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The Effectiveness of Fun Game *Kahoot* as A Media in the Teaching of Vocabulary

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Abstract

This research aims to know the significant difference of using fun game *Kahoot* to students in learning the vocabulary mastery of Senior High School. The objectives of the study are; (1) to find out the students' ability in vocabulary who were taught with fun game *Kahoot* (2) to find out the students' ability in vocabulary who were taught without fun game *Kahoot* (3) to find out the significant difference on vocabulary mastery of the eleventh-grade students who were taught using fun game *Kahoot* and who were taught without using fun game *Kahoot*. This research was going through quasi-experimental design consisted of two classes. 36 XI MIPA 4 and 35 XI MIPA 3 of *SMAN 1 Boja* in the academic year 2021/2022 was taken as the sample. The instrument was valid and reliable, the difficulty level was categorized as a medium, and the discriminating power was organized well. It can be known by the result of data. The researchers using SPSS in this research. The data collected were analyzed using a t-test. It was found that the students' ability to learn vocabulary taught with fun game Kahoot was improved. The student's ability to learn vocabulary that was taught without fun game Kahoot was poor. The value of the t-test was higher than the t-table (20, 04>1, 67). It means teaching vocabulary using the fun game Kahoot was effective. At last, the paper proposed suggestions for teachers to using fun game Kahoot in teaching vocabulary.

Keywords: Fun Game Kahoot, vocabulary, effectiveness

Introduction

One of the activities that aids students improve their academic ability are teaching and learning. Nowadays, the advancement of individuals' abilities correlates perfectly with the expansion of the globalization process. We can't restrain globalization from technology. The rapid rise of technology has had numerous beneficial effects on people's lives. At least one of them is involved in education in some way. Technology brings fresh air to the teaching and learning process (Sani, 2016).

According to Bicen, H., & Kocakoyun, Ş. (2018), technology is critical in education in this pandemic. Because face-to-face learning is not possible, many schools implement online classes. Using fun game media in online courses is an excellent way to apply technology to education. Teachers can use digital material, enjoyable games to create a more pleasant learning environment while indirectly teaching students about technology. For both teachers and students, technology-based learning is highly advantageous. Fun games may create fascinating and new classrooms, but they can also guide learners and even teachers to use fun games efficiently and prepare them for a future where fun games may continue to evolve. To keep up with the globalization trend that has brought the rest of the internet and messaging technology-based industry 4.0 to Indonesia, we need to improve effective knowledge acquisition and essential training participants (Suharsono, 2020).

Eventually, fun games are used in language learning. It's a unique approach to vocabulary instruction. According to Wright, there are many explanations why fun games can be used in language learning (2006:2). To begin with, learning a language is a difficult task. It takes effort to understand and use newly discovered language in conversation and written composition. Rather than simply studying a foreign language, fun games enable students to gain experience. Fun games consist of drilling and additional benefits that allow students to learn the language as a live contact. Language practice can be intense and meaningful through fun games. As a result, the researchers discovered a game-based learning method that encourages students to enhance their vocabulary skills by playing the fun game *Kahoot*.

Kahoot seems to be a game-based digital learning environment used as instructional technology in schools. It is interesting for students. *Kahoot* is an online game that uses course material to assess students' skills. Teachers and students will participate in the game for free, and all they need is a multimedia tool to do so (Siegle, 2015). Integrating technology and curriculum will support teaching and learning processes such as the language learning process. (Bull and Ma, 2001) states that

technology offers language learners unlimited access and resources. Otherwise, *Kahoot* has an essential role in inspiring students to learn vocabulary and make it more interesting to understand and teach. The improvement of co-operative language learning with appropriate technological learning media (Clements & Sarama, 2003). Chirandon in Manan (2016:141) stated that one effective technique is using the fun game *Kahoot*. It can improve their vocabulary knowledge and also their ability to communicate.

In addition, vocabulary is a necessary tool to communicate and acquire information. One of the most daunting aspects of second language learning is developing a wide range of words. One of the most daunting aspects of second language learning is the development of a broad vocabulary. The other main explanation of the value of vocabulary is that students most likely have difficulty learning the word essential for academic success, whether because of their family resources, a foreign language in their homes, or any other reason.

In teaching vocabulary, a teacher must make the students excited and enjoy the teaching-learning process. Qualified teachers, suitable environments, and facilities technology for multimedia have performed an essential role in teaching and learning. One of the means or channels of general communication in society is defined as the media. The researcherss argue that educators ignore this personal performance but establish a context that supports widespread media creation and processing participation. The press also supports the success of language teaching. Things around us can be used as teaching media, such as pictures, toys, games, or multimedia. Teachers should choose suitable teaching media to attract student attention.

