog, (3) Teacher and students browsed and read selected materials (report text) from the links embedded on class blog, (4) Teacher read one post from class blog about certain topic in each meeting while explaining about aspects of writing, (5) Teacher asked students to brainstorm or get the ideas about the same topic (students may browse other sources related to the topic), (6) Students wrote a paragraph of report text related to the topic with group/peer/individually (drafting process), (7) Students posted their first writing draft on their blog, (8) Students gave comments on each others works (responding process), (9) Students did self-editing on their works (revising and editing process), (10) Students published their revision or final draft in the comment column of class bog (post-writing), and (11) Teacher and students had small discussion about their works.

4. Results and Discussion

There was a significant improvement in writing achieved by experiment group students. In detail, for seven aspects of writing, experiment group also showed significant improvement in all aspects with the order from the highest to lowest results as follows: 1) closing sentence (23%), 2) tone (16%), 3) opening sentence (14%), 4) supporting sentences (14%), 5) organization idea (13%), 6) vocabulary or word usage (11%), and 7) spelling, capitalization and punctuation (9%).But control group did not make any significant improvement in their writing. Moreover, only closing sentence improved while 6 aspects did not.

Furthermore, there was significant difference of posttest and gain score between experiment and control group. The results of experiment and control groups' scores were presented in Table 1.

Table 1

VARIABLES		PRETEST		POSTTEST		Mean diff pre and post exp within	Mean diff pre and post cont within	T-value and sig. between pre and post exp within	T-value and sig. between pre and post cont within	T-value and sig. posttest between exp and control	T-value and sig. of gain between exp and control
		Mean Exp	Mean Cont	Mean Exp	Mean Cont						
Writing (total)		49.97	49.12	79.20	53.35	29.22	4.22	14.838	1.627	11.739	7.671
								0.000	0.120	0.000	0.000
a.	Tone	51.88	51.88	84.38	53.13	32.50	1.25	13.175	0.490	11.650	8.810
								0.000	0.629	0.000	0.000
b.	Opening Sent	48.13	50.00	77.50	51.88	29.38	1.88	7.194	0.348	6.042	4.069
								0.000	0.732	0.000	0.000
c.	Supporting Sent	50.00	49.38	78.75	54.38	28.75	5.00	9.976	1.035	6.106	4.221
								0.000	0.314	0.000	0.000
d.	Concluding Sent	31.25	27.50	77.50	40.00	46.25	12.50	12.333	5.210	9.693	7.581
								0.000	0.000	0.000	0.000
e.	Organization Idea	55.00	51.88	81.88	54.38	26.88	2.50	8.459	0.777	10.252	5.389
								0.000	0.447	0.000	0.000
f.	Vocab/Word Use	53.75	52.50	75.63	57.50	21.88	5.00	7.315	1.405	7.623	3.630
								0.000	0.176	0.000	0.001
g.	Spell,capital,punct	59.38	60.63	78.75	62.50	19.38	1.88	6.049	0.471	5.151	3.425
								0.000	0.643	0.000	0.001

In line with it, the results of observation revealed that there was progress in writing made by experiment group students. From the final observation, it could be identified that experiment group students made improvement in most of observation aspects. Over 50 % of the students were in excellent category especially in accession, organization, statement, and evaluation. Meanwhile, dealing with synthesis and creation, less than 50% of the students were in excellent category. The results of observation were showed in Table 2.

Table 2

OBSERVATION ASPECTS	OBSERVATION 1				OBSERVATION 2				OBSERVATION 3			
	Excellent	Good	Poor	Failed	Excellent	Good	Poor	Failed	Excellent	Good	Poor	Failed
Statement	15%	55%	25%	5%	15%	80%	5%	-	55%	45%	-	-
Accession	25%	35%	40%	-	25%	65%	10%	-	70%	30%	-	-
Evaluation	5%	50%	45%	-	10%	80%	10%	-	50%	50%	-	-
Organization	15%	35%	50%	-	10%	75%	15%	-	60%	40%	-	-
Synthesis	5%	45%	45%	5%	5%	75%	20%	-	30%	65%	5%	-
Creation	5%	40%	55%	-	5%	85%	5%	5%	40%	55%	5%	-

Based on the results above, it can be concluded that blogging is very effective to improve students' writing skill. The result of this study is in agreement with many other studies which have similar results. Study conducted by Murray and Hourigan (2008) show that blogs could be easily integrated into a virtual EFL writing environment to improve students' writing skills. Furthermore, Palombo (2011) explains that experiencing students by the use of blog in writing process improved students written products. In addition, a research conducted by Klages and Clark (2009) point out that integrating blogs into learning contributed to more effective writing.

The improvements in all aspects of writing indicate that writing performance of the students in this study was getting better. In each meeting, students uploaded better posts on their blogs based on corrections from others in the previous posts. As the result, the quality of the content also improved. Vurdien (2011) states that writing through blog in EFL class can make the students become more careful in planning their tasks and error corrections before submitting their work. Besides, there were participation and interaction among students during commenting and revising phase. It makes learning atmosphere become interactive and collaborative.

In detail, the order from the highest to the lowest improvement is as follows: 1) closing sentence, 2) tone, 3) opening sentence, 4) supporting sentences, 5) organization idea, 6) vocabulary or word usage, and 7) spelling, capitalization and punctuation. The results reveal that during writing process, students tended to be more focus on the content of their writing than mechanics like spelling, capitalization and punctuation. Furthermore, closing sentence was highly significant improved because most of the students did not include closing sentence in their writing pretest. They did not conclude their writing at all. It means that at the beginning of the study, students' knowledge about writing aspects was still very poor. Having been taught about parts of a paragraph, they already knew about those aspects then applied them on their writing product. Thus, not only closing sentence but also opening sentence and supporting sentences gained high improvement. Besides, reading before writing really helped students in getting the ideas. Input from reading helped them to elaborate the ideas that would be expressed into written words. Moreover, they were able to produce the ideas in correct tone and good organization. Furthermore, low improvement in vocabulary aspect might be caused by online activities during teaching and learning process. As the students preferred to open online dictionary they easily found the meaning but quickly to forget it. At last, due to unawareness of good spelling, capitalization, and punctuation, therefore students gained lowest progress in this aspect.

In conjunction with it, the data from observation also strengthen the results of students' writing improvement. In terms of accession, online activities enabled students to obtain more appropriate information that support their writing process so that they were able to organize their writing using good statement. Furthermore, their friends' feedbacks on their writing helped them to evaluate their compositions. Meanwhile, students' lack of language proficiency caused them difficult to synthesize the ideas from online resources. Finally, students did not really concern with creation on their posts since their main focus was on their writing,

5. Conclusion and Remark

Based on the results and interpretations, there was significantly different results in writing achievement between experiment and control group in which experiment gained significant improvement in all variables as well as their aspects. It is concluded that weblog was effective to improve writing achievement of EFL learners. However, it raises some important points that need to be suggested for further research. First, blogging for learning purpose in classroom is good especially in English language teaching as long as the facility and teacher's guidance support learning process. Second, web based resources in EFL learning should be taken into account in this digitized learning era. At last, some obstacles still could not be avoided but it still could be anticipated. Therefore, teacher should be well prepared before integrating ICT into EFL learning.

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MODERN TECHNOLOGY DEVICES IN EFL TEACHING

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Abstract

This paper aims at making a review of positive experiences that used modern technology devices in classrooms of English as a foreign language around the world. Some modern technology devices will be reviewed, they are: Tablet PCs, smartphone and iPads. For this review, four articles by researchers from different countries were selected in order to obtain positive reports on the use of modern technology devices in EFL classroom. Despite modern technology devices are still rare and not being popular in some areas in Indonesia, the use of that kinds of device as a learning tool is being largerly developed in Indonesia and other countries and it has shown good results so far.

Keywords: *Modern Technology Devices, EFL, Teaching*

1. Introduction

Technology plays an important role in teaching and learning process, especially for EFL teaching. "The use of technology in teaching becomes more important in present times, because teachers also have to be able to keep up with the technological knowledge of their students" (Richards, 2014, p.2). With the improvements in technology and its use in EFL classrooms, the roles of the EFL teachers are also changing (Zhu & Wang, 2006). Within this change, the knowledge of technology use is a must for foreign language teacher candidates in many teacher training programs (Barzaq, 2007) and teacher educators (Moradkhani, Akbari, Ghafar, Samar, & Kiany, 2013). Besides, the aim of profesional development is seen as helping teachers make meaning of technology integration in teaching to regulate its influence on edcation (Barzaq, 2007).

As a matter of fact, EFL teachers perceived technology use very beneficial in many research and teaching contexts. For example, teachers in Iran had positive attitudes toward using technology to augment language learning through a

computer-oriented instruction (Mollaei & Riasati, 2013). Korean EFL teachers were found to be seeing computer technology as a useful teaching tool that could easily boost means of teaching by providing students with a variety of language inputs and increasing students' learning capabilities in real-life contexts (Park & Son, 2009). Furthermore, the advantages of using modern technology devices in EFL classroom were listed as providing authentic materials for learners, making students meet native friends online, and assisting teacher-student communication (Chong, 2011).

Although teachers had positive attitudes towards integrating technology in teaching EFL students, a number of challenges have also been quoted. For example, Chinese EFL teachers used technology chiefly for teacher-centred drives, such as instructional supply, and rarely utilized technology for student-centred tasks. Likewise, most of the Libyan teachers confronted difficulties related to time restriction and lack of managerial support (Emhamed & Khrisnan, 2011). Iranian EFL teachers were also found to be suffering from some complications in employing Computer Assisted Language Learning (CALL) in languag eclassrooms because of the teachers themselves, facilites too use, learners (Hedayati & Marandi, 2014), lack of online services and resources, lack of interface in online teaching, cultural oppositions to online teaching, teachers' inadequate knowledge of online teaching (Dashtestani, 2014) and lack of technological devices that can be used for teaching (Kazemi & Narafshan, 2014).

Age was also found as a variable in technology integration in foreign language classrooms. According to Rahimi and Yadollahi (2010), a lower technology anxiety had resulted better integration of technology in EFL classrooms; and as older teachers had higher levels of technology anxiety than younger teachers, they were more hesitant to incorporate technology into their classes. It is also reported that external factors such as time constraints inadequate technology, inflexible school programs and textbooks, and lack of managerial care affect the execution of CALL in a negative way. On the other hand, internal factors such as teachers' inadequacy in technology use, technological knowledge,

and views on technology integration also influence teachers' choices to use technology in their classrooms (Park & Son, 2009).

2. Theoritical Background

2.1 Historic Background and Terminology

In recent years, the improvement of modern technology devices, such as mobile phones and tablet computers, has received great interest in the field of education. In a study using Technology mediated learning provides foreign language educators with the means to increased exposure to the target language within the classroom by providing offline as well as online resources. In addition, blended learning settings extend the learning environment to the online sphere and engage learners beyond the classroom (Conrad & Donaldson, 2004).

There have also been numerous research projects related to the usefulness of modern technology devices for students in an EFL environment. Ono and Ishihara's (2011) study reported that although initially they imagined that it would be difficult to type on an iPod Touch due to its limited screen size, the devices were indeed effective in improving students' language skills. Baleghizadeh and Oladrostam (2010), in an attempt to help students overcome anxiety related to whether they could use English with grammatical accuracy, had 40 EFL students in Iran record themselves speaking in English on their mobile phones during class. In a study in Taiwan, Lu (2008) reported that when students learned vocabulary by texting on their mobile phones, they were able to obtain significantly higher scores on a posttest measuring their understanding of vocabulary than those who studied using a traditional paper method.

2.2 What are Modern Technology Devices?

More recently, devices requiring electricity, such as television, videos, and computers, have increased in popularity as teaching aids in the classroom. Since the birth of the internet, computers and tablet computers in particular have become more common not only in regular classrooms, but also in EFL

classrooms, where a global network allows a wealth of knowledge to be brought to students almost immediately at the touch of a button. The use of touch-screen computer tablets appears to have brought many advantages to the classroom. Simpson (2012), for example, suggested that the introduction of iPads into an American elementary school resulted in students being more enthusiastic in their study, and that this did not wane, even months after the tablets and had been lent to students.

Mobile learning devices, as defined by Sharples, Taylor and Vavoula (2010), brings this online dimension of language courses to the face-to-face dimension. With the availability of broadband access and Wi-Fi networks, learners and educators can connect to the Internet when they need too. They can search for information, read course notes, consult references, share links as well as contribute to the on-going lesson and instructor modes to support. With online and offline reference tools, the learners can verify and refine their work. Predictive text input and automated translators provide them with an immediate feedback (Godwin-Jones, 2012). Checking structures maintains the learners' engaged with the task.

3. Some Positive Experiences

In this part of the article, the aim is to describe and analyze four positive experiences concerning the use of modern technology devices in EFL classrooms around the world. The four articles used for this paper were chosen because they all have positive experiences in EFL teaching using modern technology devices as a learning device in common. The articles are presented in chronological order in an attempt to follow the progress achieved by the use of technology brought into education. The articles are the following:

1. iPads in the Foreign Language Classroom: A learner's Perspective, by Cecile Gabarre from University Putra Malaysia, Serge Gabarre from University Putra Malaysia, Rosseni Din from University Kebangsaan Malaysia, Parilah Mohd Shah from Universiti Kebangsaan Malaysia, Aidah Abdul Karim from Universiti Kebangsaan Malaysia (2014).

2. Effective Use of Tablet Computers in EFL Pedagogy, by Adrian Leis from Miyagi University of Education (2014).

3. Tablet PCS as Instructional Tools in English as a Foreign Language Education, by Assist. Prof. Dr. Perihan SAVAS from Middle East Technical University Turkey (2014).

4. Shape Shifting Smartphones: Riding the Waves in Post-Secondary Education, by Peggy Jubien, University of Alberta, Canada (2013).

The first experience is presented by Cecile Gabarre from University Putra Malaysia, Serge Gabarre from University Putra Malaysia, Rosseni Din from University Kebangsaan Malaysia, Parilah Mohd Shah from Universiti Kebangsaan Malaysia, Aidah Abdul Karim from Universiti Kebangsaan Malaysia. The title of the article is "iPads in the Foreign Language Classroom: A learner's Perspective". The article had been published on 3L: The Southeast Asian Journal of English Language Studies, volume 20 (1): 115-128. This researh aimed to explore how mobile tactile devices can be used in classroom settings to enhance language learning particularly by promoting flexible and active learning opportunities as reported in Chen (2013) and Lys (2013). Mang and Wardley (2012) stressed the need to integrate the technological set-up within a pedagogical framework. Therefore, the current study used the technological learning content framework (TLCK) from Chai and Tsai(2013, p. 45) to explore the iPad's contribution to the learning experience. In their review of the literature on the technological pedagogical content knowledge framework from Koehler and Mishra (2009), Chai and Tsai recommended investigating the learners' educational experiences with the integrated technology to assess the appropriateness of the technological set-up with the learning outcomes. A narrative qualitative design was adopted to provide a secure and private environment to encourage disclosure, thus generating a deeper understanding of the determining factors leading to the learner's motivation towards using the iPad and to the processes involved thereafter. This study involved two researcher as participant. The two researchers had taught this learner over three consecutive semesters and a good teacher-student relationship existed. The study was

conducted in a Malaysian public university. The French courses were delivered in classrooms as well as in computer language laboratories. The classrooms were equipped with a computer connected to the internet and to an LCD projector. The language laboratories consisted of tables of four computers connected to a class network and to the internet. All the computers were monitored from the teachers' computer station and connected to an interactive white board Emilie owned an iPad 2, Wi-Fi and 3G enabled with 16 GB and her laptop was a Toshiba PORTEGE T210-1026R equipped with an Intel ®Pentium 1.33 GHz processor and 2048 MB DDR3 1066MHz SDRAM. In-class observations were used to collect data on how the iPad influenced the participant's learning process technologically, pedagogically, and socially. Observations, informal discussions and field notes were used to design the one-on-one interview protocol and to triangulate the findings. The interview has conducted two weeks after the participants had received their iPad.

