

The Influence of Language Laboratory in Empowering Students' Listening Comprehension Skill and Speaking Performance

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1.0 INTRODUCTION

In this globalization era, English is used around the world. It is considered as a means of communication to relate people among nations and it covers many sectors including business, education, engineering, technology, banking, tourism, etc. Moreover, the communication tools available around us are supported by the use of this language. Amongst various potential benefits of English language use, EF EPI (2015) claims that the most essential concern is the communication teaching practices. Based on the survey which was analyzed from more than 910,000 adults who took online English test in 2014, the average level of adult English proficiency in the world has risen slightly since 2014. Thereupon, it is also reported that the gap between the highest and lowest proficiency countries has widened. Europe countries are identified as they dominate the index which means that they fill the highest proficiency bands. Meanwhile, Asia has a high level of English skill diversity, with three countries in the High Proficiency bands as well as several in the lowest proficiency band. Sixteen Asian countries were analyzed out of seventy subjects by the EF EPI and only six countries scored a higher English proficiency score than the average point (53.21). Indonesia is in the 32nd rank with EF EPI score of 52.91 and categorized in moderate proficiency. With the increasingly international economies, Asian countries invest in English training as a tool for accelerating globalization. Some of the effective strategies to obtain higher English proficiency level are: focusing on practical communication skills, training English for communication, developing effective English assessment tools, and investing in technology and online learning tools.

Indonesia as a part of the Association of South East Asian nations (ASEAN) is about welcome the new integration program of ASEAN namely ASEAN Economic Community (AEC) 2015. Members of ASEAN agreed to implement AEC 2015 as the creation of single market and production which enables free flows of goods, services, investment, capital and people to increase the stability of political and economic systems as well as the social cultural exchange. According to Choomthong (2013), the fields that will be firstly affected are construction, business, and medical services. Human resource capacity might be the main concern of taking on this event since the ASEAN members have different language use and social culture condition. Therefore, in the ASEAN Secretariat (2008b) English has been chosen as the language of administration for ASEAN and is additionally often the language that users across ASEAN have in common. Dulyadaweesid (2003) states that education is seen as a key factor in preparing the citizens of the member states for the increased integration and resulting competitiveness. English language education is seen as a necessity to prepare human resources to compete effectively and make use of technical, business, and negotiation skills areas. Specifically for business area, Didiot-Cook, Gauthier, and Scheirlinckx (2000) did a survey on language needs in business for European multinational companies. It was found out that companies expect to recruit employees with at least an advanced level of English competence. Viewed from the four English language skills, oral skills which involve listening and speaking are considered far more important than written ones. It is regarded so since business communication mostly covers the setting of meetings, negotiating, and problem solving context.

Thus, the demanded English competency of AEC context is in accordance with the needs of business setting.

English language teaching plays a vital role in developing the quality of human resources in ASEAN countries. Various learning programs might be helpful to raise their awareness of English language importance through education. Aside from implementing certain learning method to improve people's listening and speaking ability, it is also necessary for us to remember that the use of technology has expanded rapidly to enhance the effectiveness of academic classroom context. A number of benefits related to the use of technology in classrooms have been reported. According to Beauvois (1998), the use of networked computers improves students' writing skill. Reading comprehension improvement was also found out in a study by Lunde (1990) where the students enrolled in a computer mediated communication project. An interview by Beauvois (1994) to students about the use of LAN in their English classes obtained a result that students' speaking confidence was increased. Then considerable improvement of French listening and speaking as the result of maximizing the use of technology devices is also reported in a study by Sanaoui and Lapkin (1992).

Language laboratory is the integration of several technological devices to support language teaching. Brenes (2006) defines the language laboratory as a teaching tool requiring the implementation of well-constructed tasks based on the students' need. The main objectives are to make the individual practice of students more effective and increase the productivity of language teachers who only need to focus on the student's production and the mistakes encountered (Antich, et.al:1988). Several studies also show that language laboratory supports the users to improve their oral skills namely listening and speaking.

The availability of language laboratory in our university motivated the researchers to conduct a study on finding out whether a language laboratory significantly improves students' listening comprehension achievement and speaking performance. Therefore, the improvement of both listening and speaking skills support the students to achieve language competence as their valuable asset to encounter the AEC.

