

The Effect of Using Instagram Polling Quiz Towards Students' Vocabulary Mastery

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ABSTRACT

The aims of this research is to determine the significant effect of using the Instagram Polling Quiz application on students' vocabulary mastery. To help enhance the students' vocabulary mastery of tenth grade at SMKN 1 Trenggalek. This research uses a quantitative design method with a quasi-experimental method that uses statistical analysis. This research involved tenth grade of DKV 1 students and tenth grade of DKV 3 students at SMKN 1 Trenggalek in the academic year of 2023/2024 as subjects. In collecting data, researchers used multiple choice tests as instruments. The analysis provided is a pre-test and post-test after treatment. The researcher analyzed the data obtained utilizing SPSS version 25 with paired sample t-test analysis. Furthermore the post-test score in the experimental class was higher than the control class (79,03 > 74,83). So that the results of the paired sample t-test for experimental class in this research show a significance value of $0,000 < 0,05$. This means that H_0 is rejected and H_a is accepted. In conclusion, this research has been able to answer the research problem, namely "Is there any significant effect of utilizing Instagram Polling Quiz application towards students' vocabulary mastery at the Tenth Grade of SMKN 1 Trenggalek?" Furthermore, there is a significant influence of implementing the Instagram Polling Quiz on students' vocabulary mastery.

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Introduction

The use of technology, especially social media is nothing new in this modern era. According to Leong in Ostic et al. (2021) state that utilize of social media platforms has developed significantly in recent years. At that point Swar in Ostic et al. (2021) characterize that social media encompasses websites and digital resources that enable user interactions, offering avenues to exchange information, viewpoints, and passions. Therefore, the significant growth of social media can facilitate interaction between users sosial media platforms by giving them the opportunity to collaborate information, viewpoints, and passions.

Social media has several types, according to the features in it. Chisenga et al. (2014) state that there are fifteen classifications of social media platforms, including audio sharing

platforms, blogging platforms, microblogging platforms, social networking services, internet voice applications, social bookmarking platforms, online calendars, academic social networking sites, photo sharing platforms, video sharing platforms, online collaboration platforms, presentations, discussion platforms, online mapping tools, and cloud storage platforms. Then, Statista in Arianti et al. (2021) explains that in these fifteen categories, social media platforms predominantly utilized in Indonesia are YouTube, WhatsApp, Facebook, Instagram, Twitter, Line, Messenger, Linkedin, and Telegram. That shows that there are several types of social media use in Indonesia, where people use various platforms for various purposes.

One of the foremost widely utilized social media in Indonesia is Instagram. Around 23 million active users of Instagram in Indonesia are matured 18-24 a long time, and in this age extend people are in adulthood (Rahma et al., 2021). So active Instagram users in Indonesia are people who enter into creating adulthood. Many students use social media at this young age, it turns out that social media is useful for learning activities. Inayati (2015) suggests that social media offers a platform for learning English, aligning with educational theories like constructivism and social-cultural theory. Therefore, social media has constructivism and social-cultural nature, so that it becomes a fun learning media, and makes students interested in learning English using social media.

Vocabulary is very important when learning English. The collection of words in language is definition of vocabulary according to Maulana (2020). Within the Serve of National Education's declare number 008/H/KR/2022 with respect to the learning results in vocational high school grade X (Phase E) of the Merdeka Curriculums, it is required that understudies are able to utilized English to communicate contemplations and conversation almost subject everyday lives or issues related to their age in assembled to form, think about, and adjust combination of composing utilizing common vocabulary and words (Kemendikbud, BSKAP, 2022). Therefore, in vocational high schools, mastering vocabulary is essential for students to effectively use English in everyday communication and discussions on topics relevant to their lives and age.

According to the results of the researcher's observations, the condition of learning English in one of the departments of SMKN 1 Trenggalek is good enough, but students have difficulties in applying new vocabulary. Besides, the learning media used by teachers still uses the usual media, PowerPoint Presentation, Google Classroom, and Google Form. So students get bored quickly and this reduce students' interest in learning English, which combine the student preference and an interesting study, especially vocabulary. Apart from that, several other previous research studies also applied social media as a learning media, namely Instagram, which is felt to make learning fun, so that the utilize of Instagram media trully supports students' interest, motivation and vocabulary in learning English. Then reviewing the background above, this research aims to examine whether the utilize of Instagram Polling Quiz has a significant effect on students' vocabulary mastery.