The analysis comprised the three-dimensional space narrative structure established by Clandinin and Conelly (2000): interactions, continuity and situation. Interactions encompassed the social interactions between the participant and the ret of the class (face-to-face and virtual) as well as the human-machine interactions. Continuity was divided in three chronogical phases describing the participant's perceptions of the past, present and future regarding the influence of the iPad on their life. The situation consisted in the contextualization of the information emerging from the participant's narration.

In terms of mobile learning, the participant described her iPad as more practical than her laptop. It was easier to carry because it was sleek and weighed less. It was also faster to start and to connect to WIFI. On the other hand, smart phones were seen as tempting. They were described as real phones as opposed to tablet computers which used 3G only to connect to the internet. Regarding the iPad's perceived ease-of-use, the participant was truly challenged by the iOS interface. She had to get used to transferring files through email and kept on discovering new applications and features every day. However, her technological

acceptance was high because she had chosen the iPad. Emilie provided valuable insights on how the learners were carrying out individual tasks such as listening comprehension or collaborative work. Tablet computers are versatile and thus, have the potential to engage learners by keeping them interested, challenged and motivated. Classroom activities should also make use of all features of the devices: brainstorming, interactive presentation, handwriting annotations, podcasting, and multimedia content. Course content and applications could be pushed to the learners' devices for revision purposes. In the same way, learner created content could be pushed to the lecturers for feedback and future sharing in a peer learning approach (Morgan & Toldedo, 2006).

Furthermore, the technological challenges faced by this learner were intricately linked to her specific situation, i.e., as being the only learner equipped with an iPad with a limited prior knowledge of the iOS interface. Therefore, there is a need for further research on the usability and utility of tablet computers from other manufacturers.

The second experience is presented by Adrian Leis from Miyagi University of Education. The title of the article is "Effective Use of Tablet Computers in EFL Pedagogy". The article had been published on JALT 2013 Conference Proceedings. The aim of the study was to answer the following research questions:

1. Does using tablet computers in teacher training improve participants' views about these devices as teaching tools?

2. Does using tablet computers in teacher training improve participants' views if these devices as tools for learning a second language?

The participants in this study were 38 (20 male, 18 female) Japanese university undergraduate and graduate students whose goal was to become an English teacher at either the elementary school or junior high school level.

Results indicated that the training did in fact bring about such results, with students indicating they were more prepared to use these devices in class. By

making use of more authentic classrooms in future studies, it is hoped that further understanding will be gained about whether the use of technology such as tablet computers results in not only a more comfortable teaching environment for instructors, but one in which students are able to make strong progress in their language studies.

The third research is presented by Assist. Prof. Dr. Perihan SAVAS from Middle East Technical University Turkey. The title of the article is "Tablet PCS as Instructional Tools in English as a Foreign Language Education". The article had been published on TOJET: The Turkish Online Journal of Educational Technology, volume 13 issue 1, January 2014. The main purpose of the study presented here was to find out the perceptions of 40 volunteer prospective EFL teachers on the effectiveness of the use of tablet pcs in relation to EFL.

The participants of the study were 40 prospective EFL teachers who were sophomores in a state university in Turkey. All were enrolled in an EFL B.A. program at a foreign language education department in which the medium of instruction was English. All participants were given consent forms before the study began and only the volunteer participants too part in the study. Nine of out 40 participants were males whereas the rest (31)were females. The average age of the participants was 20. In addition, all participants were in a methodology course in which they were being trained on how to teach speaking, listening, and vocabulary in English.

The data collection took place in one full academic semester in three phases and mainly via two surveys.

PHASE I * pre-tablet PC use survey was administered before participants used tabletPCs in relation to EFL

PHASE II * participants in groups of three received one android 4.0 based tablet pcs and visited google play store for EFL materials/tasks and wrote down the ones they prefered to use in teaching english

PHASE III * Post tablet PC use survey was administered after participants used tablet pcs in relatin to EFL.

The resulsts of the study have several implications for researchers and aducators who wish to use tablet pcs in relation to teaching EFL. First of all, the results show rthat prospective teachers can develop more positive attitude toward the use of tablet pcs in teaching EFL as they gain more experience in using these instructional tools. This finding was in line with Tingerthal's (2011) suggestion that technical problems that teachers face when they start teaching with tablet pcs become less problematic in timeas the instructors get used to using tablet pcs and it becomes a part of their regular teaching routines. In additions, it is possible that the examples and sample tasks and materials of EFL in google play provide the prospective teachers a more detailed understanding of the possibilities that tablet pcs can provide in instruction. Learning by and through examples and sample activities is extremely important for prospertive EFL teachers as they have less actual teaching experience in a real classroom. If teacher educators wish to utilize tablet pcs as instructional tools in EFL, it is essential that prospertive teachers are given training and experience in using these devices.

In addition, the results of the study can imply that there should be more tasks, ,aterials, and applications in teaching Writing skills in English via Tablet PCs. Software designers and researchers in the field of Instructional Technology can do more research and projects to develop more writing applications that can be used with an EFL classroom in mind. To do this, software designers, researchers, EFL teacher educators, and prospective as well as in-service teachers can work in collaboration to design more tasks/materials that would meet the needs of EFL learners and maximize the potential of tablet PCs as instuctional tools.

To sum up, in this study it was seen that the participants developed more positive attitude toward the use of Tablet PCs in relation to EFL as they gained experience in using tablets. This study was carried out in one academic semester and with 40 peticipants in one BA progran at a state university. More research is

required across different institutions profile of prospective teachers over a longer period of time.

The last experience is presented by Peggy Jubien, University of Alberta, Canada. The title of the article is "Shape Shifting Smartphones: Riding the Waves in Post-Secondary Education". The article had been published on Canadian Journal of Learning and Technology, volume 39(2), 2013. This study received formal review and approval from the University of Alberta's ethics review board. The only criterion to participate was that students had to own and use a smartphone. The purpose of the study was to examine students' everyday use of smartphones, particularly as they related to educational tasks. Data for this study was collected during semi-formal interviews that lasted for approximately one hour. Most of the participants brought their smarthphones to the interviews and they both described and demonstrated how they used their phones during the meetings.

By considering one object, the smartphones, and the ways that it is assembled together with other human and non-human actors in post-secondary, it is possible to learn more about how the socio-material is influencing educational practices. Studying smartphones' use shows us that there is no clear separation between students' personal and school lives and that the threads or actor-networks to observe the ways that smartphones are influencing and changing learning practices. We can learn about how accessing and gathering information, receiving feedback from instructors and collaborating with other students changes when students use smartphones and we momentarily notice some of the concealed actors that assemble together in the networks. We can also reflect on the ways that smartphones act as a fluid and fire objects and consider how they can be described as protean objects. Using this new terminology calls attention to how smartphones are continually going through a process of shape shifting and how time seems to speed up and the ways that virtual and physical spaces can be briefly be fused together. These understandings raise important questions for educators and

administrators that need to be further explored and reflected on, as smarthphones and tablet computers are integrated into all levels of education.

4. Conclusion and Remark

After reading and analyzing the four studies about using modern technology devices around the world, it was possible to notice that after the first attempts of using modern technology devices in classrooms, more educators are willing to help develop this learning tool. The articles framed the use of modern technology devices from a very similar approach. The researchers described their methods very carefully and all of them seemed to have similar point of views on how to develop a course using those kinds of devices.

They all agreed that more research should be conducted and there are still many things to be discovered, but there is no doubt teachers now have powerful tool in their hands. It seemed that with the increasing need to learn a foreign language, teachers and students are more willing to find out better ways to make the complex learning task easier and more effective, and the teaching of a foreign language, as well. Although considering the use of modern technology devices very demanding for the teacher, and a task that requires a very well prepared educator, researchers considered it as a great opportunity for class improvement.

With computer technology developing rapidly in the 21ˢᵗ century, there can be a danger that these tools can become the center of the English lesson, undermining the role of the teacher. The author does not agree with that idea and stresses that the most important considerations for learning must be the people in the classroom: the teachers and the students. However, the advantages that modern technology brings to the classroom as an aid for teachers must also be considered in EFL teaching. With previous research showing some inclination amongst teachers toward hesitation to use technology in the classroom, it was hoped that using tablet computers in the training of university students studying to

become English teachers would help them feel more comfortable using tablet computers in EFL classes.

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USERS' RESPONSES OF THE AUTHENTIC ASSESSMENT INSTRUMENT DEVELOPED TO ASSESS PROBLEM-SOLVING SKILLS OF PROSPECTIVE BIOLOGY TEACHERS IN FIELD PRACTICE ACTIVITIES

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Abstract

This study is the final stage of study designed by using the method of Educational Research and Development (R & D) to generate a tested authentic assessment instrument model so thatit can be used to assess problem-solving skills of prospective biology teachers in field practice activities. The assessment instruments, that have been developed and tested on limited audiences in the earlier study stage, have very high validity and reliability for measuring learning outcomes in the cognitive domains (0.877 and 0.949), have high validity and reliability in assessing observing skills (0.776 and 0.866), communication skills (0.665 and 0.581), developing proposals (0.854 and 0.884) and collecting specimens (0.676 and 0.400), but only until sufficient and medium categories for the skill measurement of taking notes of process (0.607 and 0.153), and making report of the result of field practice (0.607 and 0.153). The instruments also have sufficient validity (0.589) and high reliability (0.75) for the measurement of scientific attitude. At the final stage of this study, the instrument was then used by the 10 supervisors to assess the field practice activities involving 120 students of prospective biology teachers from a private university in Bandung, Indonesia. Each supervisor assessed footages of 5 students. The result of the study shows that the supervisors who are the assessment instrument users give good responses evenly ($\bar{\bar{x}}$ = 3,58 ± 0,12) on questions with following indicators: The result shows that the supervisors who are the assessment instrument users give good responses evenly (x = 3.58 ± 0.12) to questions with following indicators: the suitability of the instruments with the needs in the field, the suitability of the instruments with their columns, instrument effectiveness in the assessment, as well as ease of use of the instrument. The participating students of field practice who are assessed state that in-advance explanation about techniques and aspects of the assessment before the implementation of the field practice can encourage them to conduct the field practice much better, in order to obtain higher learning outcomes.Making improvements and conducting further tests on the authentic assessment instrument developed in this study are suggested so that the instrument can become a measuring tool of learning outcome which has higher reliability and validity.

Keywords: authentic assessment, problem-solving skill, integrated field practice, prospective biology teachers

1. Introduction

The study is the final stage of three series of studies about the development of authentic assessment instrument model in assessing problem-solving skills in field practice activities. The study was conducted as an answer of the lack of the

standard and tested authentic assessment model which has been an obstacle of the implementation of science learningwhich is scientific-inquiry oriented and centered on students' activities. By far, teachers or lecturers tend to conduct science learning theoretically presented in clasrooms by using methods which do not really provide experiences for students to practice thinking and problem-solving skills, supported by the lack of assessment in assessing students' learning activities, so that inquiry-oriented science learning seems to be meaningless.

Science learning (including biology) is generally aimed at explaining natural phenomena. Therefore, students who learn science need to do direct observation which will encourage them to always want to know further about whatever happens in nature.One of effective activities in conducting observations directly is field practice. In this activity, students are encouraged to think and solve problems they deal with in the field.

As in general learning process, students' achievements and acquisitions of learning they do need continuous assessments so improvements can be done that learning objectives can be achieved as expected. Representative assessment tools which can assess problem-solving skills accurately are needed in this assessment process. The presence of accurate authentic assessment which is done along field practice is expected to identify students' individual profiles in solving problems. In time, improvements for stundents whose assessments are in low category can be done immediately so that personalities of students—who have high problem-solving skills and are ready to face real challenges in the execution of their duties in the future-- are expected to appear at the end of the study.

2. Theoretical Background

Field practice is defined as a trip designed by a school and implemented for educational aims. Students go somewhere so that the subject matters can be observed and examined directly in the settings according to their own functions. Field practicesare done based on these following reasons: a) to obtain direct experience; b) to stimulate interest and motivation toward science; c) to give meaning to learning; d) to enhance the skills of observation and perception of the

participants; e) to affect social development personally (Patrick, 2010).There are many things that students can gain through a field practice if the activity is managed effectively. The chance of direct learning in that field can improve students' problem-solving and crtical thinking skills. In addition, field practices can help students understand concepts and develop researching skills on the level that cannot be achieved through the combination of lectures and laboratorium activities.

Field practice has been an important part of learning in long history of education. Field practice is aimed at improving thinking skills, interest and suceess rates of science education. Field practice gives a chance to students to gain concrete experiences through: a) a transition of learning stage from a simple concept to a complex concept; b) a direct experience with real phenomena and matters; and c)the occurrence of hands-on activities to construct and reinforce abstract concepts (Tal, 2004).

Field practice needs a unique assessment, because assessments with conventional approach are hard to implement. Powell *et al.* (2010) describes several ways of effective and fair assessments of field practice, namely students' journals, field-based quizzes, and level of participation. Lei (2010) proposes several assessments to assess students' learning and acquisition in the field in the form of formal assessments which include presence, participation, learning journal or reflective, field practice, portfolio, research report, research project, oral presentation and poster, self assessment, and peer assessment. Those assessment methods are likely to lead to general skills assessment that someone must own, while the literature regarding the assessment that assesses problem-solving skills is still rare.This becomes a stimulant of the realization of the authentic assessment instrument model in assessing problem-solving skills in field practice activities which are done in this study series.

Needs analysis had been done in the first stage of the study through interviews with 30 students participating a field practice and 5 supervisors. The result shows that the field practice activities have not had any authentic assessment process yet due to limited number of assessors and the lack of of

relevant and flexible standard instruments.Based on the needs analysis, model design and authentic assessment instrument were developed which then were validated through experts' judgemenents and trials on limited audiences.

In the second stage of the study, instrument implementation had been done and it was meant to assess a field practice attended by 30 students of prospective biology teachers from a private university in Bandung. The result shows that authentic assessment in integrated field practice activities is able to measure directly knowledge, skills, and scientific attitude of the practicing students at a time. The advanced explanation about techniques and assessment aspects before the field practice may encourage the students to do the field practive better, so that the learning result will be higher. Authentic assessment instruments developed in this study has very high validity and reliability to assess the learning result in congnitive field (0.877 and 0.949), high in assessing observing skills (0.776 dan 0.866), communicating (0.665 dan 0.581), arranging proposals (0.854 dan 0.884)and collecting specimen (0.676 dan 0.400), but it is sufficient and medium for skills of note-taking (0.607 and 0.153) and compiling the result of field practice (0.607 dan 0,153).

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The core activity of the study conducted in this third stage is the implementation of the use of the instruments in the assessment of field practice activities based on problem-solving skills of students/prospective biology teachers on wider audiences, in attempt togain responses of field practice supervisors as the users and the students of prospective biology teachers as the subjects of the study. Moreover, it is expected to obtain an overview of learning process and students' acquisition in the field, while provide learning for students/prospective biology teachers about assessment model development for field practice activites, so that they have someday have sufficient knowledge in the execution of their duties.

3. Method

This study was conducted with Educational Research and Development (R & D) which is modified based on the needs. Gall et al. (2003) saw Educational R & D as a process used to develop and validate product in education field. Sugiyono (2012) stated that products produced through Educational R & D hopefully can increase the productivity of education. This study was conducted to produce a product in the form of authentic assesment model that is valid and reliable to score the problem solving skill of students/prospective biology teachers in field practice.