Studies on fun games in teaching English Foreign Language have been explored by Akdogan (2017) stated that games allow people to communicate and collaborate, to be innovative in the practical use of language. Then, (Khoshsima et al., 2015), Bucky explains that "Games encourage learners by providing them with meaningful contexts to direct their energy towards language learning." In learning vocabulary, games can be both advantageous and efficient. People are highly inspiring because they require friendly competition and provide a collaborative learning environment where students can collaborate. One strategy to help students learn and utilize English expressions is to use a game-based learning method in the classroom. According to (Sabandar et al., 2018), one of the fun ways to educate learners is through digital games. Games are usually intended to increase learners' desire for competition, goal achievement, and genuine self-expression. Games are

also great for promoting interactivity, having rules with a quantifiable result, colorful, appealing, and highly realistic. (Hadijah et al., 2020) stated that the game could attract the students' attention to the test. It helps the students be more active in the classroom, and last, the game makes the students more enthusiastic in doing the test. The use of technology in teaching can make the students have fun learning. Technology also has the power to transform education by ushering in a new model of connected teaching. This model links teachers to their students and professional content, resources, and systems to help them improve their instruction in the classroom. The use of technology also increases students' engagement and motivation and accelerates learning (Susanti, 2017).

As part of digital learning media, the Kahoot game is one of the platforms for learning networks. Kahoot is a great learning tool that's simple to use for both teachers and students. Morten Versvik, Jamie Brooker, and Johan Brand came up with it with the Norwegian University of Technology & Science (NTNU) (Wikipedia, 2017). *Kahoot* is a learning game that is played in the classroom with students. *Kahoot* will test students' skills against vocabulary through quizzes in *Kahoot*. *Kahoot* makes students interested in learning so that the response from students is robust. This might be referred to as a student feedback system. Kahoot was ranked amongst the top 100 modern web technologies used in the class by Kapuler (2015). On the list of applications rated for their effectiveness of treatments for teaching or assessing students in class, Kahoot comes in at number 36. This information suggests that Kahoot can be a valuable tool for improving vocabulary. Since Kahoot is a relatively new online method, there may be minor studies on its effect in the class and little evidence for its utility in teaching material vocabulary. While Kahoot is an online game, there have been many studies on the efficacy of using other online games to teach language. Whereas *Kahoot* is an online game, there have been many studies into the effectiveness and using other interactive games in teaching vocabulary in the language (Huang, 2015). The *Kahoot* application can create multiple choice questions in a debate format that can be played with all students (Bicen & Kocakoyun, 2018). Students can play the games without creating an account and generate a nickname shown in the game (Dellos and Johns, 2015). Additionally, Kahoot quiz game questions provide interactive graphics such as pictures and videos to engage students (Dellos, 2015) further, and students win points for correctly and quickly answering questions.

Several of those four abilities to listening, speaking, reading, and writing cannot be separated from language learning because vocabulary is a part of it.

Additionally, the vocabulary used in class has been a valuable resource for both teachers and students while studying a foreign language in a classroom environment. According to (Alqahtani 2015), vocabulary is a crucial part of learning a foreign language because new terms are frequently discussed, whether in books or classes. A person's understanding of oral and written texts depends on their vocabulary. Wilkins (1972:111), very little can be communicated without grammar, and nothing can be shared without vocabulary. This argument is also consistent with Krashen's observation which students do not hold textbooks in their bags but rather dictionaries.

Moreover, the first and foremost part of learning a foreign language is vocabulary. According to (Hiebert & Mesmer, 2013), students had to know the words to read increasingly demanding text with understanding. This is consistent with the cited vocabulary of Neuman & Dwyer (2009). To communicate successfully, we need to know words when speaking (expressive vocabulary) and phrases when reading (receptive vocabulary). Not only is it essential to understand the terms that someone uses, but the language must also be spoken. Students will eventually improve their skills by learning words and their similarities to ideas and facts, which will help them understand the meaning of vocabulary. Comments deemed acceptable are understandable by learners and compatible with their level of competence (Crossley et al., 2012).

Within the problems, the following is the researchers's problem statement as follows:

1. How is the students' vocabulary mastery when they were taught Fun Game *Kahoot*?
2. How is the students' vocabulary mastery when they were taught without Fun Game *Kahoot*?
3. Is there any significant difference in vocabulary mastery between the eleventh-grade students who were taught using Fun Game *Kahoot* and those who were taught without using Fun Game *Kahoot*?