2.0 LITERATURE REVIEW

Recently, ASEAN Secretariat (2008a) described that the cooperation among ASEAN members has been realized as the association moves towards the development of the AEC (ASEAN Economic Community) which will allow more free trade, cultural exchange, and human resource mobility in some key, specialized fields between its member states. English is viewed as an essential tool to be chosen as the administration language as well as means of communication among the members (ASEAN Secretariat: 2008b). Moreover, Stroupe and Kimura (2015) describe that the English language education in the regions is ongoing as the need for English for communicative purposes to be competitive in an integrated labor force rises. This can be seen from various programs and educational policies attempted by each regions in order to establish a conducive English language teaching for their nation.

A number of studies related to the exploration of technology in language classroom activity have been reported. Sanaoui and Lapkin (1992) implemented the email exchange project among the French students and the students' response showed that this program increased their learning responsibility and broadened their cultural awareness. Positive attitudes toward learning in a writing project supported by the use of Local Area Network (LAN) is also obtained by Beauvois' study in 1998. The findings on the effectiveness of technology are discovered worldwide. In Japan, it was found out that computer mediated communication project improved the students' reading comprehension (Lunde: 1990). Eventually, those studies drew students' perception which reflects the benefits of technology use in language classroom for instance: self-concept improvement, basic skills mastery, higher-order thinking skills, better recall and confidence gained in directing their own learning.

The technology adopted by the first language laboratory has been modified rapidly toward the utilization of more digitalised learning materials. The phonograph record and its development into the phonetics laboratory were the first form of language laboratory in the 1920s. The phonetic laboratory was utilized by booths or carrels and audio installation. Surprisingly, Diekhoff (1965) states that the 1960s were the golden years of the language laboratory where this kind of facility had been installed in America's secondary schools. Audiocassette was equipped in the language laboratory since it offered a lower price and various functions to support the listening activities like the features of audio lingual listen and repeat drills. Another additional technical advance was the speech compressor-expander which allowed the recording to be sped up or slowed down as reported by Couch (1973). In the beginning of 1980s, personal computers were very popular by its integration into the language laboratory. It is believed that this device could handle the "paper" skills such as reading and writing. Roby (2004) reports that the amount of computer courseware grew steadily during the 1990s and publishers began packaging textbook-specific software with audio and video materials. Nowadays, more advanced software and hardware modifies the language learning in the laboratory. The production of language applications bolsters language laboratory both in the present and future to spread its significance on language learning.

Language laboratory mainly aims to support the listening activities. It enables students to assess their listening comprehension and perform their production in order to check whether they make any mistakes in terms of pronunciation. A Language instructor is also given a kind of easiness to conduct language classroom activity with the possible integration of learners' listening and speaking skills improvement. Richards (2001) argues that sounds and rhythm sensibility of a language might be acquired by hearing best samples of a spoken language. Richards' study also proved that the language laboratory provides the opportunity to learn all aspects of phonetics such as pronunciation, accent, stress, etc. Vishalakshi (2014) also describes related significances of language laboratory. Both short and long term coaching classes for international standardized examinations could be organized in the laboratory. In additional, online courses and paperless examinations could also be conducted.

A survey by Mustard and Tudisco (1959) on laboratory usage involved forty nine universities in United States as the respondent. It was found out that the laboratory was used mainly by the first year classes. The study also revealed better listening and speaking skills resulted from courses involved lab work comparing to the classes made no use of the lab. Brenes (2006) also did a survey with three main objectives: to analyze the effectiveness of the language laboratory in teaching listening comprehension, to find out which material aid students prefer, and to determine whether or not students take advantage of feedback. Related to the respondents' feedback on the questionnaire, 65.7% of students considered that the language lab is very helpful in order to improve listening skill due to the practice in the language laboratory. The previous studies are in accordance with writers' idea. In additional, the writers intend to dig up the influence of language laboratory to empower students' listening comprehension and speaking performance.

3.0 METHODOLOGY

3.1 Research Design

In this study, the writers will use Non-equivalent Groups Pre-test- Post-test Control or Comparison Group Design. This design is prevalent and useful in education because it is impossible to randomly assign subjects. (McMillan & Schumacher, 2010, p. 278) Researchers are given an opportunity to involve the established group, give a pre-test, administer the intervention condition to one group and get the difference by assigning the post-test.