On its process, this study was designed to be conducted in three grand steps, which are Plan, Development, and Dissemination. Each step is done in effectiveconsecutive years during three years. The Plan step which generates Authentic Assessment Instrument and Model to Score Problem Solving Skill in Field Practice has been done in the first year (2014/2015). The Development step has also been done in the second year (2015/2016) by implementing instrument aimed to score the field practice activity of 30 students/prospective biology teachersfrom a private university in Bandung that generates the category of validity level and instrument reliability in scoring the students' skill in cognitive field and their scientific attitude.

In this third step of the study, the researcher applied the use of authentic assessment instrument which is the result of the development of second step/year research in a wider circle, which is in the field practice programmed in the curriculum of Biology Education Study Program in a private LPTK in Bandung. This third step was done with the aim of testing the effectivity, and detecting the important roles of authentic assessment instrument as a result of this study's development in scoring the process and the result of students in their field practice. Besides, in this third step of research, the researcher compiled the views of lecturers who supervise the field practice toward the aspects of the suitability of instrument with the needs in field, the suitability of instrument with its rubric, the effectivity of instrument in scoring, and its easiness for the users, gathered from the implementation of the instrument. The view of students who are the field practice's participants as a subject scored by the instrument is also compiled to support the conviction of the scoring effectivity toward the increase of studying result.

Field practice which became the mode of this research is a field practice activity integrating invertebrata zoology field discussion, animal ecology, cryptogamae botany, and phanerogamae botany, and was done in Karapyak Beach, Pangandaran. The participants of the field practice consist of 120 students/prospective biology teachers, and involve 10 supervising lecturers. Authentic assessment instrument which is the result of this research development is used by supervising lecturers in scoring cognitive aspect, skill, portofolio, and students' affective during the field practice.

The variables measured in this third step/third year consist of: 1) The scoring of the activity of students' field practice with authentic assessment instrument as a result of development, 2). Lecturers' response/views in using authentic assessment guidance, 3). Students' response/views toward authentic assessment application.

4. Result and Discussion

4.1 The Scoring of Field Practice with Authentic Assessment Instrument

The data of cognitive field scoring of field practice students with authentic assessment instrument that has been developed is displayed in a form of graphic in Picture 4.1 below:

Picture 4.1 Graphic of the scoring result of biology-teacher-to-be students's field practice with authentic assessment instrument as development result.

Based on the compiled data, it can be seen that 10 supervising lecturers can do the scoring process and students' studying result in the field practice activity by using authentic assessment instrument developed in this study. The result shows that the field practice participants can conduct their field practice with very good criteria.

4.2   Response of Field Practice Supervising Lecturers in Using Authentic
       Assessment Instrument

Generally, response given by field practice supervising lecturers towards the usage of developed authentic assessment in this study include instrument's suitability with fields' needs, instrument's conformity with its rubric, instrument's effectiveness in assessment, and its ease of use. Those aspects are explained in indicators that also become questions and statements in provided response questionnaire. The answers of those questions are converted to scores which categories are listed in the questionnaire. Besides, respondents are also asked for their reactions in the form of description.

Table 4.1. General Score and Responses of General Practice Supervising Lecturer as Users of Study Developed Authentic Assessment Instrument

No	Question/Statement	Score Mean	Criteria	General Responses
1	Authentic assessment instrument suitability with field requirement	$3.5 \pm 0{,}53$	Good	Suitable with integrated field practice activity
2	Instrument suitability with field requirement	$1.8 \pm 0{,}42$	Very good	The point regarding instrument has shown integration in field practice activity so that this authentic assessment instrument could be

				used as guidance in assessing integrated field course
3	Instrument suitability in cognitive field with assessment rubric	3.5 ± 0,53	Good	Assessment instrument is more flexible in following development in practice, the item is too general
4	Cognitive field assessment result after using authentic assessment instrument	3.6 ± 0,52	Very good	Very good
5	Suitability of creativity instrument with assessment rubric	3.5 ± 0,53	Very good	Suitable with requirements in field
6	Result of assessment in creativity/psychomotor field after using authentic assessment instrument	3.6 ± 0,52	Very good	In attachment
7	Suitability of portfolio instrument with assessment rubric	3.7 ± 0,48	Very good	Suitable with requirements in field
8	Portfolio assessment result after using authentic assessment instrument	3.5 ± 0,53	Good	In attachment
9	Suitability of affective instrument with assessment rubric	3.6 ± 0,52	Very good	Suitable with expected attitude that has to be developed
10	Result of affective assessment after using authentic assessment instrument	3.4 ± 0,67	Good	In attachment
11	Effectiveness of authentic instrument in assessing integrated field practice	3.7 ± 0,48	Very good	Effective in assessing integrated field practice
Average score		3,57 ± 021	Good	

Field practice activity is purposed to train students to think and solve problems found in field based on knowledge they gain in classes. Like any other learning process in general, student's achievement and gain of what they have learned need sustainable assessment in order to improve it so that learning goals can be achieved according to expectation. In this assessment process, representative assessment instrument that is able to assess problem solving creativity accurately is needed.

The observation in the study shown that all respondents who consist of 10 field practice supervising lecturers responds positively to the authentic assessment instrument developed in this study with their willingness to use it as assessing instrument for students' learning process and result during field practice activity. It could be understood since as explained in previous chapter, based on direct

observation in field and interview to practice lecturers and students in previous field practice activity, there was no standardized authentic assessment instrument in the field practice activity, neither in the process nor in the resulted product. Therefore, the value of usefulness of authentic assessment instrument developed in this study is obviously measurable through responses given by field practice supervising lecturers who used this instrument. Respondents also stated that the existence of this instrument make it easier for lecturers to assess students' field practice creativity authentically and objectively, so it is easier to determine further supervising action to be taken.

Generally, practice supervising lecturer respondents as users of this instrument gave good responses toward the contents available in the instrument as indicators which include instrument's suitability aspects with the requirements in the field, instrument's suitability with its rubric, its effectiveness in assessing, as well as its easiness of use (responses' average score of $3,57 \pm 021$). Respondents stated that this instrument is very suitable with field requirement (average score of $3,8 \pm 0,42$; criteria: very good). Description of general response shown that instrument problem points has shown integration with field practice activity so that this instrument could be used as guide to assess, even to direct integrated field practice performance. It corresponds to Mueller's (2008, in Abidin, 2012) statement which said that authentic assessment instrument which includes learning process and result components which needs to be assessed at once can be used as direction guide for learning process to achieve the goals. In a learning process, authentic assessment measures, monitors, and assesses all learning result aspects (included in cognitive, affective, and psychomotor domain), whether they are visible as the final result of a learning process, or as changes and developments of activity, and learning gain during learning process. This statement became the base in designing and developing authentic assessment instrument in this research. Developed authentic assessment instrument are purposed to be able to measure students' competency in the term of knowledge, creativity, and attitude during the field practice activity. Assessing their knowledge is purposed to see their creativity in solving problems found during

integrated field practice, with assessment aspects that include problem identification ability, problem formulation ability, solution designing ability, hypothesis creating ability, information-gaining ability, information associating ability, and conclusion making ability. Assessing their creativity is designed to be done through work-show with assessment aspects that include science process and portfolio with products in form of proposal, notes in field practice activity process, field practice result report, and collection of specimens resulted from field practice. Assessing their attitude is designed to assess students' scientific attitude during field practice activity which includes curiosity, inventive, critical thinking, stance firmness, realizing the limitations, appreciation evidences, sincerity, objectiveness, willingness to change their opinions, open-minded, willingness to co-working, as well as willingness and ability to ask questions.

4.3 Students' Responses toward the Implementation of Authentic Assessment

Questions in the questionnaire used to draw responses/ feedback of the students participating in the field practice toward the implementation of authentic assessment instruments in the integrated field practice are summarized in three statements about the implemementation of authentic assessment instruments, assessment indicators rubrics whose answers are compiled in categories of very difficult, difficult, fairly easy, and very easy. The percentage of answers of the questions are as shown on the following graphic in Figure 4.2.
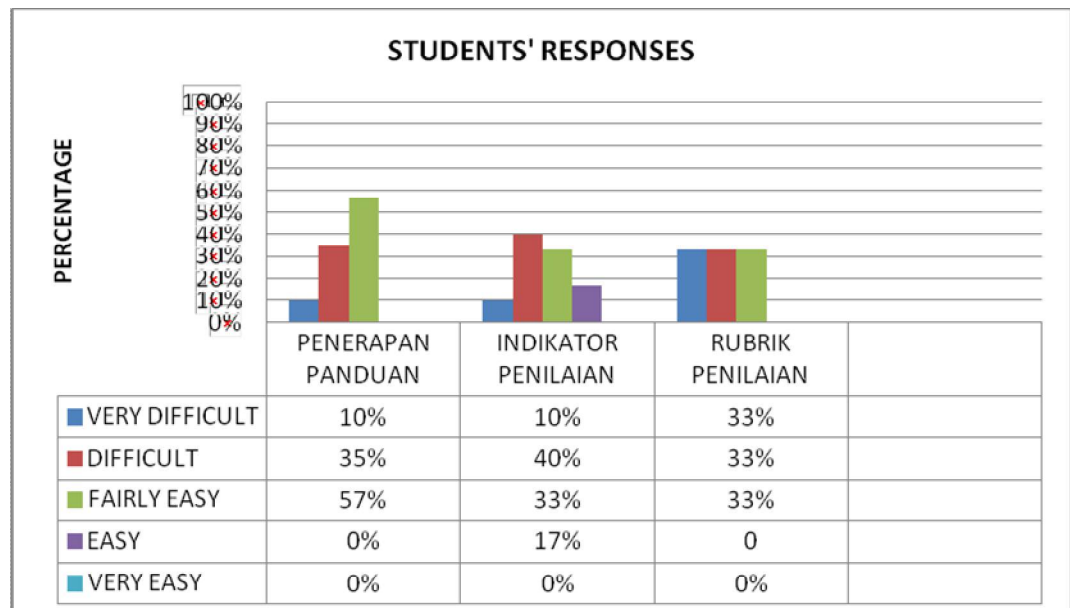
Figure 4.2 The percentage of student responses to the questions in the authentic assessment instruments which is the development results of the study

Based on the graphic in Figure 4.2, 57% of students/field practice participants state that questions or statements in authentic assessment intruments developed in this study are quiet easy to apply, though 40% of the students state that it is difficult to fulfill the assessment indicators, while each 33% of the students state that it is very difficult, difficult, and fairly east to apply the assessment rubrics. However, the result of structured interview with open answers shows students' reseponses which propose their opinios about the assessment aspects and indicators measured during field practice activities toward the improvement of the quality of their knowledge, performance and scientific attitude. After receiving socialization about the assessment aspects and indicators as mentioned in the assessment instruments before the implementation of field practice, students are challenged to show their best performance. They want to explore the knowledge by themselves and want to show their scientific attitude more during the practice field activities.

5. Conclusion and Suggestions

Based on the results of the third stage/year of the study, it can be conluded as follows.

1) The implementation of authentic assessment developed in the study is able to assess and record students/prospective biology teachers' profiles in solving problem in integrated field practices.

2) The existence of authentic assessment instruments of the development result in the study has an important role as tools and guides of learning process in field practice activities in attempt to improve the graduate quality of biology teacher education

3) The practicum supervisors as the instrument users give good responses to the content of the authentic assessment instruments which is the development result in the study with the indicators covering aspects of the suitability of the instruments with the needs in the field, the suitability of the instruments with their columns, the effectiveness of the instruments in the assessment, as well as the ease of use (average score of response of $3,57 \pm 021$).The existence of the instruments facilitates the supervisor to determine to determine achievement of students' learning objective and determine the kind of action for further guidances.

4) For students/prospective biology teachers/field practice participants, the impelementation of authentic assessment instruments which is the development result of the study gives impacts toward the quality improvement of knowledge, performance, and their scientific attitude. Socialization of aspects and indicators of the assessment as mentioned in assessment instruments before field practice gives challenges to show participants' best performances, to explore knowledge by themselves, and to behave more scientific during the field practice activities.

Departing from results of this study, suggestions can be propopsed so that the implementation of field practice can always be planned carefully in accordance with the learning objectives that will be achieved.As a measurement

device of learning process and results in field practice activities which have been examined by methods that can be accounted for, as well as the test results which showhigh validity and reliability, the authentic assessment instrument which is the development result of the study can be used as one of reference models or even it can be used directly as a assessment tool of similar field practice activities.Aside from being assessment tools, the contents in this instrument can also be used as guidancein determining the direction of the goal of field practice implementation.

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ANALYSIS OF IMPACT FROM TEACHER CERTIFICATION

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Abtract

This research applies qualitative research and study case as its method. The aim of this research is to describe professional competence and learning process improvement after teacher certification program in Bojongrangkas 02 Elementary School, Bogor. Triangulation is employed during the data collection, which is the combination of observation, interviews, and documentation. The data analysis consecutively consists of data reductions process, presentation, and conclusion. The data then is examined through credibility, transferability, dependability, and confirmability test. The subjects taken are three teachers who have been certified in Bojongrangkas 02 Elementary School. The result of the professional competence reveals that the teachers are able to master the fundamental notions of learning, handle the various students' ability, prepare the learning program, cope with stake holders at the school, understand the learning subject well, prepare the lessons based on the curriculum and level of students' development, conduct evaluation, and cultivate students' personality. On the other hand, they need guidance in exploring the material, using an appropriate strategy and teaching media, using information technology and communication as well as doing self reflection. The result of learning process improvement reveals that most teachers are competent in conducting the pre-activity session in the learning process, mastering the material, and using the appropriate language. However, they still need guidance in finding the appropriate learning strategy, using teaching media, encouraging students' participation and enthusiasm, and applying the post-activity session in learning process. It can be concluded that the certificate program is greatly beneficial although some teachers may still need some coaching. This need emerges, as, in the real situation, there are drawbacks that need to be addressed, especially those in the aspects of professional competence and learning process.

Keywords: Teacher certification, Professional competence, Learning.

1. Introduction

Any nation would consider that education sector plays a central or a significant role in the life of a nation as it serves and is responsible for providing and developing the human resources. Kompas (Kompas, May 13, 2014) reported

that, according to some international research, Indonesia education system continuously produced unfavorable results. Based on *Pearson'* rating in 2014, Indonesia stood at the bottom position out of 40 countries. Whereas according to the latest *Learning Curve* of *Pearson* describing the index of global cognitive ability and the result of educational system, Indonesia' rate has not shifted from that of 2012. This unfavorable situation shared similar rate with that of other international rating systems. The rate given by such leading international education company also considers the results of the study of mathematics, science, and reading as stated in *Progress in International Reading Literacy Study (PIRLS), Trends in International Mathematics (TIMMS),* as well as *Program for International Student Assessment (PISA)*. Indonesia was left behind Mexico (39), Brazil (38), as well as Thailand (35). In contrast, the top five positions were occupied by South Korea, Japan, Singapore, Hong Kong, and Finland.

The success of those Asian countries was due to their strong "Culture of Accountability" wherein teachers, students, and parents actively participate in education. In addition, people therein highly appreciate teachers and schools. To put a bright face on education system in Indonesia, or at least to drag it to the top position in Southeast Asia, competent teachers are undeniably needed, since teachers are those who directly participate in the educational process. The success of the process and the outcomes of learning activities depend on teachers. Therefore, teachers are accordingly the key to successful achievement of the educational objectives and teachers are also believed to play an important role to improve the quality of education.

Major breakthrough in 2005 has been evidence to the eye of public that the government has been literally improving the teachers 'competency by issuing the Law of the Republic of Indonesia Number 14 Year 2005 on Teachers and Lecturers. The Indonesia Government through the Ministry of National Education (MONE) has administered Teacher Certification Program since 2007. To determine teachers' level of competence mastery, the mapping of competence should be performed through the Preliminary Competency Test (UKA) before teachers' participating in the teacher certification program.