Method

Quantitative research is the research design in this research. Mehrad et al. (2019) define quantitative research as research in which the researcher basicly utilize post-positivist statements to propose knowledge, for example; thinking about cause and impact, reducing it to specific variables, hypothesis and questions, utilizing measurements and observations, and testing theories. Therefore this research adopts a quantitative design, emphasizing statistical analysis and aligning with post-positivist claims utilizing a quasi-experimental design and non-

equivalent control group design. Below can be described the research design according to Abraham et al. (2022):

Table 1. Non-Equivalent Control Group Design

Pre-test	Treatment	Post-test
O ₁	X	O ₂
O ₃		O ₄

Explanation:

- O₁ : Pre-test in the experimental group (Before using the treatment)
- X : Treatment in the experimental group (Using Instagram Polling Quiz)
- O₂ : Post-test in the experimental group (After using the treatment)
- O₃ : Pre-test in the control group (Before using conventional method)
- O₄ : Post-test in the control group (After using conventional method)

Priadana and Sunarsi (2021) define that population as the total number of subjects considered by a researcher. So tenth grade of DKV in SMKN 1 Trenggalek in academic year 2023/2024 are populations of this research which consists of 105 students. Then Priadana and Sunarsi (2021) added that sample is a part of a population that has similar characteristics to the population itself, therefore the sample obtained from the population must be truly representative. Alifah (2020) also states that purposive sampling method is a sampling method according to the specific considerations of the researcher. Therefore to determine the sample in this research, the researcher applied non-probability sampling with purposive sampling. Then researcher choose both control and experiment group based on the lottery method, which tenth grade of DKV 3 as experimental group and tenth grade of DKV 1 as control group.

Multiple choice tests with pre-test and post-test types are the data collection method utilized in this research. Giving a pre-test before research subjects are given treatment is very important to determine students' vocabulary abilities before being given treatment. Apart from that, giving a post-test after the research subjects are given treatment, it is also very notable to know students' vocabulary abilities after being given treatment. The pre-test and post-test are multiple choice and each has 20 questions.

The researcher tests the validity, reliability and difficulty questions to create a good test before the pre-test and post-test are distributed. The data obtained were analyzed using SPSS software version 25 with test of normality, test of homogeneity, and paired sample t-test.

Result

In this research, the researcher used test to determine the effect of utilizing Instagram Polling Quiz towards students' vocabulary mastery at tenth grade of SMKN 1 Trenggalek. The type of the test there are pre-test and post-test. Before pre-test and post-test distributed, the researcher tests the validity, reliability and difficulty questions to create a good test. To test the validity instrument the researcher validated the content validity with advisors and English teachers at SMKN 1 Trenggalek through two validation process. The first validation result with minor revision and the second validation without revision. Apart from that to test the reliability the researcher utilize SPSS version 25 software, a Cronbach's alpha value of 0,756 was obtained for pre-test and a Cronbach's alpha value of 0,812 was obtained for pos-test, which showed good reliability. Then to test the difficulty questions the researcher used item difficulty index

(P) formula which was adobted from Kunandar in Azkiyah (2018), which obtained good criteria for pre-test and post test questions. After getting good result the reseacher distributed pre-test and post-test for both classes.

Description of The Pre-Test Score

The figure below showed pre-test score in the both classes for the tenth grade of SMKN 1 Trenggalek in the academic year 2023/2024. There were 31 students in the X DKV 3 as the experimental class and 31 students in the X DKV 1 as the control class.

