

The Effect of Kahoot! On Junior Secondary School Students' Vocabulary Mastery: An Experimental Study

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Abstract

The advancement of technology has improved the implementation of gamification in various educational settings. Kahoot! is a digital game-based learning platform that is becoming more and more incorporated into educational settings to enhance classroom learning. This study proposed a game-based learning with Kahoot! and applied it to in English subject of Junior High School level. The research focused on the impact of using Kahoot! in classroom teaching in order to ascertain whether games can contribute to students' vocabulary mastery. 42 students from an Islamic junior high school at Cikeusik, Indonesia, participated in this research. We formulated two treatment iterations: one game-based, utilizing Kahoot for the experiment class, and the other conventional, utilizing a paper-based multiple-choice test in the control class. We implemented an 8-week treatment, consisting of 2 hours per week. The findings revealed that learners grew interested in concentrating on level cognitive learning processes as a result of their immersion in the flow of the game. Their involvement in class had a major positive impact on their learning.

Keywords: Learning Media, Kahoot Application, Vocabulary Mastery.

Citation:

Ratih, Rohimajaya N, A.& Munawaroh T., (2023). The Effect of Kahoot! On Junior Secondary School Students' Vocabulary Mastery: An Experimental Study. *Journal of Educational Review and Cultural Studies*, 1(2), 86-96. <https://doi.org/10.61540/jercs.v1i2.54>

Article History:

Received 26 October 2023

Accepted 14 November 2023

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INTRODUCTION

English is the Language of International Communication Even though English is not the most widely used language in the world, English has become one of the core subjects at the Indonesian middle school level, some Indonesian people think that English is the main foreign language; therefore Indonesian people still encounter some obstacles and difficulties in learning other mother tongues, one of which is English, four skills must be mastered in learning English, namely writing, reading, listening and speaking, (Hummer & Rohimajaya, 2018). But before learning the four components, it must be preceded by mastering vocabulary first. According to Munawaroh (2022) stated that the most important thing before mastering it all is vocabulary.

Vocabulary is the most important component of speech activity: listening and speaking, reading and writing (Abdullagevna 2020:325). It means that Vocabulary is the most important part of language as it affects the four language skills: listening, speaking, reading, and writing. If the student wants to master four language skills, the student must master vocabulary first, As it will positively affect her speaking, listening, reading, and writing skills. According to Hummer and Rohimajaya (2018:169), a student's vocabulary is generally considered to be an important part of both language learning and language skill development. Vocabulary also influences the way students communicate with others. Good and effective communication is possible when students master vocabulary. According to Neuman and Dwyer (2009: 385) stated that vocabulary can be defined as the words the students need to know in order to communicate effectively. The words students speak, the words the students hear.

From the researchers' observations at one Islamic Junior Secondary school in Cikeusik Pandeglang, Indonesia, we found that many of the 8th graders at MTs Al-Mu'min Cikeusik Pandeglang still struggle with learning new vocabulary. The researcher found that many students still struggled to learn new vocabulary because the teaching methods were boring. Students lacked vocabulary and motivation and were not interested in learning English. Learning English using game-based applications is an effective way for millennial students because students stick with their gadgets all the time.

In fact, many students still struggle with language acquisition, especially vocabulary. Students still have difficulty acquiring new vocabulary because teaching techniques are ineffective. Students are usually asked to look up difficult words, recognize meanings in dictionaries, and are expected to memorize words. Students have trouble memorizing unfamiliar words they hear or read in texts. Students have difficulty

understanding and comprehending the meaning of unfamiliar words and learning new words. Therefore, the teachers should have some interesting techniques for teaching vocabulary to their students.

There are many techniques to improve students' vocabulary mastery. One of them is using games in the *Kahoot* application. *Kahoot* is a game-based learning stage which used as educational technology in schools and other educational institutions. Medina and Hurtado (2017) surveyed 70 university students Together with *Kahoot!* For classroom vocabulary learning. The students were then divided into control groups and tested experimentally. The results showed that the students in the experimental group performed better on the post-test than the students in the experimental group and control group.

Kahoot is a game-based learning phase used as educational technology in schools and other educational institutions (Brand and Brooker, 2018). Educational games are user-created multiple-choice quizzes accessible through a web browser or the *Kahoot* application. *Kahoot* application helps you learn effectively, since *Kahoot* is a technology medium, its technology is very mature now. The students can find everything in tech media. The *Kahoot* application can be used as a medium for teaching materials in the classroom to increase students' interest in vocabulary learning and prevent learning from becoming boring.

Based on a review of previous research, the implementation and issues of using *Kahoot* as technology-aided in English teaching have not been thoroughly examined. Therefore, in this current study, researchers investigated how the implementation of *Kahoot* as a medium improved their English vocabulary storage. It might shed light on how to benefit technology-aided learning media.