Ministry of Education and Culture of the Republic of Indonesia in 2015 announced the results of UKA (Preliminary Competency Test) held in February. The area that managed to stand at the highest position was the Special Region of Yogyakarta (DIY) with an average score of 50.1. Following the Special Region of Yogyakarta were the top 10 Provinces consisting of DKI Jakarta (49.2), Bali (48.9), East Java (47.1), Central Java (45.2), West Java (44,0) Riau Islands (43.8), West Sumatra (42.7), and Papua (41.1). There were also 5 Provinces which gained the lowest average scores namely Maluku (34.5), North Maluku (34.8), West Kalimantan (35.4), Central Kalimantan (35.5) and Jambi (35.7).

Teachers who passed the Preliminary Competency Test were then eligible for Teacher Professional Education and Training (PLPG). Several universities have been appointed by Teacher Training Institute (LPTK) to run PLPG successfully. These include Pakuan University (District 135), State University of Jakarta (District 109) and Indonesia University of Education (District 110). This PLPG program is to be held for at least 9 days consisting of 90 Meeting Hours (JP), distributed into 30 JP for theories and 60 JP for practices. One JP lasts for 50 minutes. This PLPG starts with a *pre-test* in writing (1 JP) aimed for measuring the participants' initial pedagogical and professional competence. Afterwards, some learning that includes the delivery of material theoretically (30 JP) and the implementation of theory into practice (60 JP) takes place. At the end of PLPG, there is a competency test that includes a written test and a practice test. Participants who manage to pass the test will receive a certificate of professional educators and are entitled to educator professional allowance (TPP).

A total of seven provinces obtain the best score in the administration of teacher competency test (UKG) in 2015. The score obtained at the time evidently hit the minimum competency standards (SKM) which is a nationally targeted score of 55 on average. Those seven provinces were DI Yogyakarta (62.58), Central Java (59.10), Jakarta (58.44), East Java (56.73), Bali (56.13), Bangka Belitung (55.13), and West Java (55.06). The 2015's national average score of UKG results for both field of competence was 53.02. In addition to the seven provinces above which successfully passed the minimum competency standards

(SKM), there were three provinces that surpassed the national average, namely Riau Islands (54.72), West Sumatra (54.68), and South Kalimantan (53.15).

Based on the UKG results gained by teachers having participated in PLPG, there is a necessity to improve the implementation of PLPG in the sense that it should become more stringent, or to render effort to improve the teachers' professional competence.

There was an adverse tendency arising from the teacher certification program which denoted the same idea as the study conducted by Prof Dr Baedhowi, M. Si. uploaded in kompas.com under the article entitled "The teacher certification targets no points". This article reads, "A study to determine the competence of teachers post certification, conducted by Baedhowi and Hartoyo in 2009 reveals that the motivation of teachers to promptly participate in the competence program is not solely based on their willingness to acknowledge their level of competence but rather on financial motivation. It can, therefore, be concluded that the certification is not solely a means to improve teachers' professionalism, but rather to gain the material benefits which is the main driving factor for teachers' engagement in this program.

The inconsistency found between the certification program and the facts on the ground have driven the researcher to conduct a study entitled the Analysis of Impact from Teacher Certification in Bojongrangkas 02 State Elementary School of Ciampea District, Bogor Regency during the second semester in the academic year of 2015/2016. This research is focused on the professional competence of teachers and improvement of the learning process after certification.

Teachers, posted as professionals in primary, secondary, and early childhood education in formal institution are appointed in accordance with the legislation. Their professionalism as teachers should be evidenced by a teaching certificate which is to be issued after they participate in the certification program. On this, Makawimbang (2011:140) argues that certification is the process of providing a teaching certificate for professional teachers, where this certificate is formal proof that supports the recognition granted to teachers as professionals.

Mulyasa (2012: 33) argues that certification is a process of granting

recognition to teachers who have acquired competence in carrying out educational services at a certain level, after they manage to pass the competency test conducted by the certification institution.

National Commission on Educational Services cited by Mulyasa (2012: 34) provides a more general understanding of certification *that certification is a procedure whereby the state evaluates and reviews a teacher candidate's credentials and provides him or her a license to teach*. In this case the certification is a procedure to determine whether a prospective teacher is eligible to obtain license and authority to teach. This is necessary as the graduates from teaching program of both the public and private universities come with various competences.

Basically the implementation of the teacher certification has many goals. Suyanto and Djihad (2013: 44) stated that the teacher certification aims to determine the eligibility of a teacher in carrying out duties as agents of learning at schools and to provide teaching certificate for teachers who have satisfied the requirements and passed the certification test.

Whereas, Wibowo, as quoted by Mulyasa (2012: 35) propose that this certification aims to :(1) Protect the profession of educators and education personnel; (2) Protect the public from incompetent practices that possibly ruin the reputation of teachers and education personnel; (3) Assist and protect the providers of education, by providing guidelines and instruments to recruit the qualified applicants; (4) Establish public image of the profession of teachers and education personnel; (5) Provide solutions in order to improve the quality of teachers and education personnel.

In addition to the objectives, the implementation of teacher certification also brings several benefits. The benefits of the certification, according to Djihad and Suyanto, are (2013: 44) to : (1) protect the profession of teacher from incompetent education services which may ruin the reputation of the teaching profession itself; (2) protect the public from educational practices that are not qualified and professional which will hamper efforts to improve the quality of education and preparation of human resources in the country; (3) become the means of quality

assurance in LPTK which is to prepare prospective teachers and also serve as a quality control for educational service users; (4) keep education provider institutions on track that they will not be distracted by internal and external intention which may potentially depart from the applicable provisions.

From a different angle, Mulyasa, argues (2012: 35) that the certification of teachers and educational personnel can be said to bring benefits as it consists of: (1) Quality Supervision, in the form of, for example, : (a) Certification bodies that have identified and determined a set of unique competencies (b) For every type of profession that may lead practitioners to sustainably develop their level of competence (c) The professionalism improvement by means of a selection mechanism at the time when teachers start their professional carrier in the organization and in their further career development. (d) The better selection process, the more qualified training programs as well as the more independent learning efforts to improve their professionalism; (2) Quality Assurance, which includes: (a) The professionalism development process and practitioner performance evaluation which will create a better image in the eye of the public and government regarding the profession organizations and their members. Thus stakeholders, especially customers/users, will be more appreciative of the profession organizations and in turn, profession organizations will be competent enough to provide a guarantee or to protect customers and users (b) Certification provides valuable information for customers/users who need to employ workers in some expertise area with certain skills.

Professional competence is the mastery of learning materials broadly and profoundly. As noted by Makawimbang (2011:139), professional competence is the ability of mastering the subject matter broadly and profoundly. Suyanto and Djihad confirm similar tone (2013: 51) as they argue that professional competence is the broad and profound mastery of learning materials which include mastery of curriculum subjects at school and substances of knowledge that cover the materials, as well as mastery of the structure and methodology of the knowledge.

In addition, Mulyasa (2012: 135) also makes some citation regarding the National Education Standards based on the elucidation of Article 28 paragraph (3)

point c which states that professional competence is the ability of mastering learning materials broadly and profoundly which facilitates students to meet the standards of competence set out in the National Education Standards. In contrast to the opinion of the experts above, Sanjaya (2008: 145) argues that professional competence is the competence or skills related to the completion of the tasks of education. From the foregoing, it is sufficient to conclude that professional competence is a competence that should be mastered by the teacher which relates to the implementation of the main task of teaching.

Suyanto and Djihad (2013: 51) argue that any sub professional competences should have the essential indicators as follows: (1) The ability to master the structured knowledge substances related to the field of study. This means that teachers should comprehend the teaching materials contained in the school curriculum, comprehend the structure, concepts and methods of knowledge behind it and which are relevant with the teaching materials, understand the relationship between the concept of the related subjects, and apply the knowledge concepts in teaching and learning; (2) The ability to master the structure and the scientific method which implies that teachers should master the steps of research and critical studies to deepen their knowledge or to enhance their understanding of the subjects.

Furthermore, Sanjaya (2008: 146) mentions several skills related to professional competence which come to be as follows: (1) The ability to master the fundamental aspects of education, for example, comprehension of the educational purpose to be achieved i.e. national objectives, institutional objectives, curricular goals and learning objectives; (2) The comprehension of educational psychology, for example, the notion of the development stages of students, the notion of learning theories, etc.; (3) The ability in the mastery of the lessons in accordance with the subject areas they teach; (4) The ability to apply various learning methodologies and strategies; (5) The ability to design and utilize various media and learning resources; (6) The ability to carry out the learning evaluation; (7) The ability to prepare a learning program; (8) The ability to work with supporting elements, for example, comprehension of the school

administration system, guidance and counseling; (9) The ability to conduct research and produce scientific notions to improve performance.

Regarding this subject, Mulyasa (2012: 135) also suggests the scope of teachers' professional competence, that they should: (1) Understand and be able to implement a basic educational notion in terms of philosophical, psychological, sociological aspects and others; (2) Understand and be able to implement learning theories according to the level of students' development; (3) Be able to handle and develop subject areas that they teach; (4) Understand and able to implement various learning methods; (5) Be able to develop and use a various tools, media and learning resources that are relevant; (6) Be able to organize and implement learning programs; (7) Be able to carry out the evaluation of learning outcomes; (8) Be able to grow the personality of the learner.

The term of learning is a new term that is used to identify the activities of teachers and students. Previously, it was known as the learning and teaching process. Gagne, Briggs, and Wager quoted Harvest (2001: 1.5) are convinced that learning is a series of activities designed to allow the students to experience the learning process. Learning refers to all activities that directly affect the students' learning process.

Rukmana and Suryana (2006: 10) argue that the learning process is basically an interaction between teachers and learners. The quality of relationships between teachers and students in the learning process is heavily determined by teachers' personality in teaching and those of students in learning. The relationship would influence students' willingness to engage in this activity. If a positive relationship is well-established between teachers and students, the later will try to earnestly engage in this activity. This happens as, in addition to students' tendency to imitate, students would have the pleasure gained from the positive relationship with the teacher. In other words, the quality of relationships between teachers and students determines the success of an effective learning process.

Sutardi and Sudirjo (2007: 2) consider that learning is a provision of environmental setting which provides a deep impression for students so that the learning program may grow and develop optimally. Thus, the learning process is

an external learning that is intentionally planned.

The Supervision Team for Didactic Method/Curriculum Course of IKIP Surabaya, as quoted by Suryosubroto (2009: 8) argues that efficiency and effectiveness in the interaction process of teaching and learning refer to the teachers' moving heaven and earth to help the students to learn well. To determine the effectiveness of teaching, teachers should conduct a test to evaluate various aspects of the teaching process. The test results will reveal the weakness of students' learning and those of teachers' teaching thoroughly.

The effectiveness of an activity depends on whether its plan is implemented or not. Regarding this, Sutardi and Sudirjo (2007:3) argue that learning should be effective and meaningful if it is conducted under the following procedure: (1) Recap of prior knowledge; (2) Exploration; (3) Consolidation of learning; (4) Establishment of competence, attitude, and behavior. (5) Formative Assessment.

Further, Suryosubroto (2009:13) argues that in providing the effective implementation of learning, the following points should be considered carefully: (1) The consistency of teaching and learning activities in the curriculums which should be based on the following aspects: (a) The purpose of teaching (b) The teaching materials provided (c) The teaching tools used (d) The evaluation strategy/assessment applied; (2) The implementation of learning and teaching process which includes (a) Creating environment for students' learning activities (b) Presenting the tools, resources, and learning equipment (c) Using the time available for teaching and learning activities effectively (d) Motivating students to learn (e) Mastering materials to be delivered (f) Engaging students in the learning process (g) Implementing communication/interaction during the learning process (h) Providing assistance and guidance for students (i) Implementing the assessment of the process and the learning outcomes (j) Generalizing the learning outcomes and making the follow-up.

2. Method

The research was conducted at the Bojongrangkas 02 State Elementary School, Bogor Regency. As to the time, this research was conducted in May 2016.

The subjects were three teachers who had been certified and the principal at Bojongrangkas 02 State Elementary School, Bogor Regency during the second semester of academic year 2015/2016. This type of research is qualitative research which employs the case study method. Data is collected by means of triangulation, which is the combination of the results of observational studies, interviews, and documentation. The results of the data collection and the reflection on data regarding what was heard, seen, experienced, and thought were recorded in written form in the field notes. In a qualitative study, the research instrument was the researcher himself. The data analysis is consecutively performed through the process of data reduction, data presentation, and conclusion. Data validity was examined by means of the test of credibility, transferability, dependability, and confirmability.

3. Result and Discussion

The issues, revealed from and discussed based on the interviews, observation, and documentation, address the professional competence of teachers and improvement of the learning process after certification. The findings in this study are evidently in accordance with the research focus and sub research focus, which will be presented as follows:

1. Teachers' professional competence post-certification.

The teachers were able to master the fundamental notions of education, which was, for example, shown by their comprehension of the educational purpose to be achieved. They were able to handle the students' distinctive ability. The lessons should be made to correspond to the curriculum and students' levels of development. The teachers were able to arrange the learning programs. The teachers were able to cope with the stake holders at schools, which was, for example, shown by their conducting a meeting with the parents and becoming committees at school events. The teachers were able to understand the lessons they should teach and able to carry out the evaluation. They were also able to cultivate the personality of the students, while at the same time applied the character values of the nation during the learning.

On the other hand, these teachers still need guidance to improve their ability in delivering material to the students, utilizing information and communication technology, self-reflecting, applying the training previously followed, and in seeking the relevant learning strategies where a need of guidance to implement cooperative learning model and utilize media in learning continuously exists.

Suyanto and Djihad (2013: 51) argue that any sub professional competences should have the essential indicators as follows: (1) The ability to master the structured knowledge substances related to the field of study. This means that teachers should comprehend the teaching materials contained in the school curriculum, comprehend the structure, concepts and methods of knowledge behind it and which are relevant with the teaching materials, understand the relationship between the concept of the related subjects, and apply the knowledge concepts in teaching and learning; (2) The ability to master the structure and the scientific method which implies that teachers should master the steps of research and critical studies to deepen their knowledge or to enhance their understanding of the subjects.

Furthermore, Sanjaya (2008: 146) mentions several skills related to professional competence as follows: (1) The ability to master the fundamental aspects of education, for example, comprehension of the educational purpose to be achieved i.e. national objectives, institutional objectives, curricular goals and learning objectives; (2) The comprehension of educational psychology, for example, the notion of the development stages of students, the notion of learning theories, etc.; (3) The ability in the mastery of the subject matter in accordance with the subject areas they teach; (4) The ability to apply various learning methodologies and strategies; (5) The ability to design and utilize various media and learning resources; (6) The ability to carry out the learning evaluation; (7) The ability to prepare a learning program; (8) The ability to work with supporting elements, for example, comprehension of the school administration system, guidance and counseling; (9) The ability to conduct research and produce scientific notions to improve performance.

Further, Mulyasa (2012: 135) also suggests the scope of teachers' professional

competence, that they should: (1) Understand and be able to implement a basic educational notion in terms of philosophical, psychological, sociological aspects and others; (2) Understand and be able to implement learning theories according to the level of students' development; (3) Be able to handle and develop subject areas that they teach; (4) Understand and able to implement various learning methods; (5) Be able to develop and use various tools, media and learning resources that are relevant; (6) Be able to organize and implement learning programs; (7) Be able to carry out the evaluation of learning outcomes; (8) Be able to cultivate the personality of the students.

2. Improvement of learning process post-certification

In terms of prelearning activities, most teachers are competent enough in having the students' prepared for the learning and in delivering the learning objectives. Nevertheless, these teachers still need guidance in recapping the prior knowledge or in linking what has already been known with what the students will learn. As to the aspect of learning material mastery, most teachers were able to deliver the teaching materials orderly and clearly, to link the material with the reality, and to present the material in accordance with the allocation of the predetermined time.