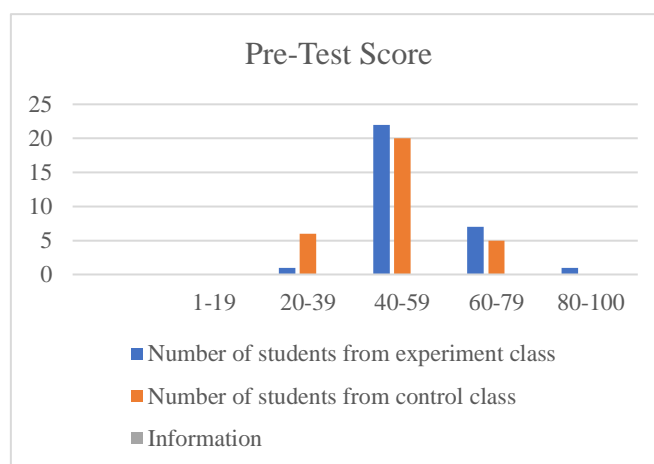


Figure 1. Range score pre-test

From figure 1 above, it means that if student reached the minimum score of 60 then the student was declared complete, and if he student don't reached the minimum score of 60 then the student was declared not complete. So the pre-test result for expeimental class and control class are shown in the table 2:

Table 2. The Result of Students' Pre-Test in both the Experimental and Control Classes

Completeness	PRE-TEST			
	Experimental Class		Control Class	
	Frequency	Percentage	Frequency	Percentage
Complete	8	26%	5	16%
Not Complete	23	74%	26	84%
Mean	52,26		47,74	
Maximum	80		70	
Minimum	35		30	
Total Score	1620		1480	
Total Subject	31		31	

From table 2 above, the result of pre-test score stated that in experimental class only 26% is declared complete and 74% is declared not complete, meanwhile in control class only 16% declared complete and 84% declared not complete. Besides, the average score for experimental class was 52,26 and for control class was 47,74. It implies both classes had low vocabulary because they can't reach the minimum score of 60 and many students declared not complete. After knowing that result, researcher did treatments in the experimental class.

Description of The Post-Test Score

After implementing the treatment, researcher also distributed the post-test. The figure below showed the pre-test score in both classes for tenth grade of SMKN 1 Trenggalek in the academic year 2023/2024. There were 31 students in the X DKV 3 as the experiment class and 31 students in the X DKV 1 as the control class.

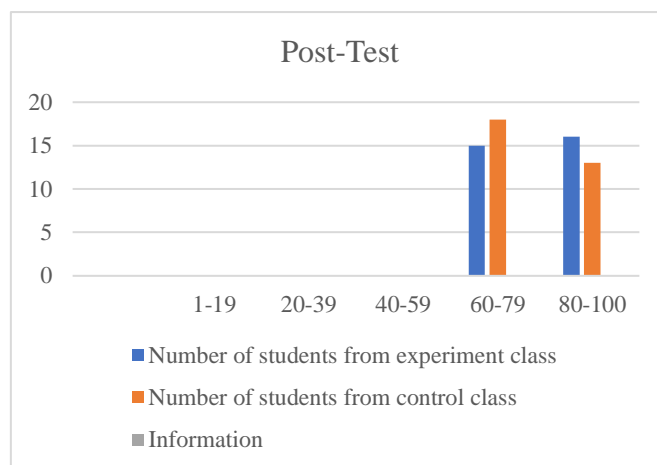


Figure 2. Range score post-test

From figure 2 above, it means that if student reached the minimum score of 60 then the student was declared complete, and if he student don't reached the minimum score of 60 then the student was declared not complete. So the post-test result for both classes are shown in the table 3:

Table 3. The Result Students' Post-Test in both the Experimental and Control Classes

Completeness	POST-TEST			
	Experimental Class		Control Class	
	Frequency	Percentage	Frequency	Percentage
Complete	31	100%	31	100%
Not Complete	0	0%	0	0%
Mean	79,03		74,84	
Maximum	95		95	
Minimum	60		60	
Total Score	2450		2320	
Total Subject	31		31	

From table 3 above, the result of post-test score that in experimental class was declared 100% complete, meanwhile in control class was declared 100% complete. Besides, the average score of experimental class was 79,03 and the control class was 74,83. So the average score from both classes increased, with the experimental class increased from 52,26 to 79,03 and the control class increased from 47,74 to 74,84. It means both classes can reach the minimum score of 60. In conclusion, the results of student scores after using Instagram Polling Quiz are high and increasing.

