The Effects on the Use of Google Classroom and Seesaw Class Applications towards Students' Attitude: A Comparative Study

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Abstract
The emerging industrial revolution 4.0 has lead changes in many sectors, including education sector. In higher education, technology is used as the media for integrating learning materials and motivating students in the teaching-learning process. The angle that is focused in this study is students' attitude when using technology. The technology tools used are Google Classroom and Seesaw Class applications. This study would like to highlight whether there are effects on students' attitude in the process of using the applications and the comparison between two kinds of technology tools. The method used was linear regression. Since this is a comparative study, it compares two sides that are on Google Classroom application and students' attitude and also Seesaw Class application and students' attitude. The instrument used was closed-ended questionnaire. This study had passed classical assumption tests in both sides in which the data were distributed normal and there was no heteroscedasticity problem. The results from linear regression in both sides show that there were effects on the use of Google Classroom and Seesaw Class applications towards students' attitude. It means that Ha1 and Ha2 were accepted. It can be explained that the use of applications amplify students' attitude in the process of teaching-learning activities.

Keywords: *Google Classroom application, Seesaw Class application, students' attitude, linear regression*

Introduction
Industrial 4.0 has led to the integration of technology during teaching-learning activities. Both teachers and students can explore teaching-learning activities with computer or smartphone. Smartphone is the technology that is used in many sectors. Dudeney and Hockly (2007) states that mobile learning uses mobile phone with access to technology in learning. Mobile learning in this study is learning by using Google Classroom application and Seesaw Class application.

Google Classroom is an application that offers many features that can be used in the teaching-learning activities. Wang, Q et al. (as cited in Sukmawati and Nensia, 2019) state that Google Classroom "has potential for teaching and learning because of its unique built-in functions that offer pedagogical, social and technological affordances". Janzen (as cited in Iftakhar, 2016) states several benefits in using Google Classroom. They are easy to use, save time, cloud based, flexible, free, and mobile friendly. Seesaw Class application is also used in the smartphone. Hamilton (2017) states that Seesaw Class application provides features, such as PDF, links, videos, QR Code, and text.

Attitude has broader concept in terms of language learning and technology use. Emmitt and Pollock (2002) state that "attitudes towards the second language will greatly influence the learning process, the learner who is positively predisposed towards a second language and culture is more motivated". Brown (2014) states affective factors, namely self-esteem, self-efficacy, willingness to communicate, inhibition, risk taking, anxiety, empathy, extroversion and introversion. Brown (2014) also states that motivation consists of intrinsic motivation,

extrinsic motivation, and social-psychological perspectives in enhancing learning. In terms of technology use, Blake (as cited in Behroozian and Sadeghoghli, 2017) states that "as we utilize technology for language learning, we must focus on how the students use it and on their attitudes that result from the experience they have using the technology".

There are three previous studies on technology and attitude. Rana (2012) stated the attitude towards technology integration. Cahyani and Cahyono (2012) stated that technology use made language learning more interesting. Behroozian and Sadeghoghli (2017) stated factors that influence attitude of using technology. From the previous studies mentioned, there is no study that is focused on specific use of technology in application use with comparison towards students' attitude yet. Hence, this study is addressed to explore the comparison of using Google Classroom application and Seesaw Class application towards students' attitude. This study has limitation in terms of sampling. Firstly, this study is conducted in one university and specific study programs. Secondly, this study conducts the sampling with purposive sampling. Since there is limitation of time, the respondents cannot be in the same class, but they are in the different classes. Although the pre-test is not conducted yet, but the result of students' English final average score is more or less the same so that they can be categorized equal.

Research questions in this study are as follows:
1. Is there effect on the use of Google Classroom application towards students' attitude?
2. Is there effect on the use of Seesaw Class application towards students' attitude?
3. Which application has bigger contribution towards students' attitude?

This study is aimed to discover the comparison of using Google Classroom application and Seesaw Class application towards students' attitude.