When viewed from the aspect of learning strategies, most teachers have already applied a contextual learning approach, but they still need guidance in the implementation of learning activities regarding how to implement cooperative learning model and various methods. In relation to the aspect of utilization of the learning resources/media, most teachers have already used learning resources that correspond to the learning objectives, but they still need guidance regarding how to utilize the tools or media in learning.

Regarding the aspects of student engagement, most teachers have been able to respond to every student's question well, but they still need guidance as to how to foster the active participation and enthusiasm of the students in learning. This is because teachers still need guidance in finding relevant learning strategies and media. In terms of the aspect of language use, most teachers have been using

appropriate, clear and correct spoken and written language. The teachers also deliver their arguments using appropriate language.

In relation to the aspect of learning assessment, most teachers have already been competent in monitoring the students' progress during the learning process. They have conducted the final assessment according to indicators/objectives. However, regarding the aspects of learning conclusion, most teachers still need guidance in implementing the follow-up and reflection sessions.

Regarding this, Sutardi and Sudirjo (2007: 3) argues that learning should be effective and meaningful if conducted under the following procedures: (1) Recapping prior knowledge. This stage can be done by: (a) Starting the learning process with points which the students have been familiar with (b) Providing motivation with interesting and useful learning materials as well as linking it with the meaning in everyday life (c) Encouraging students to be curious about new things; (2) Doing exploration. This stage is designed to associate new materials with the knowledge which the students have been familiar with by: (a) Introducing the standard material and the basic competencies that students need to have (b) Relating the new standard material and the basic competencies with the knowledge which the students have been familiar with (c) Implementing the most appropriate method and various methods; (3) Performing learning consolidation. This activity is to enable students in the formation of competence, by associating the competence with everyday life. This can be done by: (a) Involving students in interpreting and understanding the standard materials and new competencies (b) Engaging students in problem solving (c) Emphasizing the relevance of the standard material and new competencies with aspects of activities in the community; (4) Establishing the students' competence, attitude, and behavior. The formation of the intended competencies, attitudes and behaviors can be obtained by: (a) Encouraging the students to apply concepts, understanding and competencies that they have learned in everyday life (b) Directly practicing what is learnt so that students are able to build competencies, attitudes, and the new behaviors in everyday life (c) Applying the appropriate method to enable the formation of intended competencies, attitudes, and behaviors; (5) Performing

formative assessment. The assessment is conducted by: (a) Developing instruments to assess students' learning outcomes (b) Using the results of the assessment to analyze the shortcomings and weaknesses of the students as well as the problems faced by teachers to improve their services to students.

Further, Suryosubroto (2009:13) argues that to provide an effective implementation of learning, the following points should be considered carefully: (1) The consistency of teaching and learning activities in the curriculum, which is to be observed against the following aspects: (a) The purpose of teaching (b) The teaching materials provided (c) The teaching tools used (d) The evaluation strategy/assessment used; (2) The implementation of learning and teaching process which includes (a) Creating environment for students' learning activities (b) Presenting the tools, resources, and learning equipment (c) Using the time available for teaching and learning activities effectively (d) Motivating students to learn (e) Mastering materials to be delivered (f) Engaging students in the learning process (g) Implementing communication/interaction during the learning process (h) Providing assistance and guidance for students (i) Conducting the assessment of the process and the learning outcomes (j) Generalizing the learning outcomes and making the follow-up.

4. Conclusion and Remark

This research which addresses the professional competence reveals that the teachers have been able to master the fundamental notions of education, cope with students' various abilities, prepare the learning program, cope with stake holders at schools, master the lessons, in which the materials are prepared in accordance with the curriculum and the students' level of development, carry out the evaluation of learning, and cultivate the students' personality. On the other hand, they still need guidance to improve their ability in delivering materials, using the relevant instructional strategies and media, utilizing information and communication technology, and self-reflecting. Furthermore, the research, regarding the improvement in the learning process, reveals that most teachers are competent in conducting prelearning, mastering the materials, using the proper

language, and conducting the assessment of learning. On the other hand, they still need guidance in finding relevant learning strategies, utilizing the learning media, encouraging active participation and enthusiasm of the students, and concluding the learning. It can be concluded that the certification program is very beneficial despite the fact that, due to facts on the ground, the teachers still need coaching. There are still shortcomings that must be addressed, which in particular, are the aspects of professional competence and the improvement of the learning process.

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PERCEPTION AND NEEDS ANALYSIS OF DEVELOPMENT POEM TEACHING MATERIALS BASED ON LOCAL WISDOM[1]

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Abstract
This article is a part of the research and development that aims to produce poem teaching materials based on the local wisdom for IX grade of MTs in Palembang in the form of modules and CD. The problem is how are the perceptions and expectations that needed by students and teachers about the material that will made. This study uses the procedures of Bolg & Gall and Jolly & Ballito. The subject of this research are the students and teachers on the IX grade of MTs in Palembang with academic year 2015/2016, one state MTs and two private MTs. Collecting data using documentation, surveys, interview, observations, questionnaires, and focus group discussions. Data analysis using quantitative and qualitative approaches. The results showed: 1) In the curriculum, it is a competence to understand the poem. In the textbook there was only a few materials about poem, no special book that talks about poem, no special literary of teaching materials about poem, poem examples that provided from outside, and learning activities doesn't compatible with the demands of SK and KD. 2) Teachers and students perception's data towards the poem teaching materials used, 87% of teachers and 88% of students stated that poem teaching materials used in schools is not appropriate. 3) Analysis of the poem teaching materials should be developed data is 95.9% of teachers and 85.7% of students claimed it's a good thing that poem teaching materials develops in the module and *CD* form. Based on the results of forum group discussions (FGD) concluded that the existing poem teaching materials is not suitable with the curriculum, students are required to have competence in understanding poem. Poem as a literary work that has dulce et utile, contains the values of local wisdom that can be used to increase positive values for the students. The results is perceptions and needs analysis can be used as input for the developmentof poem teaching materials. Teaching materials that will be developed, expected to preserve the localwisdom and useful for the cultivation of moral values which identical to the value of character education.

Keywords: *poem teaching materials, basic competence, the value of local wisdom*

1. Introduction

Problems in learning literature is caused by there was only small part of literature in the curriculum, it is still included in the Indonesian language learning (Department of Education, 1998). The small amount of literary materials in the curriculum and literature teaching materials (Puskur, 2014), are unfortunate by education experts. In the conditions of nation 'devastated' like today, actually

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learning literature can be used as a 'helper'. The current living conditions are said to have experienced as a crisis of character (Akhwan, 2011:7), can be solved by maximizing the literature instructional.

Atmazaki (1991: 11) said that the fate of poem (old literature) in Riau community at this time is almost gone. It can be said that, young generation no longer enjoys poem, even they never see any poem books anymore. This is caused by poem books is rare to find. Old Malay literature or classic Malay literature is one of the cultural treasures in Indonesia which is almost forgotten by the young generation nowadays.

Poem as an old literary, is one of the standards of competence that must be mastered by MTs students. In the 2006 curriculum, required competencies by students in learning poem, contained in the standard of competence No. 5, to understand the types of poem discourse literature through listening to poem.

According to Noor (2007), Palembang besides famous of it's songket as a beautiful cloth, it's also famous for the rich literature sources, from legends, folklore, until poem story about the battle or heroic story. This patriotic poems usually spoken by and to the nobility. It is said by the Governor of South Sumatra on 11[th] November 2012, Abdul Moeloek as a cultural treasures of South Sumatra has been registered to Unesco (Sumeks, 2012: II) as the superior treasure of Palembang city. Beside Abdul Moeloek in Palembang, there was Syair Perang Menteng, which told a war between Palembang with colonial Dutch in 1819, evidence of the Palembang's struggle. As a traditional art, the Abdul Moeloek and Syair Perang Menteng has many useful value. Poem as a result of local wisdom is expected to be able to teach students to have a good character. This is in line with the philosophical foundation of the basic 2013 curriculum point No. 1, education is rooted to the nation's cultural life to build the present and the future (Puskur, 2014). The same as Idi (2013: 25) said, that the education sociology questioning the meeting and mixing of cultures surrounding environment such that the formation of certain behaviors and relationships are intertwined. Basically, the entire basic competence in teaching students must be achieved to the maximum, as well as literary competence.

Some of the problems mentioned above, needs to be solved. One of them is the development of Indonesian teaching materials, especially poem learning by using the local wisdom. Before carrying the development, it's need to know how the presence poem teaching material and the poem teaching materials nowadays.

The problem is, how to identify the needs of poems teaching materials like module and *CD* for students and teachers of IX grade *MTs* in Palembang based on local wisdom. The goal is to identify and describe the perceptions and needs of teaching materials like module and *CD*-based learning poems that based on local wisdom, according to students and teachers of IX grade *MTs* in Palembang.

2. Theoritical Background

To maximize learning literature, teaching materials needs to prepare. Djamarah (2010: 15) told, one of the characteristics of the learning process is there are teaching materials as the content of the interaction. As Muhammad Nuh, the Ministry of Education and Culture, said that good teaching materials is a connection with the formation of attitudes in each basic competence. Same like the Head of Development and Language Development said that the lessons that the thing that able to develop and form a pattern of a child's mind is Indonesian. This further reinforces the argument researchers to incorporate the values of local wisdom in learning Indonesian, especially in teaching literature at school.

Based on the learning objectives Indonesian language and literature, teaching literature at school should be realized precisely so it can provide great benefits to students, especially in increasing the knowledge, experience, and insights about life and living. The importance of improving the quality of learning this literature, also supported by one point of the Depdiknas Planning Secsion, '... one of the rehabilitation program of trust and moral society is intensifying educational literature and the arts as a mode for moral formation and development of taste' (Depdiknas, 2006:37).

Recognition of cultural or potential areas become important, in case to develop the students values through education, one of the strategies implemented is through the integration of local wisdom in the subjects matter, especially in

Indonesian literature. In addition, according to Permendiknas (2013) stated that the matter of local wisdom can also be used to fill the local content in school. The values of the local wisdom usually synonymous with the values of character. Character or morals will no doubt have a major roles in human life. Faced with the phenomenon of moral crisis, a charge often directed to the world of education as the cause. This is due to education as the forefront of preparing qualified human resources and morally valuables. In Islam, a character has an important position and is considered to have vital functions in guiding people's lives. Like in the Qur'an Surat An-Nahl verse 90 (1991).

To support the realization of the ideals of character development and addressing national issues today, the Government makes the character development as one of the priority programs of development and national education. Head of the Education Department os South Sumatera said, education legislation will be inserted in the curriculum in 2013 which should be applied in all districts/cities in South Sumatra. "Regions asset, such as local wisdom of culture, buildings, and local languages will be inserted in the local content in school. So students in South Sumatera will think globally and act locally. So, the culture of the area will be sustainable and a cultural asset never to be claimed by other countries anymore. Therefore, the children were saved and know about the culture itself.", Widodo told *Liputan6.com*, in Palembang, Wednesday (09/17/2014).

Poem teaching materials in the form like modules and audio-visual form such as *CD* will be developed by utilizing local wisdom. Local wisdom that will be implemented is the result of local culture, in this case a poem from Palembang culture and values of local wisdom that is synonymous with the values that contains of characters. Values extraction can be carried out through: analyzing the structure of the poem, analyzing the elements of poem, describing the theme of poem based on the core disclosure of poem, and the message (local moral values and character education) with convincing evidence.

Results of local wisdom of the culture in South Sumatra, Palembang in particular, the Syair Abdul Moeloek and Syair Perang Menteng, which will be

used for the development of teaching materials as an example and material to analyze the values it contains, because it contains with character values. Nurhayati et.al. (2012) wrote a paper about Dul Muluk in international seminar in Japan. Zahra (1995) in her thesis writing values contained in the 'Abdoel Moeloek''.

As we know that literature teachers can educate students to become a better person, more polite and more sublime. In consistence with the statement of Horatius in Wellek & Warren (1990: 24), dulce et utile, that literature serves entertain and teach something. Fundamentally, literature should at least disclose or contain three main aspects, namely decore (give something to the reader), delectare (giving pleasure through aesthetic elements), and movore (able to mobilize the creativity of the reader). Told by Atmazaki (1991: 124) that good literature gives values that are educational, aesthetic, moral, and social. Thus through the appreciation of literature, students can find values, like moral, educational, aesthetic, social, and other benefit. In the Islam teachings of Islam, also stated that art is beautiful and Allah loves beautiful, "Innallaha jamiil wayuhibbu aljamaal". In Thohir (2004: 44) stated, sustainability literature continues to grow when entering the time of the Prophet's companions, even when it appeared a variety of knowledge which acts as a support for the peeling depth literature contained in the Quran. Up to now the existence of literature can be perceived, even shape can be enjoyed with a wide range of variants, one of which is a poem.

Poem is a literary form of poetry, which is included in the old literary, came from Persia, brought into the archipelago along with the entry of Islam to Indonesia. Sudjiman (2006) stated, the word 'poem' is derived from the Arabic, which is 'Syi'ir' or 'Syu'ur' which means "feeling realized". Furthermore, the word 'Syu'ur' evolve into 'Syi'ru' which means poem. Etymologically 'syi'ir' comes from the word شعر أو شعر, the meaning is know and feel it. During its development, specifically in Indonesia, the poem changes and modificates became Malay typical, no longer refers to the literary tradition of the poem of the Arab countries.

A teacher does not have to be glued in creating or developing a teaching material. It said Tomlinson (2011: 66), '... Materials include anything which can be used to facilitate the learning, they can be presented in print, through live performance or display, or on casette, *CDI-ROM*, *DVD* or the *internet*.'. Prastowo (2012: 17) groups textbook teaching materials, modules, handouts, worksheets, models or mockups, audio instructional materials, interactive teaching materials, etc. Aqib (2013: 51) also classify the types of print instructional materials, nonprinting, and display teaching materials. The module is an alternative teaching materials that can be developed to achieve the learning objectives, which are packed full and systematic, and specific. *CD* is one type of teaching materials that using the computer technology or the Internet. *CD* is a media that utilizes multimedia formats, which can unify voice, video, text, and programs.

In accordance with the steps the development of teaching materials, both the module and the *CD*, then in this paper reported the results of the first step, which is carrying out a needs analysis.

3. Method

This study is part of research and development to produce new products through the development process, Borg & Gall (2007:256) and Jolly and Bolitho (Thomlinso, 2011:66). From the 10 measures of Borg & Gall and 7 step of Jolly and Bolitho, in this paper reported the results of the first step, research and collecting information or identification of need for material. This stages is preliminary study that was conducted to obtain feedback from potential users and studied the teaching materials which include: the literature and field studies, analysis of teaching materials once used by teachers, identifying the needs of teaching materials for students and teachers, and discussions (focus group discussion) ,

The subject of research to get the data the perceptions and needs of poem teaching materials based on local wisdom in the form of modules and *CD* are Indonesian teachers and students of IX grade on *MTs* Negeri 1, *MTs* Aisyiya, and *MTs* Patra Jaya Mandiri.

Collecting data using survey, documentation, observation, interviews, questionnaires, and focus group discussions. The survey, documentation, and observations made according to the curriculum and teaching materials used for this poem. Interviews were conducted with Indonesian teachers. Questionnaire addressed to teachers and students in an effort to seek input on learning poem, which has been carried out and teaching materials poem that will be developed; as well as the final discussion with the teachers/experts through focus group discussions.

Data analysis using two model approaches, namely qualitative and quantitative approaches, combining two different research/mixed method. As the Creswell (2008: 552), 'A mixed methods research design is a procedure for collecting, analyzing, and mixing both quantitative and qualitative research and methods in a single study to understanding a research problem'.