Normality Test

After know that results, the researcher carried out the normality test using Kolmogorov–Smirnov on SPSS software version 25. According to Dornyei in Wahyuda (2022) clarifies what

is meant by normal distribution is characterized by a range of values, with most values clustered around the mean. This test is essential before performing t-test to determine whether the data is normally distributed. According to Nuryadi et al. (2017) if the significance value is greater than 0,05 it implies the distribution is normal. So the normality test result for both classes are shown in the table 4:

Table 4. The Results of Pre-Test and Post-Test Normality

		Tests of Normality					
	Class	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Result	Pre-Test Experimental	0,143	31	0,104	0,937	31	0,069
	Post-Test Experimental	0,133	31	0,174	0,936	31	0,064
	Pre-Test Control	0,133	31	0,174	0,966	31	0,426
	Post-Test Control	0,108	31	0,200*	0,936	31	0,064
*. This is a lower bound of the true significance.							
a. Lilliefors Significance Correction							

From Table 4, it is evident that the pre-test significance values for the experimental class was 0,069 and for the control class was 0,426, it implies that there are greater than 0,05, indicated that the pre-test scores are normally distributed. Similarly, the post-test significance values for the experimental class was 0,064 and for the control class was 0,064, it implies there are also greater than 0,05, indicated that the post-test scores are normally distributed.

Homogeneity Test

After having the normality test results, another step is to carried out a homogeneity test using the Lavene Test method. According to Alifah (2020) defines homogeneity test is a test utilized to decide whether data is homogeneous or inhomogeneous, at that point homogeneity testing can be carried out if the data previously had a normal distribution in normality testing. This test was calculated using the Levene statistical test in SPSS version 25 software. According to Nuryadi et al. (2017) if the Levene Statistics value or significance value based on mean is greater than 0,05 it implies that the data variation is homogeneous. So the homogeneity result of students' pre-test for both classes are shown in the table 5:

Table 5. The Results of Pre-Test Variances Homogeneity

		Test of Homogeneity of Variance			
	Pre-Test	Levene Statistic	df1	df2	Sig.
Result	Based on Mean	0,114	1	60	0,737
	Based on Median	0,156	1	60	0,694
	Based on Median and with adjusted df	0,156	1	60,000	0,694
	Based on trimmed mean	0,137	1	60	0,712

From table 5 above, the data appears that the significance value of pre-test score in both classes was 0,737, indicating that the variances are homogenous, that is supported by the homogeneity test results, where the significant value is greater than 0,05. Then the researcher also conducted a homogeneity test for the students' post-test scores. So the post-test result of students' post-test for both classes are shown in the table 6:

Table 6. The Results of Post-Test Variances Homogeneity

Test of Homogeneity of Variance					
	Post Test	Levene Statistic	df1	df2	Sig.
Result	Based on Mean	0,116	1	60	0,734
	Based on Median	0,110	1	60	0,741
	Based on Median and with adjusted df	0,110	1	59,399	0,741
	Based on trimmed mean	0,093	1	60	0,761

From table 6 above, the significance value for the post-test scores in both classes is 0,734, which is greater than 0,05, indicating that the variances are homogeneous.

Paired Sample T-Test

After measuring and checking for normality and homogeneity utilizing SPSS software version 25, the researcher analyzed the data with paired sample t-test. Latan in Alifah (2020), paired samples t-test is utilized to test results where the participants are the same but the variables are different. That's to know the significant distinction value between before applying the Instagram Polling Quiz and after applying the Instagram Polling Quiz in the experimental class. To empirically substantiate the impact of Instagram Polling Quiz on students' vocabulary mastery, the researcher also utilized paired sample t-test with SPSS application version 25. So the data descriptive result for both classes are shown in the table 7:

Table 7. The Results of Data Descriptive for Both Classes

Group Statistic					
	Class	Mean	N	Std. Deviation	Std. Error Mean
Result	Post-Test of Experimental Class	79,03	31	10,910	1,960
	Post-Test of Control Class	74,84	31	10,839	1,947