METHOD

The researcher has employed a quantitative approach in this study. According to Goertzen (2017:12), quantitative research methods are concerned with the collection and analysis of structured data that can be represented numerically. Furthermore, quantitative research is about developing hypotheses with examples (Cresswell 2017:2), based on the preceding statement, the researcher can conclude that this quantitative approach is a research method employed as a measuring instrument or quantitative or statistical data analysis to test the significance effect of the hypothesis.

This study was exploratory in nature. According to Creswell (2008), experimental research is used when the writer wishes to establish possible cause and effect between the independent and dependent variables. This means that there are variances in environment that will result in cause-and-effect results. The

pre-experimental approach was used in this study to determine the impact of using the Kahoot program on students' vocabulary knowledge.

Based on the definition above the researcher assumed the quantitative approach make the researcher easy to find out the data or the effect from the research, so that the researcher uses the pre-experimental design, and apply pre-test and pos-test vocabulary mastery in the experimental class and control class. This research has two variables, namely independent variable and dependent variable or the X variable and Y variable. X Variable is the Kahoot application whole Y variable is the students' vocabulary mastery.

FINDINGS AND DISCUSSION

The results section reports the findings of your study based on the methodology [or methodologies] you applied to gather information. The results section should state the findings of the research arranged in a logical sequence, clear and concise, without bias or interpretation.

The result of the pre-test and post-test was taught by using Kahoot application. The pre-test was conducted on 31st July 2023, and the post-test was conducted on august 28th 2023. The students were given 30 multiple choices related to the material of giving an example.

Table 1. *Descriptive of the Data*

	N	Min	Max	sum	Mean	Std. Deviation
Pre-test control	20	40	80	1210	60,50	11,227
Post-test control	20	60	80	1395	69,75	6,382
Pre-test experimental	22	45	80	1475	67,05	8,261
Post-test experimental	22	70	100	1850	84,09	9,466
Valid N (listwise)	20					

From table 13.IV above, the minimum score obtained by the experimental class in the pre-test is 45 and the maximum for the pre-test experimental class 80 and the total score is 1475. While the experimental class post-test requires a minimum score of 70 and a maximum score of 100 to receive a total score of 1850, the control class pre-test requires a minimum score of 40 and a maximum score of 80 to receive a total score

of 1210. While the control class's post-test minimum 60 and maximum scores are 80 and the overall score is 1395.

Table 2. *Paired Samples Test*

		Paired Differences					t	df	Significance	
		Mean	Std deviation	Std Error mean	95% Confidence Interval of the Difference				One sided p	Two sided p
					Lower	Upper				
Pair 1	Pre-Test Control Post-Test Experimental	-9,250	13,306	2,975	-15,477	-3,023	-3,109	19	,003	,006
Pair 2	Pre-Test Experimental Post-Test Experimental	-17,045	8,115	1,730	-20,643	-13,447	-9,852	21	<,001	<,001

Based on the data above, so it could be concluded that: Is there any significant the Effect of Kahoot application towards students' vocabulary mastery at the eighth-grade students of MTs Al-Mu'min Cikeusik Pandeglang Banten.

Based on the output SPSS 29 on Table 2, it reveals that the significance value (p -value) = 0.00 at pair. H_a is accepted and H_o is a rejected so that there is significance effect of Kahoot application on vocabulary mastery.

The aim of this research to investigate the significant effect of the *Kahoot* application on students vocabulary mastery at the eighth grade of MTs Al-Mu'min Cikeusik, Pandeglang, academic year 2023/2024. The data were obtained before (pre-test) and after (post-test) experimenting MTs Al-Mu'min Cikeusik with *Kahoot* application as the teaching medium in the experimental class and traditional methods in the control class. The researcher analyzed the results of students' post-test scores in both the experimental and control classes to see if the *Kahoot* application had significant effect on student vocabulary mastery.

To evaluate the data, the researcher utilized SPSS version 29 for Windows with selected formulas. To answer the research question in this research, is there any significant effect on student vocabulary mastery

in eighth grade of MTs Al-Mu'min Cikeusik. So, the researcher proved it with the result of the t-test and t-table. This hypothesis testing is used to see the significance of the effect of *Kahoot* application on students' vocabulary mastery. The result of this test will generalize the research hypothesis.