Data from interviews, documentation, surveys, observations, and results FGD objectively analyzed, described, and then concluded in an effort to obtain information about the importance of research and development of teaching materials and CD learning modules based on local wisdom poem for IX grade MTs in the city of Palembang. Data perceptions and needs questionnaire results were analyzed by using a rating scale measuring scale with details: 1 = not true/ not suitable/never; 2 = less true/less suitable/infrequently; 3 = right/appropriate /ever; 4 = very true/very appropriate/always. Or: 1 = no need/needed; 2 = less necessary/required; 3 = necessary/required; 4 = very necessary/required. The results of the analysis will be used as consideration of poem material development.

4. Result and Discussion

After the initial phase of the research, according to the procedure that used (Bord and Gall) and (Jolly and Bolitho), the next step is to reported results of the *research and collecting information* or *identification of need for material.*

Survey, Documentation, Observation, and Interviews

Surveys and studies conducted on curriculum documentation and textbooks Indonesian IX grade *MTs*, interviews were conducted with two Indonesian teachers at *MTs* 1 Palembang.

In the curriculum, it is stated that students are required to have Competency Standards No. 5, listen: to understand the discourse of literary types through listening lyric poem. KD 5.1: find the themes and messages of poem that is played, KD 5.2 analyze the elements of poem that was played. Indicators to be achieved, 'Being able to write the lyrics were played, were able to identify the characteristics of poem, able to analyze the structure of poem, able to analyze the elements of poem, able to find the theme of the poem is based on the core disclosure of poems, able to capture the message (local moral values and character education) poem with convincing evidence, is able to deduce the content of poem, and is able to make examples of poem.'

Based on surveys and interviews, researchers and the Indonesian teachers of *MTs* 1 Palembang, Dra. Irdawati, M.M. and Nurhayati, S.Pd. about poem, it is known that there is no teaching materials that suitable with the competencies and indicators that are expected. Indonesian textbooks that used just contains small amount material about poem. In the textbooks used in schools, 'Bahasa dan Bersastra Indonesia Kelas 9' (Wirajaya 2008) material of poem include: history of poem, the types of poem, sample poems, and the task of determining the message of the poem. No information about the structure of the poem, the types of poem are not given instance, there is no way to conclude the contents of poems accompanied by an example.

There is no no examples in the textbooks about poems based on the analysis of the elements and values contained. By the standards of competence and the basic competencies, students are required to have the ability to analyze poem, but in the book there is no text information, training, or work associated with the analysis of the values contained in the poem. This fact is important in the effort to plant the values of local wisdom that is consistent with the character values that can encourage students to have a positive character.

In addition, the Indonesian textbooks are not given examples of poems based on local wisdom. Examples of poems published in the text book is 'Syair Pesanan Ayahanda' which consists of 10 stanzas. Literary books that had been used not oriented to local literature (especially Palembang) but tend to be on the famous literatures in the archipelago so that students do not know that in the region there is also a literature that worthy of study. The learning activities that assigned to the students in the textbook does not comply with the demands in the standards of competence and basic competence. In the standard of competence and the basic competencies, students are required to have the ability to understand the message of the poem that is listened, but the learning activities that are written in textbooks, students are asked to read a poem. There are no media that can be used to play the poem.

The results of observation are also showed that learning poems done in class only based on existing textbooks. Students are asked to read a sense of poem, elements of poem, recited examples of poem and wrote the theme and the message contained in the poem. Students also had difficulty in finding an element of poem. This could be due to the material in the textbook are very minimal. Besides its activities are not appropriate.

Results of Teacher and Student Perceptions

To find out feedback/perception of teachers and students of IX grade *MTs* toward poem teaching materials used by teachers over the years, there was some data that collected using the questionnaire in July 2016 and August 2016 to the subject of research. Questionnaire for teachers contains 15 statements and 1

suggestion, for students contains 12 statements and 1 suggestion. The statement accompanied by four possible answers, namely: 1. not correct/not suitable/never, 2. less true/less suitable /infrequently, 3. correct/appropriate/ever, and 4.very true/very appropriate/ always. Here are the results of the analysis.

Data from the teacher's perception questionnaire, the claim that poem teaching material that is/are used in accordance with the basic competencies, 6 teacher said it was not correct/not suitable, 3 teachers answered less suitable, 2 teachers answered accordingly, and no one answered very appropriate. Similarly with the statement that the existing teaching materials poem/used in accordance with the indicators, 6 teacher said it was not correct/not suitable, 3 teachers answered less suitable, 2 teachers answered accordingly, and no one answered very appropriate. The statement that the material in the poem teaching materials complete, answered by 7 teachers were not properly/not suitable, 3 teachers answered less appropriate, and 1 teacher answer accordingly, no teachers were answered very appropriate. Likewise, the statement that the material in the poem teaching materials proper, and no representation that materials in the poem teaching materials interesting, answered by 7 teachers were not properly/not suitable, 3 teachers answered less appropriate, and 1 teacher answer accordingly, no teachers were answered very corresponding. For representation that materials in the poem teaching materials accuracy in concept and theory, 6 teacher said it was not correct/not suitable, 3 teachers expressed less true/less appropriate, and 2 teachers expressed correct/appropriate, and nothing is stated very suitable/very correct. Statements that include poem teaching materials examples of local poem, answered by all teachers (11 people) are not properly/not suitable/never. All teachers also expressed no true/not suitable/never to a statement that the examples of poem contains the values of local wisdom. The statement that the examples of poem include explanations, 8 teachers answer is not correct/not suitable, 2 teachers answered less true/not appropriate, one teacher answered correct/ appropriate, no one answered so true/very appropriate. Same with the statement that the arrangement of the contents of poem teaching materials systematic and statement arrangement of the material in accordance with the concept, 8 teachers

answer is not correct/not suitable, 2 teachers answered less true/less suitable, 1 teacher answered correct/appropriate, no one answered so true/very appropriate. Statements about the content of the material composition balanced, answered by nine teachers were not true, one teacher less correct answer, one teacher answered correctly, no one answered very true. Similarly, a statement that is clear and complete instructions, supporting the presentation of the material suitable and appropriate presentation of the material supporting statement, answered 9 teachers were not true, one teacher less correct answer, one teacher answered correctly, no one answered very true. There are 6 teachers said not really, 2 teachers expressed less true, and 3 teachers certifying that the sentences of teaching materials poems are easy to understand, sentences poem instructional materials effective, sentences instructional materials poem using standard language, words in poem proper teaching materials, and a statement that the words in a poem appropriate teaching materials. A statement that the teaching materials are equipped with a *CD* of poem gathering, answered by all teachers (11 people) are not properly/never.

From the data of the teacher's perception, it can be concluded that 70% of teachers said that the existing/used poem teaching materials are not suitable so far, 17% said less appropriate, and only 13% said appropriate. So 87% of teachers said that the poem teaching materials used less appropriate. The questionnaire data from student's perceptions, known to 110 students expressed very true that teachers use textbooks to teach poem Indonesian, 30 students stated correctly. There are 112 students stated is not true that poem teaching material in textbooks is already complete, and 28 students expressed less true. 123 students expressed less completely and 17 students stated is not true that the teacher teaches lyric poem using special teaching materials. Likewise, the statement that teachers use teaching materials appropriate in learning poem, almost all of the students said it was not true (123 students expressed less true/rarely, 17 states do not really/never. Almost all of the students also expressed less true/not appropriate (123 students) that the material in poem teaching materials complete, and 17 students stated is not correct/not appropriate. Statement of materials in poem teaching materials right, represented by 120 students less true/not appropriate, 10 students said it was

not correct/not appropriate, only 9 those who assert the correct/appropriate, no one answered so true/very appropriate. A statement of teaching materials poems include examples of poem locally, was also answered by 120 students less true/less suitable, 2 students answer is not correct/not appropriate, and 18 students answered correctly/appropriate. A total of 133 students answered not really/not match that sample poem contains the values of local wisdom, only seven people who answer correct/ appropriate. A statement that the manual is clear and complete teaching materials, answered by 109 students is not correct/not appropriate, 31 students answered correct/appropriate. There are 100 students expressed not really/not match that sentences are easy to understand poem teaching materials, 40 students responded less true/less appropriate. Similarly, the statement that the words rhyme effective teaching materials. A statement that the teaching materials are equipped with a *CD* of poem gathering, to be answered by all students (140) is not correct/not suitable/never.

Based on the results of students' perceptions can be concluded that 50% of students stated poem teaching materials used in schools is not appropriate, 38% said it was not appropriate, 7% said very appropriate, and 5% stated that accordingly, so 88% of students stated that the poem teaching materials were used in school for less/not appropriate.

Based on data from the teacher and student perceptions of the teaching material is used for this poem, showed that 70% of teachers and 38% of students stated that teaching material is used for this poem is not appropriate; 17% of teachers and 50% of students expressed less appropriate; 13% of teachers and 7% of students stated accordingly; 0% 7% of teachers and students expressed very appropriate. Overall it can be stated that 87% of teachers and 88% of students said that poem teaching materials used in schools lacking/not appropriate.

Results of Teacher and Student Needs Analisys on Subjects to be Produced

In order to obtain information about the needs of teachers and students of poem teaching materials that will be developed, questionnaire has distributed to the subject of research, in July-August 2016. The questionnaire for teachers contains 24 statements and 1 suggestion for students 15 statements and 1 suggestion. The statement accompanied by 4 possible answers, namely: 1.not necessary/unnecessary, 2. it takes less/less necessary, 3.required/necessary, and 4.desperately needed/very necessary. Here are the results of the analysis.

Data from the analysis of the needs of teachers to the poem teaching materials developed by researchers, 8 teachers expressed that it is necessary poem teaching materials and creative new, and three teachers expressed required. All teachers (11 people) claimed a much-needed poem teaching materials in accordance with competence, poem teaching materials according to the indicators, IX grade *MTs* against teaching materials poem many benefits, instructional materials poem complete, poem teaching materials is clear, as well as much-needed teaching poem materials interesting. Against the statement that it is necessary poem teaching materials include examples of local poems, statements need examples of poem that contains the values of local wisdom, and statements necessary sample analysis of the values of local wisdom in poem, as much as 9 teachers expressed are needed, one teacher stated required, 1 teacher expressed less necessary, and no states are not required. The claim that the examples of poem analysis needs to include explanations, answered by all teachers (11 people) will be needed. Likewise, the claim that the examples analysis of poem should include evidence, statement of need arrangement of the contents of teaching materials poetic balance between material, examples, assignments, and tests, the statement needs to makeup the contents of poem teaching materials systematic, statements need information supporting presentation material accordingly, the statement necessary teaching materials poem which comes with a *CD* gathering, the statement should guide the use of *CD* gathering clear and complete statement of need *CD* gathering poems teaching materials are clear, and the statement of need *CD* gathering poem teaching materials interesting, all the teachers responded

very required. Against the assertion that needs to *CD* gathering poem teaching materials contains the results of local wisdom, answered by 9 teachers are needed, one teacher replied needed, one teacher said less necessary, no one answered is not required. To the assertion that needs to *CD* gathering relevant poems teaching materials, all teachers (11 peoples) state is needed. All teachers also expressed needed the words of poem teaching materials that are easy to understand, sentences are effective in poem teaching materials, and it takes the right words in poem teaching materials.

From the analysis data of the needs of the teacher showed that 95.9% of teachers said much needed poem teaching materials in the form of module and *CD* for IX grade *MTs* to be developed, 2.6% of teachers said needed, and 1.5% of teachers said less necessary, no teacher who declares not needed.

The results of the questionnaire needs of students about poem teaching materials developed obtained the following data. Statements about the need of teaching materials specifically about poem, 80 students responded very necessary, 50 students answered needed, 8 students answered less needed, and only two students who answered not required. Answer students about needing new poem teaching materials, 123 answered urgently needed, 17 is required, and no one answered lacking/not needed. Statements about the need to complete the poem teaching materials, 130 students responded answered very needed, and 10 students answered needed. The students' answers on the need of poem teaching materials clear, 133 students responded very needed and 7 students answer required. Statements about the need of poem teaching materials that include sample local lyric, 110 answered urgently needed, 20 students answered needed, 10 students responded less needed. Against the assertion that needs to examples of poem that contains the values of local wisdom, 112 students responded very necessary, 13 students answered needed, 15 students responded less needed. Statements about the need to sample analysis of the values of local wisdom in poem, 110 students responded very necessary, 20 students answered needed, 10 students responded less needed. The students' answers to the statement that these examples should include an explanation of poem analysis, 120 students responded

very necessary, 20 students answered needed. Statements about the need to fill the composition of poem systematic teaching materials, 110 students responded very necessary, 20 students answered needed, 10 students responded less needed. A statement that the contents of teaching materials necessary arrangement poetic balance between material, examples, assignments, and tests, answered by 120 students is very needed, 20 students answered needed. Statement that the necessary poem teaching materials with a *CD*, all students (140 persons) answered urgently needed, and all the students also answered very needed poem teaching materials gathering *CD* are clear, also needed *CD* gathering poems teaching materials interesting. Statements that need *CD* gathering poem teaching materials contains the results of local wisdom, the answer is very needed by 100 students, 20 students answered needed, 15 students answered less needed, and 5 students responded answered not needed. Statements that need sentences that use standard language in poem teaching materials, 131 students answered very needed, and 9 students answered needed.

From the data analysis of the students needs to the poem teaching materials developed showed that 85.7% of students stated is very needed, 10.7% said it needed, 3.3% said less needed, and only 0.3% said it was not needed.

Based on the needs analysis to poem teaching materials that will be developed, showed that 95.9% of teachers and 85.7% of students claimed very needed poem teaching materials in the form module and *CD* for IX grade *MTs* to be developed, 2.6% teachers and 10.7% of students stated needed, 1.5% of teachers and 3.3% of students expressed less needed, and 0% of teachers and 0.3% of students said it was not needed.

The Results of the Final Discussion with The Teachers/Experts through FGD.

All data findings from perception and needs analysis, to be further discussed in groups of experts/practitioners through FGD, according opinion of Carey (1994). FGD conducted in August 2016 by a group of experts/ practitioners, namely Indonesian teachers who teach at *MTs* first, *MTs* Aisyiyah, and *MTs* Patra Mandiri. Based on discussions (FGD) with 10 Indonesian teachers,

which is also in consultation with the Promoter and Co-Promoter, the result that poem teaching materials is not maximized when instructional poems published in the curriculum, students are required to have competence in understanding poem, and poem can be used to foster positive values in students. That requires the procurement of poem teaching materials based on local wisdom in the form of modules and *CD*s for IX grade *MTs* in Palembang. After conducting in-depth discussion, agreed on the following aspects, 1) Teachers should use special teaching materials about poem. 2) Teachers should use teaching materials of interest when teaching poem. 3) poem teaching materials must contain local wisdom. 4) Examples of poem in teaching materials must come from local poem. 5) Local poem can be used as a means to preserve the values of local wisdom. 6) poem teaching materials must contain the values of local wisdom. 7) poem teaching materials should contain examples of the analysis of the value of local knowledge. 8) The value of local wisdom needed teaching materials developed in the poem include local moral values of peace and prosperity; the character value: 4 main values forming the moral alkarimah, seven basic values of character, and 18 values of character education in the National Education. 9) poem teaching materials must be complete and in accordance with the competence to be achieved. 10) teaching materials should contain: the concept (definition of poem), principles (characteristic of poem), the fact (historical poem, the kind of poem and examples, the building blocks of poem: the elements, understanding, example), procedures (steps find a theme/message in the poem along with an example, take the example of Syair Abdul Moeloek and Syair Perang Menteng), as well as attitudes or values analyze/find the values of local wisdom and character contained in the poem Syair Abdul Moeloek and Syair Perang Menteng (which listened) with evidence. 11) poem teaching materials should be balanced between the introduction, contents, and cover. 12) Posts in poem teaching materials module shape and font of the letters should be clear. 13) equipped with teaching materials poem tasks, exercise, and proper evaluation. 14) poem teaching materials include instructions for use. 15) Instructional materials include interesting illustration of the poem. 16) The size of the module poem teaching

materials should not be too big. 17) The front of the module there should be an illustration of local wisdom. 18) teaching materials should be equipped with a *CD* of poem gathering. 19) *CD* gathering of poem teaching materials should be interesting. 20) *CD* gathering of poem teaching material should be in accordance with the material gathering. 21) *CD* gathering of poem teaching materials should raise the values of local wisdom. 22) *CD* gathering of poem teaching materials include clear instructions for use. 23) The composition of colors in matching *CD*. 24) The form and letter font in the *CD* should be clear. 25) The duration of gathering material in accordance with the allocation of time. 26) Background used: audio sound male/female. 27) *CD* gathering verse learning should be in line with the contents of the module. Part gathering accordance with the competencies and indicators to be achieved. 28) The language used in the standard language poem teaching materials. 29) The sentence used in teaching materials poem effective sentence. And 30) Words in poem teaching materials should be appropriate.