Methodology

In this research, the researchers used a quasi-experimental design. Cohen (2007:57) states that there are two groups in quasi-experimental studies; experimental and control. In this experiment, the researcherss gave the test to measure students' ability through a google form to determine whether there was any

significant difference between before using fun game *Kahoot* and after using fun game *Kahoot*.

a. Population and Sample

Marczyk et al. l (2005: 18) defined that "population is all individual interest of the researchers." The population for this study will include all of the students in SMAN 1 Boja's 11th grade. According to (Creswell 2013), a sample is a subset of the target population that the researchers intends to analyze to generalize the target population. The researchers will focus on two eleventh-grade classes in this study. They are XI MIPA 3 (experimental group), 36 students, and XI MIPA 4, 35 students in the control group.

b. Instrument

In this research, the researcherss used to test as an instrument to collect the data. There were two tests in this research; pre-test and post-test. Creswell (2012) states that a pre-test measures the students in some characteristics before they get treatment. Creswell (2012) states that the treatment variable is measured in categories whether the sample will receive or denied the activities to determine its effect on an outcome. After the pre-test was given, the treatment was started. The students did the treatment by using fun game Kahoot. They used their smartphone or laptop.

After giving treatment, a post-test was given to the students. Creswell (2012) states that post-test measures on some characteristics assessed for participants in an experiment after a treatment. It was used to measure the students' enhancement in mastering vocabulary after the researcherss gave the treatment.

c. Technique of Data Collection

According to Cohen et al. (2007), there were two types of tests, parametric and non-parametric. The design is visible in a parametric test for a significant population. Furthermore, a non-parametric test is designed for a smaller sample in which there is no specific population.

The data were collected in one way by the researchers. There were two tests given: a pre-test and a post-test. The researchers gave twenty-five questions in the pre-test. Each question had five possible answers. The students were given treatment after completing the pre-test. The researchers used the enjoyable game Kahoot as a game-based learning tool in their treatment. The final stage was the post-test. The researcherss administered a post-test to the students, which consisted of twenty-five questions with five possible answers. In this study, the researcherss utilized tests and observation for collecting the data.

d. Data Analysis

The researchers used scoring to correct students' ability to learn vocabulary. The method of data analysis was an essential part of this research because the researcherss got the result of the data analysis. The researchers used a t-test whether there was any significant difference by using fun game Kahoot to answer the aims of this research whether there was a significant difference after the researchers implemented the fun game Kahoot in learning vocabulary.

e. Validity

Validity was required to conduct the study. It was critical to assess the test's reliability. According to Cohen et al. (2007), validity is an essential factor for doing good research. It would be pointless to do a study if it was invalid.

Validity was a measure that shows the correctness degree of the instrument. A good test content validity is if each part of the test used to collect data has relevancy to aim and cover representative material. To measure the validity of the test, the formula is:

$$r_{xy} = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N\Sigma X^2 - (\Sigma X)^2\}\{N\Sigma Y^2 - (\Sigma Y)^2\}}}$$

Where:

r_{xy}: correlation between variable x and y
x: the score of odd items
y: the score of even items
N: the number of students
$\sum x$: the number of items of x score
$\sum y$: a total score
$\sum x_2$: total of quadrant of item
$\sum y_2$: total quadrant of total score

After the researchers got the r_{count}, they compared the result of rcount and with rxy and rtable with a = 5%, if rcount > rtable; therefore, the item was categorized as significant. It means that the item was valid. Besides, if $r_{count} = r_{table}$, the result item was not valid and cannot be used. Based on the result of validity from forty-four items that were given to the student was valid.

f. Reliability

Based on Cohen et al. (2007), reliability in quantitative research is essentially a synonym for dependability, consistency, and reliability over time, instruments, and the respondent group. Reliability showed to what extent was a device could be believed. Reliability showed that an instrument was enough to be trusted to be used as a collection means because it was good. Besides, the research has to find the reliability of all test items. To count the reliability of the test, this can be calculated using the formula:

$$r_{11} = \left(\frac{k}{k-1}\right)\left(\frac{S^2 - \Sigma pq}{S^2}\right)$$

Based on the computation of the reliability test, the result of reliability was 0.896. It means the instrument was reliable.

Findings

In this part, the researchers dealt with the analysis of the data that have been collected. The purpose of the research is to analyze the students' ability in vocabulary taught with and without using fun game *Kahoot* as the media to determine the significant difference before and after the students are taught using it.

The researchers obtained scores of students' ability to learn vocabulary in this section by distributing pre-test and post-test. As previously stated, the researchers wants to know if there is a difference in students' results before and after they are taught using the fun game *Kahoot*. The researchers administered a 25-item test. The exam is made up of multiple-choice questions. Before starting the treatment, the researchers administered a pre-test to the students to determine their proficiency in learning vocabulary. This test is used to determine a student's ability before they receive treatment. The results of the pre-test revealed that the students' ability in vocabulary learning was still medium. After receiving the results of the pre-test, the researchers treated the students with the fun game Kahoot. The students had a good time while learning. The teaching and learning process was carried out successfully.