Research Model

This study would like to explore the effect on the use of Google Classroom application towards students' attitude and the effect on the use of Seesaw Class application towards students' attitude. Accordingly, two research models are applied in this study.

Based on the research models above, the hypotheses are divided into two null hypotheses and two alternative hypotheses.

H01: There is no effect on the use of Google Classroom application towards students' attitude.
Ha1: There is effect on the use of Google Classroom application towards students' attitude.
H02: There is no effect on the use of Seesaw Class application towards students' attitude.
Ha2: There is effect on the use of Seesaw Class application towards students' attitude.

Method

This study used linear regression method. Ghozali (2011: 96) states that regression is used to measure the strength and direction of relation of independent and dependent variables. In this study, the first independent variable is Google Classroom application, the second independent variable is Seesaw Class application, and the dependent variable is students' attitude. This study compares the results of two different simple linear regression results.

The respondents in this study were selected by using purposive sampling. The total number of respondents that used Google Classroom was 38 respondents. The total number of respondents that used Seesaw Class Application was 48 respondents.

The instrument in this study was closed-ended questionnaire. It used likert scale with five point scale which was strongly disagree, disagree, neutral, agree, and strongly agree. Each variable had ten statements in the questionnaire.

Results and Discussion

Results and discussion parts consist of classical assumption tests, regressions results, and comparison of technology use and students' attitude.

Classical Assumption Tests

Classical assumption tests are divided into normality test and heteroscedasticity test.

Normality Test

Normality was used to know whether or not the data were distributed normal. Based on the result from SPSS, the Asymp. Sig score in Kolmogorov-Smirnov Test in Google Classroom Application and students' attitude was 0,832 which was > 0,05 and the Asymp. Sig score in Kolmogorov-Smirnov Test in Seesaw Class Application and students' attitude was 0,999 which was > 0,05. It means that both the data of normality in this study were distributed normal.

Table 1. Normality Test Results in Google Classroom Application and Seesaw Class Application

Variables	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)	Result
Google Classroom Application & Students' Attitude	0,623	0,832	Test distribution is normal
Seesaw Class Application & Students' Attitude	0,378	0,999	Test distribution is normal

Heteroscedasticity Test

Heteroscedasticity was used to know whether or not there was the same variance. Based on the result, the Sig. score of Google Classroom Application was 0,734 which was > 0,05 and the Sig. score of Seesaw Class Application was 0,141, which was > 0,05. It means that there was no heteroscedasticity problem both in the use of Google Classroom Application and Seesaw Class Application.

Table 2. Heteroscedasticity Test Results in Google Classroom Application and Seesaw Class Application

Variables	t	Sig.	Result
Google Classroom Application & Students' Attitude	-0,342	0,734	There is no heteroscedasticity
Seesaw Class Application & Students' Attitude	-1,499	0,141	There is no heteroscedasticity

Regressions

Regressions were conducted after having classical assumption tests of normality and heteroscedasticity. From the result, the Sig. score of the independent variable that was Google Classroom Application and the dependent variable that was students' attitude was 0,000, which was < 0,05 and t score was 5,546, which was > t table (2,02809). It means that there was effect on the use of Google Classroom Application towards students' attitude. Hence, Ha1 was accepted. It is as stated by Wang, Q et al. (as cited in Sukmawati and Nensia, 2019, p. 142) state that Google Classroom has prospect for teaching and learning. It is also as stated by Brown (2014, pp. 142-154) that learning involves affective factors.

Table 3. Regression Result in Google Classroom Application

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	**10.533**	5.493		1.917	.063
	Google Classroom Application	**.791**	**.143**	**.679**	**5.546**	**.000**
a. Dependent Variable: Students' Attitude						

The regression equation on the use of Google Classroom Application and students' attitude is as follows:

Y= a + bx

Y = 10,533 + 0,791x

It means that coefficient of X (the use of Google Classroom Application) had positive effect of 0,791 in students' attitude.