5. Conclusion and Remark

Based on survey data, documentation, observasi, and interviews, concluded that the curriculum there is a standard and basic competencies that requires students to have the ability to understand the poem, there is no teaching materials of literary special about poem, the textbook is very little material about poem, no special books that discuss poem, examples are given more poems from outside the area, and learning activities incompatible with the demands of SK and KD. From the result of the perception concluded that 87% of teachers and 88% of students said that poem teaching materials used in schools lacking/not appropriate. From the results of the needs analysis concluded that 95.9% of teachers and 85.7% of students claimed very needed poem teaching materials in the form of module and *CD* for IX grade *MTs* to be developed

Based on the findings, after in-depth discussions (FGD) it can be concluded that the existing poem teaching materials is not maximized when instructional poems published in the curriculum, students are required to have competence in

understanding poem. Poem as a literary that has dulce et utile, has values of local wisdom that can be used to foster positive values in students.

Perceptions and needs analysis results can be used as input for the development of poem teaching materials based on local wisdom in the form of modules and *CD* for IX grade *MTs* in Palembang. Poem teaching materials that will be generated is expected to preserve the results of local wisdom and used for the cultivation of the values of local wisdom that is identical to the value of character education.

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ABDUL LATIF: THE FORGOTTEN MERCHANT OF THE WESTERN COAST OF SUMATRA

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Abstract

Minangkabau merchant is a kind of typical entrepreneuship of Minangkabau closer equivalent to the concept of merchant rather than as an entrepreneur in terms of capitalist industry. Abdul Latif is a portrait of a Minangkabau merchant managed to build a business network through the shaft Malaya, India, Arabia, and Egypt. Business profits, channeled through the efforts evoke a sense of nationalism and encourage the modernization of Islam in West Sumatra, and the Nagari Koto Anau, in particular. However, the figure of entrepreneurs is not widely known, especially among the younger generation of Minangkabau. Who is Abdul Latif?, How to build world business? How to encourage modernization efforts and Islam in West Sumatra?

Keywords: Merchant, Trade, Koto Anau, Coastal, Modernization of Islam.

1. Introduction

On October 20, 2007, around 700 merchants of Minangkabau from around the world held a meeting in the city of Padang with establishing a relationship agenda, sharing experiences in a business dialogue, and building network to face the challenges of globalization.

[2]Related to this Minang merchants meeting, the topics of the discussion about the economy and Minangkabau merchants world rarely gets the attention of the researchers of history and other social sciences. Historically, the merchants of Minangkabau have been a cornerstone of the economy of the people, they are important and should be protected and facilitated by the country[3].

Minangkabau merchant is a kind of typical *entrepreneuship* of Minangkabau closer equivalent to the concept of merchant rather than as an

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[2]"Saudagar Minang dari Penjuru Dunia akan Bertemu di Padang.", further reading at http://www.waspada.co.id/index.php?option=com_content&view=article&id=2000:saudagar-minang-dari-penjuru-dunia-akan-bertemu-di padang & catid=17 & Itemid=30. Accessed on 18 Februari 2013. Minang merchants from Around the World will meet in Padang. "Further bacahttp: //www.waspada.co.id/index.php? Option = Com_content & view = article & id = 2000: merchants were minang-of-the-world corner-to- meet-the field & catid = 17 & Itemid = 30. Accessed on February 18, 2013.

[3] Capitalism and the nation state tends to marginalize the lives of small merchants, so they often postulated as the power of "shadow economy" or "informal sector, which is not recorded in official statistics, and therefore untouched by government provisions and tax liabilities

entrepreneur in terms of capitalist industry. The term g*aleh* or reworded into *galas*, at the beginning the word is related to the middle class merchant society and not upper class society. The prior orientation of these merchants is not on capital and maximum profits gain, but rather on the orientation of foraging and meet the complicated social demands. The next development in the middle-class merchants moving towards to be successful merchants or it is now called conglomerates.

The more important thing that is the advanced level to create self-awareness of the ideas of "improvement" related to the nationalism of modern Indonesian, as well as the agent of change in addressing the challenges time. Merchants life in coastal areas of Western Sumatra have been described by the beach and sea life, but unfortunately, most of the merchants surround the coast are engaged in the spice trade sector, textiles trade, or engaged in banking. Based on the origin of the western coast of Sumatra merchants were not only all from the region, but there were also derived from Darek and Rantau Minangkabau region.

The dynamics life of western coast of Sumatra merchants were quite unique, especially their strategy for maintaining the existence of the trade, and the pattern of relationships built through merchant associations. The successful merchants were not only struggling in the business world, but also devoted themselves into the world of education, social, and accelerated the process of modernization of Islam in Minangkabau. One of the interesting figures from the western coastal Minangkabau merchants to be discussed in this paper is the figure of Abdul Aziz Latif who tend to be forgotten nowadays.

Abdul Latif, so merchants origin Nagari Koto Anau Solok fondly called, is one of the successful profile merchants from western coast of Sumatra not only in the business world, but also has contributed to the relatively large on the process of Islamic modernization in his hometown. Why is Abdul Latif worthy appointed as a subject in this article? First, his business trip began by selling tobacco, palm and palm leaves, betel leaves in his hometown Koto Anau. In the next stage he migrated to Padang and became agents of branded calico/mori cloth from Garut, West Java. Second, in 1916 Abdul Latif had joined *the Vereeniging merchants*

chaired by by Nurdin Saleh[4]. In 1929 the association was renamed into the Association of Indonesian Merchants, chaired by Taher Marah Sutan. Third, in 1930 Abdul Latif served as President of Sumatra Banking, Trading Corporation Ltd (company docks and shipbuilding), and the owner N.V Haji Abdul Latif (a textile company that manufactures sarong) located in Simpangharu Padang. Fourth, Hamka specifically in his work *"Ayahku"* wrote his impression on Abdul Latif. Hamka wrote, merchant of Anau Koto had fought for the struggle of youth in West Sumatra[5].

Abdul Latif's business rapidly developed in Padang, influenced the *zeitgeist* of the Minang merchants movement engaged in *Pasar Gadang, Pasar Ilir, Pasar Mudik, Pasar Batipuh*, and *Pasar Malintang*. Those markets served as a business center and a gathering point for merchants coming from Darek and Coastal. In addition to his function in a Minang merchants association, *Vereeniging merchants* at that time also serveed as counterpart to hold Chinese traders who tried to monopolize trade along the western coast of Sumatra.

Talking about Abdul Latif are inseparable from the concept of *entrepreneurship. Entrepreneurship* means *business ownership*, the one's ownership of the company who are with small and medium enterprises. According to the Global Entrepreneurship Monitor, from the standpoint of motivation, a person chooses to establish and run their own business on the basis of:

1. Starting a business in order to exploit or pursue opportunities that can generate revenues and profits in the future, so-called *opportunity entrepreneurship*.

2. Starting a business due to the factor of necessity caused by the lack of other better options to build his own business, called *necessity entrepreneurship*

According to Wagner, A person can decide to be entrepreneurs because he has rationally calculated that by setting up his own business, he will obtain discounted

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[4] Further reading on "Persatuan Saudagar Indonesia" dalam *Propinsi Sumatera Tengah.* (Jakarta: Kementerian Penerangan, 1953), hlm. 753. Further reading "Unity Merchant of Indonesia" in Central Sumatra province. (Jakarta: Ministry of Information, 1953), p. 753.
[5]Hamka, *Ayahku.* (Jakarta: Widjaja, 1950), hlm. 189.

life-time utility better than he works in a company. Based on the theory of entrepreneurship above, factor encouraging Abdul Latif plunged in business and commerce at that time was a factor of *opportunity entrepreneurship.*

Anthropological study of the market states that the personal bonds made the market system function. Clifford Geertz, shows that the relations in the Indonesian market generally consistently in accordance with the desire for profit and rationality. [6]

Nonetheless, in the context of Minang merchants, many observers argue that one of the weaknesses of Minang entrepreneurs, so far, precisely because it relies on the family relationships; competition is becoming weaker and less innovative, so that a family history of a large merchant class continuing from one generation to the next generation become rare.

In addition to the concept of entrepreneurship, the factors drove the success of Abdul Latif as a successful merchant on the western coast of Sumatra caused by *n Ach*. David C Mc.Clelland in his experiments, managed to find a virus named *n Ach (need for Achievement)*, the need to achieve results or achievements. This virus is a personal attitude causing people to behave more aggressive. People who in every action derive satisfaction achievement[7]. When connected with the activities of Abdul Latif in managing his business, the virus also infected him, where he wants to be successful, then the result of the business profits were used for social purposes and encouraged the modernization of Islam in West Sumatra in general and in particular Anau Koto.

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[6]Clifford Geertz, *Penjaja dan Raja.* Terjemahan. (Jakarta: Yayasan Obor, 1989).
[7]Myron Weiner (ed), *Modernisasi Dinamika Pertumbuhan.* (Yogyakarta: Gajah Mada University Press, 1986), hlm 3-12

B. Discussion

1. From Anau Koto to Kota Padang: Development Process of Abdul Latif's Entrepreneurship

a. Abdul Latif Childhood

Abdul Aziz Latif lahir years 1885 di Sungai Dareh Nagari Koto Anau[8] yang indah permai. Koto Anau merupakan sebuah nagari yang terletak di kaki Gunung Talang Kecamatan Lembang Jaya. Menurut historisnya Nagari Koto Anau merupakan bagian dari konfederasi Kubuang Tigo Baleh yang secara adat disebut sebagai Nagari Adik. Menurut Geertz, pengamatan tentang personalitas berkaitan dengan stuktur pengalaman (*structure of experience*) seseorang.[9]

Abdul Aziz Latif was born in 1885 at a beautiful scenery of Sungai Dareh Nagari Koto Anau. Koto Anau is a village located at Mount Talang slope in District of Lembang Jaya. According to history of Nagari Koto Anau is part of a confederation Kubuang Tigo Baleh customarily referred to as Nagari Adik. According to Geertz, the observation of the personality associated with the structure of experience (*structure of experience*) of person. [10] The structure experience is a total accumulated of cultural patterns, the conclusion of symbols built based on each event experienced by someone, embodied in the concept of symbolic structures which can be felt by everyone.

There are some important words in *psychoanalysis* about the "structure of experience" Geertz states namely: cultural patterns, symbols, and personalities. The prior of the analysis seems clear on the cultural roots of Nagari Koto Anau, where Abdul Latif was born, grew up and even grew in conflicts early Islamic

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[8]The name of Nagari Koto Anau was derived from the word koto anam which means six koto (village) namely Anam Koto, in the territory of the Kingdom of Koto Anau past that includes Land Sirah, Koto Tower, Batu Many, Koto Laweh, Limau Lunggo, and Bajanjang Batu. In the development history, after the Kingdom of Koto Anau does not exist anymore, Stone Many, Koto Laweh, Limau Lunggo, and Stone Bajanjang then broke away and formed their own villages. Only Land Sirah and Koto Gadang that still survive and continue to use the name Koto Anau to mention the name of their area. Name Nagari Koto Anau sometimes also called Koto Gadang because their area is located in the center of Koto Tower. The former territory of the Kingdom Koto Anau then later called the District Lembang Jaya territory in addition to covering Anam Koto Inside also include Ampek Koto ax Redai which is the former Kingdom Camin Taruih and the Kingdom Camin Talayang which later became Mountain region Basil IV-Koto covering Bukik Sileh, Salayo Tanang, Kampung Batu In and Simpang Tanjung Nan Ampek. Nagari Simpang Tanjung and Kampung Batu Nan Ampek In 2002 broke away from the District Lembang Jaya and formed District of Twin Lakes.

[9]Rudolf Mrazek, *Semesta Tan Malaka*. (Yogyakarta: Bigraf Pub, 1994), hlm. 2.

[10]Rudolf Mrazek, *Semesta Tan Malaka*. (Yogyakarta: Bigraf Pub, 1994), hlm. 2.

reformation also influencing his characters. Abdul Latif was born from his parents named Latif and Rendo Ameh[11]. Abdul Latif was the second of the two brothers. He went through basic education was the People Elementary School. Late afternoon until the evening, Abdul Latif studied Quran at Surau. For every Minangkabauneses, indeed the nature (macro-microcosmos) of Minangkabau affecting his personality the character. A beautiful and lush Nature, customs based on islamic law and islamic law based on holly Quran; traditions or norms and social values referring to islamic law which then leads anyone to do good and useful for society. Those patterns of strong personal culture affects the character of Abdul Latif.

b. The development of entrepreneurial spirit of Abdul Latif

Culture trade of Minang people can be seen from the profession of their merchants (Marchant) daily life. Known locally is manggaleh (trade), means conducting the sale or exchange in the system of local or regional markets. Perhaps for these reasons that the term Minangkabau frequently spoofed by *Minangkiau* expression. When we go exploring on Nagari Koto Anau, it can be seen that this area is one area, where the people's economy and trade to every corner of the interior retained by the locals.

Similar conditions also experienced by Abdul Latif who has been honed his entrepreneur spirit when Haji Gadang (his brother) invited him to trade tobacco, palms and palm leaves, and betel leaves as an ingredient in cigarettes every weekends[12] at Koto Anau. Although born of a wealthy merchant family, but Abdul Latif never hesitate to help her brother trade every weekend. Abdul Latif's *manggaleh* tradition is closely related to the market system in Minangkabau villages existed long before the arrival of the Western Nation to Indonesia. Abdul Latif's *manggaleh* tradition is also related to the proverbial

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[11] Arizal (65 tahun), *wawancara,* tanggal 10 Februari 2013 di Koto Anau Kabupaten Solok.
[12] Rotation traditional market runs every day of the week (week) after the name of the day (from Arabic) as Week Akaik (Sunday), Sinayan (Monday), Salasa (Tuesday), Rabaa (Wednesday), Kamih (Thursday), and so forth.

tradition of Minang, namely the *customs badagang*, *duduak dagang*, *tagak dagang, bakato dagang sakali. Indak baban batu digaleh*.

On the weekends, many farmers brought their crops to market and instead they buy goods for everyday or other household appliance; partly for resaling the goods in smaller raditional markets or *lepau-lepau* in Koto Anau. Instead, bigger traders sold in bigger market places weekly through *Galeh babelok* and even became an important part of the network pitchman (peddlers) in archipelago as idntified by Van Leur. [13]

After graduating, in 1905 Haji Gadang invited Abdul Latif migrated to Padang. His first activity of the day was branded calico cloth in Pasar Gadang Padang. Besides Abdul Latif, appeared some merchants who helped rose the popularity of Pasar Gadang that time, among them:

1. Rahman Tamin, a merchant, the general manager of the firm Rahman Tamin (one of the strongest importer in the 1920s). Moreover, Rahman Tamin also the pioneer of Indonesian Importers Association (GINDO), in 1951 renamed the Association of Indonesian Importers Purchase (GAPINDO).