Both experimental and control groups are assumed to have equal English competence. Writers evaluated their learning achievement in the previous semester and it was found out that they are categorized into the same grade (grade B) with the average of 78.84 (control group) and 79.56 (experimental group). This finding is addressed to justify the threat of internal validity for this

conducted research. Pre-test was given to both groups before the intervention period to check students' prior ability in relation to their listening achievement and speaking performance. During the intervention (which was held for fourteen meetings), the experimental group studied in the language laboratory which was completed by its supporting aids. Meanwhile, the control group studied in the conventional classroom. Writers also ensured that both groups acquired the same materials. Post-test was eventually administered to the sample to obtain the significance of language laboratory use on students' listening achievement and speaking performance.

3.2 Participants

This study involved 50 students as the sample which consisted of 25 students for each experimental and control group. Researchers did not assign the randomization in selecting the subject as also described by the design. These fifty samples were selected based on their class location. Among three classes in the morning, group PA 201 is the only one group who was positioned to learn in a conventional classroom. Thus, the writers decided to use this class categorized as the control group. Whereas, PA 202 has equal English competence to the control group, therefore it is categorized as the experimental group who studied in the language laboratory to obtain its significance.

3.3 Data Collection

The data of this study were collected by means of listening comprehension test. This type of test is used to evaluate students' listening comprehension achievement. Pre-test and post-test were administered to both experimental and control group. The listening test was adopted from TOEIC Practice Exams and the results were categorized based on TOEIC scoring system. All items are in multiple-choice form.

To assess students' speaking performance, particular topics were prepared to be discussed during the intervention period. Students were interviewed to answer several questions which are formulated from six different topics. The results were analyzed based on the standardized speaking rubric.

Questionnaires were also distributed to obtain the experimental group students' perception towards the use of the language laboratory and its influence to empower their listening comprehension skill and speaking performance. This kind of instrument was adapted from Step-Greany's study (2002) by using the likert scale (strongly disagree to strongly agree) .

3.4 Data Analysis

Several techniques were implemented to analyze the data. Paired Samples T-Test helped to compare the mean differences of the pre-test and post-test of each experimental and control group (Priyatno, 2012, p.41). The second technique was Independent T-Test which is used to compare the mean differences of the two groups of a categorical variable in terms of one numerical variable (between independent and control groups).

In addition, the result of questionnaire was analyzed by using qualitative descriptive analysis on the students' perception to find any thematic responses toward the influence of language laboratory on their learning outcome. The writer used SPSS Program to calculate the analysis.

4.0 RESULTS AND DISCUSSION

4.1 Descriptive Statistics

The listening comprehension post-test showed that the achievement of all students (N=50) was at Level 200 with the mean 292.00. The frequency percentage implied that most students were

also in Level 200 by reaching the highest percentage (58%). Students in this level are presumed as having an ability to understand short descriptions of the photograph when there is only small amount of text that must be understood, understanding some of central idea, purpose, and basic content of extended spoken texts by a lot of repetition and easy vocabulary, and understanding details in extended spoken texts when the requested information comes at the beginning or end of the text as well as it matches the words in the spoken text.

Table 1: Frequency and Mean of Listening Comprehension Post-test Scores (N=50)

Level of Achievement	Mean	Frequency and Percentage	Standard Deviation
Level 200	233.97	29 (58%)	27.071
Level 300	340.36	14 (28%)	26.126
Level 400	435.71	7 (14%)	37.129
Total	292.00	50 (100%)	78.879

Based on the result of post-test on students' speaking achievement, it was found out that most students dominated Level 4 with the percentage of 66%. Level 4 speaker has certain difficulty in delivering idea or responding a complex questions. The response tends to be short and limited. This limitation also affects speaker's language use, audience awareness, pronunciation, stress, and intonation difficulties, long pauses and frequent hesitation, and limited vocabulary. The speaker hardly provides basic information.

Table 2: Frequency and Mean of Speaking Performance Post-test Scores (N=50)

Level of Achievement	Mean	Frequency and Percentage	Standard Deviation
Level 3	65.94	17 (34%)	4.250
Level 4	79.94	33 (66%)	3.960
Total	75.18	50 (100%)	7.811

4.2 Statistical Analysis

In order to answer the problem formulation proposed, the statistical analysis was applied. The writer presented two statistical analyses by using t-test formula (paired sample t-test and independent sample t-test). The following table describes the detail mean difference and significance value gained by students in both experimental and control groups:

Table 3: Mean Difference of Listening Comprehension and Speaking Performance Scores