From table 7 above, it appears that there's a significant distinction value between the both classes. This is clearly demonstrated by the group statistics, which show that the experimental class had an average score of 79,03, while the control class had an average score of 74,84. Thus, from a statistical perspective, it can be concluded that there's a distinction in the average learning outcomes of students between the both classes. According to Nuryadi et al. (2017) if the significance value is less than 0,05, it indicates that H_0 is rejected and H_a is

accepted. Additionally, to demonstrate whether the distinction is significant or not, the researcher interpreted the paired samples t-test results are shown in the table 8 below:

Table 8. The Results of Paired Samples T-Test

Paired Samples Test	Paired Differences			Pair 1	Pair 2
				Pre-Test & Post-Test of Experimental Class	Pre-Test & Post-Test of Control Class
		Mean		-26,774	-27,097
		Std. Deviation		11,729	15,694
		Std. Error Mean		2,107	2,819
		95% Confidence Interval of the Difference	Lower	-31,077	-32,853
			Upper	-22,472	-21,340
		T		-12,709	-9,613
		Df		30	30
		Sig. (2-tailed)		0,000	0,000

From table 8 above, the paired simple t-test results showed a significant value of 0,000 for experimental class, which is less than 0,05, indicating that H_0 is rejected and H_a is accepted. Similarly, the paired sample t-test results for the control class also showed a significant value of 0,000, which is less than 0,05, indicating that H_0 is rejected and H_a is accepted. This means a significant distinction between the pre-test and post-test scores, which shows a significant increase in students' vocabulary mastery in both classes.

Discussion

After the Instagram Polling Quiz technique was treated to the experimental class, while the control class was not treated and continued to use conventional or traditional methods from the English teacher, both classes showed an increase in their average post-test scores. However, the experimental class achieved a higher average post-test score compared to the control class. Although some students in both classes improved their scores from the pre-test, some scores remained in the minimum standard. The average post-test score for experimental class was 79,03, whereas it was 74,84 for the control class. Additionally, the post-test normality result for both the experimental and control classes was 0,064. And the post-test homogeneity result for both classes was 0,734. According to Nuryadi et al. (2017), the data variety is normal and homogeneous, if the significance value is greater than 0,05. In conclusion, the student post-test are normally distributed and had homogeneous variance. Other results in this research showed that utilizing the Instagram Polling Quiz application had a significant effect towards students' vocabulary mastery at tenth grade of SMKN 1 Trenggalek, as confirmed by the paired sample t-test results, which showed a significance value of 0,000, less than 0,05.

In line with this research result, Hidayah (2023) stated that students' motivation to learn English increase as they receive direct feedback on their quiz answers, so that can push who are typically disinterested in English learning to actively participate with Instagram polling quiz. In addition, Handayani (2023) stated that Instagram can be utilized to increase students' interest as a vocabulary learning media. Then Khairunnisa et al. (2021) also stated that several Instagram features can be utilized to support learning activities, including to developing English tests especially in Vocabulary, which is an important part of English language assessment.

Conclusion

Based on the result and discussion presented in this research, the researcher determined that Instagram Polling Quiz is effectively enhance students' vocabulary mastery. The results of data analysis obtained through a paired simple t-test using SPSS software version 25, showed a significance value of $0,000 < 0,05$. This indicates that H_0 is rejected and H_a is accepted. The average post-test score in the experimental class was 79,13, compared to 74,65 in the control class. Hence, H_a (Alternative hypothesis) is accepted, which showed a significant effect of implementing Instagram Polling Quiz on students' vocabulary mastery.

From that explanation, it can be concluded that research questions have been replied and demonstrated that Instagram Polling Quiz can increase students' vocabulary more and get to master English language skills in the tenth grade of SMKN 1 Trenggalek. It was also found that Instagram Polling Quiz can increase students' interest in learning English in a fun, creative and interactive manner. Through this application, students also learn new vocabulary in class unconsciously because they think they are playing social media in English. This appears that it is easy for students to actively participate in this application which makes them use English.

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