Before analyzing hypothesis testing, the researcher conducted assumption tests that are normality test and homogeneity test. The normality test was used to test whether the distribution of research data was consistent with the normal distribution. The result of the normality test pre-test, the researcher obtained data that the significance value of the experimental data class was 0,075 and the control class was 0,142. The result of the normality test post-test in the experimental class was ,200 and the control class was 0,016. It concluded that the data is in a normal distribution. The homogeneity test was used to test whether the variance of the data was homogeneous or not. The result of the homogeneity test pre-test was 0,421, while the post-test was 0,043. It can be summarized that the data was homogeneous.

The researcher has answered the hypothesis that *Kahoot* application is significance effect on student vocabulary mastery in the eighth grade of MTs Al-Mu'min Cikeusik academic year 2023/2024. The researcher evaluated the results of the data t-test with the t-table in this interpretation. If the t-test above the t-table, H_0 is rejected and H_a is accepted.

This research has two hypotheses:

H_0 : there is a significance effect of *Kahoot* application on student vocabulary mastery at the eighth grade students of MTs Al-Mu'min Cikeusik.

H_a : there is no significance effect of *Kahoot* application on student vocabulary mastery at the eighth grade students of MTs Al-Mu'min Cikeusik.

The significant value (2-tailed) of this result was 0,001, according to table 4.15, the result of an independent t-test. The H_a is accepted if the p-value (2-tailed) is less than 0,05 and the H_0 is rejected, while the H_a is rejected if the p-value (2-tailed) is more than 0,05 and the H_0 is accepted. The p-value was calculated as 0,05 ($0,001 < 0,05$) using this formula. As a result, the test result has changed significantly

Learning media *Kahoot* application is there significance effect on students' vocabulary mastery. This can be seen through students' learning outcomes in the experimental class that is VIII A. In VIII A, which is taught by using *Kahoot* application has better learning outcomes than control classes that are only using conventional learning. This is because in the learning process, using *Kahoot* application media students easier to understand and remember the material. For example, when a teacher was given the material after that

teacher gave a quiz using *Kahoot* application, and at the end of the game, the students will find out the true answer and know the score that they got. By knowing the answers, students will understand and remember what they have learned more easily.

Based on the explanation above, it can be seen that the use of *Kahoot* application as a learning media as an alternative to overcome educational problems such as low learning outcomes and lack of learning motivation. It is related to the previous related study conducted by Egi Setiawan (2020) written in the form of thesis entitled “Students’ perception on the use of *Kahoot* application in reading narrative text at SMAN 3 Makassar” who concludes that *Kahoot* application is very useful to increase students’ vocabulary mastery in descriptive text he found that *Kahoot* application this is proven by the students interested in teaching learning and the student can understand.

The material very well. The research conducted by Mada and Anharudin (2019) concludes that *Kahoot* application makes different condition in the class, it makes more active, excited, feeling good and gave rise to competition desire at the class. Research by Kathryn Elizabeth Ciaramella showed that *Kahoot* is effective to teach vocabulary acquisition and retention to the students who have disabilities. It is proven by an increase the students’ mean score after given treatment. Using *Kahoot* application as media in teaching learning process made students more active in the classroom. It is related with Christine Elizabeth Holbrey, (2020 :9) she stated that *Kahoot!* game was successful to made activities more active and interactive during the learning process.

Finally, the findings of the study show that there is a significant difference in students’ vocabulary mastery before and after utilizing *Kahoot* application as a teaching tool. The *Kahoot* application has been successfully used to instruct students in MTs Al-Mu’min Cikeusik eighth grade. According to the following description, the *Kahoot* application is effective in increasing students’ vocabulary mastery.

CONCLUSION

It can be proved with the result of analyzing using SPSS version 29. The results demonstrate that the experimental class’s mean post-test score is higher (84,09) than the control class’s post-test score (69,75). It shows that students who are studying using the *Kahoot* application do higher than students who are taught using traditional methods The researcher’s results from using the SPSS 29 t-test yielded a significance two-tailed of $0.01 < 0.05$, meaning that H_0 is rejected and H_a is accepted, indicating that the Kahoot application had an effect on students’ vocabulary mastery.

The suggestions address teachers, students, general readers, and future researchers. For teachers when teaching English to students, the teacher should employ creative media. Thus, the students like their studies, and they do not get monotonous. Teachers can provide Kahoot application to assess the students because these media allow the students to be interested in the teaching-learning and also give the motivation to increase students' vocabulary mastery. For students, it is strongly believed that the learners will be highly motivated to enhance their English skills and will have high self-confidence in conducting assessments, as well as enjoy and participate actively in teaching English. For readers, it is expected that the findings of this study may serve as a resource of fundamental information. In addition, the researcher expects that the findings of this study will benefit the reader, students, and the researcher himself. Ultimately, future researchers who want to use the Kahoot application must first learn the steps. The researcher must be able to instruct students on how to use media. This media can also be used for other courses in addition to English.

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