Dependent Variables	Pre-test		Post-test		Mean difference Pre and Post-test Exp Within	Mean difference Pre and Post-test Control within	T-value Pre and Post-test Exp within P<	T-value Pre and Post-test Control within P<	T-value of Gain Post-test between Exp& Control P<
	Mean Exp	Mean Cont	Mean Exp	Mean Cont					
1. Listening Comprehension Achievement	50.48	52.04	62.84	57.88	12.36	5.84	-6.201 (0.000)	-5.022 (0.000)	2.825 (0.007)
2. Speaking Performance	52.40	61.52	78.88	71.48	26.76	10.44	-22.376 (0.000)	-10.301 (0.000)	10.782 (0.000)

The data showed the results of statistical analysis of listening comprehension achievement and speaking performance by using paired sample t-test and independent sample t-test. Based on the

data, it was found that the mean differences between pre-test and post-test of listening comprehension scores were 12.36 (in experimental group) and 5.84 (in control group). The t-value of pre-test and post-test in experimental group was -6.201 with the significance of 0.000. Whereas, the t-value of pre-test and post-test score in control group was -5.002 with the significance of 0.000. In addition, the t-value of gain post-test between experimental and control group was 2.825 with the significance 0.007.

The data in the table above also indicated that the mean differences between pre-test and post-test of speaking performance scores were 26.76 (in experimental group) and 10.44 (in control group). The t-value of pre-test and post-test in experimental group was -22.376 with the significance of 0.000. Whereas, the t-value of pre-test and post-test score in control group was -10.301 with the significance of 0.000. In addition the t-value of gain post-test between experimental and control group was 10.782 with the significance 0.000.

The results of the study revealed that there were significant improvements in students' listening comprehension and speaking performance achievements in both experimental and control groups. The results were due to the implementation of the same teaching technique and material in both groups. However, there was a significant difference in listening comprehension and speaking performance of students who were in experimental group and those who were in control group. The students of experimental group who studied in language laboratory gained higher improvement than the students who studied in regular class. This result indicated that language laboratory facilitated the students to obtain better improvement in their listening comprehension and speaking performance achievements.

4.3 Questionnaire Results

The students' perceptions on the use of language laboratory in classroom academic context can be seen in the table below.

Table 4: Table of Students' Perception Questionnaire

No.	Questionnaire Aspects	SA	A	N	D	SD
1	The lecturer's role	21%	44%	22%	11%	2%
2	Lab and computer access	19%	39%	36%	8%	1%
3	Effect on learning	17%	49%	31%	2%	0%
4	Interest and relevance	18%	45%	37%	0%	0%
5	Effect on confidence, technical skills, and achievement	9%	32%	45%	9%	6%

Based on the data from the questionnaire, it was found that forty four percent of the students agreed that the lecturer had an important role during teaching and learning process in language laboratory. The lecturer's presence facilitated students in learning activities and handling learning difficulties. Furthermore, thirty nine percent of the students agreed that the access to the language laboratory and computer was adequate. They felt comfortable with the learning environment in language laboratory. Moreover, forty nine of the students agreed that studying in the language laboratory supported them in improving their language skills and aspects. A set of activities in the language laboratory enabled them to get more exposure in English and gain more opportunities to practice English. In addition, forty five percent of the students agreed that learning in the language laboratory provided interactive and interesting learning atmosphere. Besides, the materials and the tasks were relevant to real life needs in English. At last, thirty two percent of the students agreed that learning activities in the language laboratory helped them to enhance their confidence, technical skills, and learning achievement.

The results of the questionnaire indicated that the students had favorable perceptions towards the use of the language laboratory in a classroom academic context. Furthermore, it proved that the language laboratory facilitated students in improving their listening comprehension and speaking performance achievements.

5.0 CONCLUSION

On the basis of results and discussions of the study, the writers draw three conclusions. First, there were significant improvements on listening comprehension achievement and speaking performance between pre-test and post-test of the students who were taught in the language laboratory and who were not taught in the language laboratory. The results were due to the implementation of the same teaching technique and material in both groups.

Next, there were significance differences on listening comprehension achievement and speaking performance between the students who were taught in the language laboratory and those who were not taught in the language laboratory. The results implied that the language laboratory facilitated the experimental group students to gain better improvements in their listening comprehension achievement and speaking performance.

Finally, the students' perceptions toward the use of language laboratory in classroom academic context were favorable. The language laboratory facilitated students in learning English and contributed to the improvement of students' achievements especially in listening and speaking.

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