2. Ismail Gani and Jan Tamin, a well known merchant and also an importer until the city of Medan.

3. Salim Jalil, the leader of Salim Jalil firms and an importer in Surabaya. [14]

High spirit of entrepreneurship of Abdul Latif rapidly developed his trading business. A year later, he had become a sales agent of clothes sent from Garut, West Java. Besides trading in thePasar Gadang, Abdul Latif also brought the the merchandises to the Koto Anau. When the Dutch colonial government introduced soft loans for looms to merchants in Pasar Gadang, Abdul Latif

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[13] Further reading at H. - D. Evers (ed.), *Sociology of Southeast Asia: Readings on Social Change and Development,* (Kuala Lumpur: Oxford University Press, 1980) dalam *www.googlebooks.com. Further see H. - D. Evers (ed.), Sociology of Southeast Asia: Readings on Social Change and Development, (Kuala Lumpur: Oxford University Press, 1980) in www.google books.com.*

[14] Further reading on "Persatuan Saudagar Indonesia" dalam *Propinsi Sumatera Tengah.* (Jakarta: Kementerian Penerangan, 1953), hlm. 754.

interested in opening this new venture, setting up the first weaving convection located on Jalan Diponegoro-now. [15]

Gambar 1 Pasar Gadang atmosphere in the era of 1900s In this area Abdul Latif developed his fabric business bisnis kainnya.
Sumber: http:www.kitlv.ac.nl

In 1910, Abdul Latif married with a girl from Koto Anau named Amirah from Sikumbang Tribe. From his marriage, Abdul Latif was blessed with three children, among them Latif Fatima, Aziz Latif and Rahman Latif. While on his second marriage to Dalisah her mother wasfrom Sumanik, Tanah Datar and her father came from Silungkang. [16] Abdul Latif was blessed with 12 children, among them: Abd. Malik Latif, Abd. Muis Latif , Abd. Munir Latif, [17] Abd. Muluk Latif, Abd. Muzir Latif, Abd. Murad Latif, Siti Latifah, Siti Dawiyah, Siti Rahmani, Siti Zulfa, and Siti Yunizar.

In 1915, beside his fabric store in Pasar Gadang, Abdul Latif also had convection trademark Genuine Weaving looms Padang. A few years later, in 1920 Abdul Latif founded a textile weaving factory named N.V Abdul Latif. According to Combo (65 years), Abdul Latif N.V company located in Simpang Aru (Campus of STIE Dharma, ndalas-now) produced some renowned fabric products, including stamped Randai and Pahlawan. [18]

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[15] Interview with Hanifah (71 years), dated 19 February 2013 in Padang.
[16] *Ibid*, and interview, aged 71 years, date 19 February 2013 at Koto Anau Kabupaten Solok.
[17] Abd Munir Abd Latif, one of the fighters, who are victims of events Setujuh, Limopuluh Koto district on the Dutch Aggression
[18] B. Andoeska (Mak EtekCombo). Age (65 years), *interview,* dated 17 February 2013 in Padang.

Figure 2. Abdul Latif upon receiving an honor as a successful merchant and his devotion to the
social life from the Dutch Government
Source: Repro from the photo collection Abdul Latif's family

The rapid development of Abdul Latif's business at that time was not influenced by the network of local trade-Batavia-Dutch, but filled the trading network in Peninsular Malaya, established trade connection with Singapore, India, Arabia, and Egypt. Awakening trade network with the Islamic world, facilitating Abdul Latif to built a travel agent called Kongsi Tiga.

Kongsi Tiga is one of the pilgrimage ship travel in the colonial period[19]. The travel agent, free costs for the Minangkabau modernist scholars to pilgrimage, among them Haji Abdul Karim Amrullah, Sheikh Muhammad Djamil Djambek, Inyiak Parabek, Haji Abdullah Ahmad, and others

The development of the textile business in West Sumatra was one of the effects of *Cultuur Stelsesel* in West Sumatra. Annie Both argues that, the greatest impact felt by people living in the villages, both economy and wealth increasing. Furthermore Annie Both said that in the economic field, the village people increasingly depended on goods trade, especially salt and textiles purchased with money. [20]Post *Cultuur Stelsel*, the western coast merchants, including Abdul Latif monopolized the textile stuffs and put high prices on sales.

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[19]Hamka, *Ayahku.* (Jakarta: Widjaja, 1950), hlm. 189.
[20]Annie Both, William J.O Malley, Anna Weidemann (ed.), *Sejarah Ekonomi Indonesia.* (Jakarta: LP3ES, 1988), hlm. 161-162.

In times of economic depression, the company N.V Abdul Latif also felt the impact. Abdul Latif business venture during the world crisis nearly bankrupted (*failliet*) because of his debts of thousands Gulden. Freek Colombijn asserts, in times of economic depression Padang municipal government gave loans to some large companies *f* 450,000 to the market. However, higher interest rates, causing the municipality to give up and cause swelling of installments to be paid by merchants, Abdul Latif was including in this case[21].

Despite of his debt, Abdul Latif would not close his business. To the creditor, Abdul Latif promised to pay the debt within a few months. If he was not able to fulfill that promise, the creditor was allowed to seize all assets of his company. One thing that was praised by Hamka in his writing, though in a state of almost *failliet* Abdul Latif never refused to give assistance to those who needed a help, as written in the following quotation.

> "So with his patience, tough and sweet smile, he faces the difficulties. Although in a very difficult situation, when people come asking for help, he gave the relief well, never seems surly."[22]

2. His role in The Vereeniging Merchant and in promoting Modernization of Islam in West Sumatra

Not only struggled in the business world, but Abdul Latif was also active in Vereeniging merchants associations in 1916. Association chaired by Minang merchants Nurdin Saleh was one of the merchants association in Indonesia aimed to counter the monopoly of China trade. The Vereeniging merchants at that time centered on Pasar Gadang in Padang overseed the organization branches including *Pasar Ilir, Pasar Mudik, Pasar Batipuh,* and *Pasar Malintang*[23]. From those markets, these merchants from the western coast of Sumatra carried out business

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[21]During times of economic depression, the municipal government stopped distributing lump sum City Council members congratulated themselves because it can rely on its own sources of revenue fairly stable from company-company. During times of economic depression, the benefits merchants continued to decline. In 1937 direct taxes, the end was inevitable. Further see Freek Colombijn, *Paco-paco (City) Padang.* (Padang: Tourism and Cultural Heritage Agency of Padang and West Sumatra, t.t), p. 89

[22]Hamka, *Ayahku.* (Jakarta: Widjaja, 1950), hlm. 189.

[23] Further reading on "Persatuan Saudagar Indonesia" dalam *Propinsi Sumatera Tengah.* (Jakarta: Kementerian Penerangan, 1953), hlm. 753.

activities and in the following period this merchant associations fighting to the national level.

Figure 3: Board members of Vereeniging merchants: (from left to right): A. Fatah Sutan Malano (comissaris), A. Karim Yusuf (comissaris), Abdul Aziz Latif (Penningmeester/treasurer), Marzuki Yatim (Vice Voorzitter), Mr. Sutan Harun al-Rasjid (Hoofdcomissaris), Turkey Bagindo Anger (voorzitter), Oemar Marah Alamsyah (Secretaris), M. Thaib Sutan Mangkuto (Comissaris), Datuk Madjo Kayo (Comissaris), H.M Thaib (comissaris).
Source :, Repro of photo collections of Abdul lati's family

Selain itu, *Saudagar Vereeniging* turut mendorong saudagar-saudagar membentuk perusahaan besar yang bergerak di bidang ekspor-impor. Menurut catatan Kementerian Penerangan pada masa 1920an hingga years 1953 di Pasar Gadang bermunculan perusahaan dagang besar, seperti Firma Marah Taharuddin (eksportir), Firma Sjakur Munaf (importir), Firma B. Datuk Madjo Kajo (importir), Firma Abdul Fatah Sutan Melano (importir), N.V Sridharma, dan N.V Abdul Latif (pabrik tekstil, importir). In addition, the *Vereeniging merchants* also encouraged merchants to form large companies engaged in export-import. According to the Ministry of Information during the 1920s until 1953 in Pasar Gadang sprung major trading companies, such as Firm of Marah Taharuddin (exporters), Firm of Sjakur Munaf (importers), Firm ofB. Datuk Madjo Kajo (importers), Firm of Abdul Fatah Sutan Melano (importers), Sridharma NV and NV Abdul Latif (textile mills, importers).

In 1929, The Vereeniging merchant associations renamed into the Association of Merchants Indonesia chaired by Taher Marah Sutan[24]. But six years later (1935), a trade association returned to the Vereeniging merchant. Congress held in 1941 to elect a the board member of merchants period 1941-1943. At that time elected Mr. Sutan Harun al-Rasjid (Hoofdcomissaris), Abdul Aziz Latif (Penningmeester / object-hara), Marzuki Yatim (Vice Voorzitter), Turkey Bagindo Marah (voorzitter), and Oemar Marah Alam (Secretaris) had an influence in an attempt to push modern[25] nationalism and modernization of Islam in West Sumatra. As Thaher Marah Sutan Muhammad who founded *Sarikat Usaha*,[26]

Abdul Latif also played an active role in helping youth preaching the modernization of Islam in West Sumatra. Abdul Latif became popular and well known among youth since his friendship with Sheikh Ahmad Khatib al-Minangkabawi.

Hamka wrote that, after Abdul Latif pilgrimage in 1905, gave financial assistance to Youth. Some activities which he helped in financial fund included the release of *Al-Munir*, assited finance of Madrasah Adabiah led by Haji Abdullah Ahmad Diniyah School led by Zainuddin Labay el-Yunussi, Normaal Islamic School, Muhammadiyah schools, and several mosques in West Sumatra.

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[24] Marah Sutan finished his education only up to grade 5 elementary school, but Hatta stated that, 'huge interest to promote youth education, and believes that the only science that scientific and rational to be able to create responsible citizens'. See biography by Mardanas Safwan, 'Taher Marah Sutan: The Forgotten People', Minangkabau Cultural Monthly Magazine (Jakarta), January 1974, p. 52-55. Marah Sutan his education only up to grade 5 elementary school, but in view of Hatta, 'huge interest to promote youth education, and believes that the only science that scientific and rational to be able to create responsible citizens'. See biography by Mardanas Safwan, 'Taher Marah Sutan: The Forgotten People', Minangkabau Cultural Monthly Magazine (Jakarta), January 1974, p. 52-55.

[25] Modern nationalism of the 20th century also from the group of merchants who are members of the association Sarikat Islam (1912), the first party whose members include all the Dutch East Indies (Indonesia). Minangkabau role in trade groups is not confined to efforts to build schools suasta outside the colonial education system, but also supporting Youth movement which became the basis of the movement of nationalist groups. Generally centered in Padang Panjang.

[26] This organization is engaged in various social fields - education, commerce, organizing funeral, construction contractors, publisher of religious magazines and books, and the management of the cinema. The organization also has a four-page tabloid, Sarekat Oesaha, which is published twice a week. Sarikat Enterprises set up branches in other cities in West Sumatra, and businessmen, both being members and non-members. They not only fund commercial activities, but also activities of political parties, religious organizations, all forms of publishing, private schools, and youth organizations. One of the most active merchant Padang is Abdullah Basa Bandaro. Other board members, Sutan Said Ali, was a school teacher and member Sarikat Adabiah Islam. Said Ali later left Sarikat effort and a major driver of the Communist Party. Hatta described it as a 'teacher meek'. Mohammad Hatta, Memoir (Jakarta: Tintamas, 1979), p. 36.

Not only that, through Kongsi Tiga travel agency, Abdul Latif eliminate the cost of the pilgrimage for scholars of the Islamic modernists.

Figure 4 Board merchant Vereeniging: (seated from left to right): Oemar Marah Alamsyah, Marzuki Yatim, Turki Bagindo Marah, Mr. Sutan Harun al-Rasjid and Abdul Aziz Latif (standing from left to right): H.M Thaib, Buyung Tamin, A. Fatah Sutan Malano, M. Thaib Sutan Mangkuto, A. Karim Yusuf, and Dt. Madjo Kayo.

Source : repro of one of H. A. Latif families in Koto Anau.

Not only Hamka wrote about the role of the merchant from western coast of Sumatra, the Ministry of Information also noted the role of merchants, such as Abdul Latif in helping financially to Islamic College, Islamic Religious Teachers Association (PGAI), and orphanages Normal Islam. Abdul Latif efforts to encourage education and modernization of Islam not only done in some areas, but also in Nagari Koto Anau[27]

1. In 1905, Abdul Latif build a *surau* as means of Islamic education in Koto Anau, located behind his parents' house, Sungai Dareh Koto Anau and supported by a teacher named H. Munaf Lantai batu, Tanah Datar. [28]

2. In 1929, he built a women school then developed into Diniyah Madrasah, located on land owned by the Caniago Supanjang tribe. Madrasah burned during the PRRI 1959.

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[27]Rosma (82 tahun), *Interview, dated* 10 February 2013 at Koto Anau Solok.
[28] Further reading ona Zusneli Zubir In thesis "Peranan Madrasah Diniyah Koto Anau dalam Pengembangan Pendidikan Islam di Kabupaten Solok. Fakultas UNAND, 1987

3. Bring modernist scholars, such as Haji Abdul Karim Amrullah, Sheikh Muhammad Djamil Djambek, and Haji Abdullah Ahmad Koto Anau.

Figure 5. Surau Gadang , Koto Anau, Surau Gadang, Koto Anau, built in 1905 AD, restored in 2008
Source: Zusneli collection Zubir, February 10, 2013

Some Efforts undertaken by Abdul Latif in Koto Anau definately accelerate the modernization of Islam, earlier in this village still adopted traditional Islam. Thus, the dynamics that characterized the nationalist movement in Minangkabau not primarily rely on instinct of modernization of narrow bureaucratic elite group of Western-educated, but rather rely on a tangled interests among the religion, education, and merchants in West Sumatra. In any how to prepare the leaders of religion, politicians, education, soldiers and others. [29]

Abdul Latif and the Vereniging merchants in 1930s and before the fall of the Netherlands and Japan, helped some organizations with finance and facilities to support nationalist movements and means of communication between the West Sumatra and Java and the Malay Peninsula. Despite the obstacles from the Dutch, Minangkabau merchants maintained a strong relationship with the world business in the Malay Peninsula, and had a family relationship with the leaders and members of the radical party. This group, too, who contributed in financing the struggle during the revolution from 1945 to 1949.

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[29] Interview with dr. Yavis, MS. Aged 1974, dated 29 January 2013. Further reading on MD. Mansoer, 1970. Sejarah Minangkabau, hal 168

C. Conclusion

Abdul Latif is a portrait of a merchant from the Western coast of Sumatra who participated and helped fill out the modern nationalism hidtory and supported the efforts to modernize Islam in West Sumatra. Merchants, such Abdul Latif incorporated in the Vereeniging merchant is basically a group that upholds the islmic idealism.

The interests of this association are implemented through a series of relationships that meutus network colonial Batavia, West Sumatra, and the Netherlands, but rather through a network of alternative relationship between Sumatra and Singapore, Cairo and Mecca. Reliability mutual relations in the field of religion, commerce, and education to areas outside the colony, not only reflected in the writings of Hamka, stories, popular literature, but also novels published in Medan and *Fort de Koc*

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H. Hanifah, dr. 67 years, dated 19 February 2013 in Padang (Abdul Latif's grand son)

Rosma, aged 82 years, dated 10 February 2013 at Koto Anau

Yavis, MS. dr, aged 74 years, dated 29 January 2013 at Koto Anau.

Zoray aged 75 years*,* dated 29 Februari 2013 at Koto Anau Kabupaten Solok.

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Photoes Documentation

Zusneli Zubir Collection

http://www.kitlv.ac.nl

Abdul Azis Latif's famillie photo collection