The next result was the Sig. score of the independent variable that was Seesaw Class Application and the dependent variable that was students' attitude was 0,000, which was < 0,05 and t score was 6,860, which was > t table (2,01290). It means that there was effect on the use of Seesaw Class Application towards students' attitude. Hence, Ha2 was accepted. It is as stated by Hamilton (2017) that Seesaw Class application provides several features. It is also as stated by Brown (2014, pp. 160) that intrinsic motivation increases students' learning.

Table 4. Regression Result in Seesaw Class Application

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	**7.038**	4.312		1.632	.109
	Seesaw Class Application	**.865**	**.126**	**.711**	**6.860**	**.000**
a. Dependent Variable: Students' Attitude						

The regression equation of the use of Seesaw Class Application and students' attitude is as follows:

Y= a + bx

Y= 7,038 + 0,865x

It means that coefficient of X (the use of Seesaw Class Application) had positive effect of 0,865 in students' attitude.

Table 5. R Square Result (Google Classroom application and Seesaw Class Application)

Variables	R	R Square	Adjusted R Square
Google Classroom Application & Students' Attitude	0,679[a]	0,461	0,446
Seesaw Class Application & Students' Attitude	0,711[a]	0,506	0,495

From the result of R square above, the use of Google Classroom application has 46,1 % contribution towards students' attitude and the use of Seesaw Class application has 50,6 % contribution towards students' attitude.

Comparison on the Use of Technology and Attitude
In sum, the comparison on the use of Google Classroom application and Seesaw Class application towards students' attitude can be seen in table 6.

Table 6. Comparison Results

Variables	Normality	Heteroscedasticity	Regression	Regression Equation	R Square	Students' English average score
Google Classroom Application & Students' Attitude	0,832	0,734	Sig. 0,000 t 5,546	$Y = a+bx$ $Y= 10,5333+$**0,791**x	**0,461**	**78,45**
Seesaw Class Application & Students' Attitude	0,999	0,141	Sig 0,000 t 6,860	$Y = a+bx$ $Y= 7,038 +$**0,865**x	**0,506**	**79,23**

From the comparison table above, it can be interpreted in three major views. Firstly, the use of both Google Classroom application and Seesaw Class application towards students' attitude were distributed normal and no heteroscedasticity problem. Secondly, Ha1 and Ha2 are accepted from the result of Sig. and t score in regression parts. Thirdly, b coefficient and R square in the use of Seesaw Class application have bigger results than in the use of Google Classroom application towards students' attitude. There are also students' average scores that are taken from English semester final scores. Although there is very little difference of both average scores, it can be seen that b coefficient, R square, and average score are in direct proportion which is higher in Seesaw Class application and students' attitude than b coefficient, R square, and average score in Google Classroom application and students' attitude. Besides statistical results, the observation in the classroom also supports that students with high score results of subject content have more motivation to learn both in subject content and the use of technology.

Conclusion

Based on the results and discussion above, it can be concluded in five parts. Firstly, this study has passed classical assumption tests of normality and heteroscedasticity tests before conducting regression analysis. Secondly, the use of Google Classroom application has effect on students' attitude. Thirdly, the use of Seesaw Class application has also effect on students' attitude. Fourthly, the use of Seesaw Class application has bigger effect than Google Classroom application on students' attitude with limitation in the sampling. Fifthly, after conducting this study, the main conclusion is the use of technology in the classroom is also influenced by students' intelligence generally in subject content and willingness to learn technology.

After conducting this study, there are two suggestions that can be considered. The first is for future researchers. Since this study needs more exploration on technology and attitude, future researchers can conduct more studies on other kinds of technology and also on other respondents, and then explore more to see the effects of learning media and attitude. More findings can expand diverse views on technology and attitude in pedagogy since this study also has limitation. The second is for education practitioners. Based on this study, it is suggested that students' intelligence and internal motivation must be considered first before introducing and using technology in the classroom.

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