Following the treatment, the researchers administered a post-test to the students. This post-test was given to determine the students' ability in vocabulary learning after they had been taught using the fun game Kahoot. The researchers wanted to know how far the students had progressed in vocabulary learning after

the treatment. As a result of the post-test results, students' vocabulary outcomes improved significantly.

The post-test was given by asking the students to answer the question and apply fun game Kahoot in learning vocabulary. There were 35 students in MIPA 3 and 36 students in MIPA 4 as a subject in this research. It was done after the treatment process by applying fun game Kahoot as the media in learning vocabulary in the class. This test was intended to know the students' ability to learn a language using fun game Kahoot. The purpose of the post-test was to know the students' ability who were taught using fun game Kahoot in learning vocabulary. The mean score of pre-test was 65, 48 and post-test was 79, 08 in experimental class it can be concluded that many experimental class students got better score after using media *fun game Kahoot*.

The pre-test result was categorized as "Poor," while the post-test was classified as "Good." By referring to the table of levels of students' achievement. From 35 students as samples who were taught using *fun game Kahoot*, in the pre-test, there were six students got good category, eight students got adequate, 12 students got a poor type, nine students got inferior class while in post-test there were four students got excellent style, 16 students got good category, 11 students got good category three students got a poor type, one student got inferior class. The table of students" score is as follows:

Table 4.4
The Students' Score and the Category of Experimental Class

No.	Score	Grade	Category	Frequency of Students	
				Pre-test	Post-test
1.	90 – 100	A	Excellent	0	4
2.	80 – 89	B	Good	6	16
3.	79 – 70	C	Adequate	8	11
4.	69 – 60	D	Poor	12	3
5.	Below 60	E	Very Poor	9	1
Total				35	

After obtaining the mean score of the pre-test and post-test, the researchers calculated the standard deviation, which was then used to calculate the variant (standard deviation) of the pre-test and post-test.

The standard deviation was calculated using the following formula:

$$SD_{2} = \sqrt{\frac{\sum(x_2 - \bar{x}_2)^2}{N-1}}$$

After getting the score of standard deviation then, the researchers calculated the standard error of pre-test and post-test in the control class. The formula is as follows:

$$S_{\bar{x}} = \frac{S}{\sqrt{n}}$$

According to the calculated results, the score of the standard deviation of the pre-test was 15, 56, and the score of the standard deviation of the post-test was 9, 51. Furthermore, the pre-test standard error was 2.63, and the post-test standard error was 1.61.

Table 4.2
Descriptive Statistic of Pre-test

	Experimental	Control
Sum	2292	2338
Sample	35	36
Mean	65,49	64,94
Variance (s^2)	241,9630	148,2254
Standart deviation (s)	15,56	12,17

According to table 4.2, the sum or total score of a student in the Experimental Class is 2292, while the aggregate or total score of a student in the Control Class is 2338. The Experimental Class has a mean score of 65.49, while the Control Class has 64.94. On average, 35 students received 65 points in the Experimental Class, and 36 students received 64 points in the Control Class. Based on the criteria, students' scores 64 and 65 are medium or fair. Then the standard deviation is 15.56 in Experimental Class and12.17 in the Control class. The control group's pre-test means 64, 94, and the post-test mean score was 74, 41. Based on the calculations above, it is possible to conclude

that many students had difficulty learning vocabulary. It can be categorized as "poor" by referring to the table of levels of student achievement.

Pre-test results from 36 students who were taught without Kahoot revealed that four students were in a suitable category, nine students were in the excellent category, 11 students were in the poor class, and 12 students were in the inferior type. In the post-test, two students were assigned to the excellent category, eight to the outstanding variety, fourteen to the superb class, ten to the poor category, and two to the inferior type. The following is a table of student scores:

Table 4.3

No.	Score	Grade	Category	Frequency of Students	
				Pre-test	Post-test
1.	90 – 100	A	Excellent	0	2
2.	80 – 89	B	Good	4	8
3.	79 – 70	C	Adequate	9	14
4.	69 – 60	D	Poor	11	10
5.	Below 60	E	Very Poor	12	2
Total				36	

The researchers calculated the standard deviation score after obtaining the mean of the pre-test and post-test scores; it was used to calculate the variant (standard deviation) of the pre-test and post-test scores. After calculating the standard deviation score, the researchers estimated the control class's pre-test and post-test standard error. Based on the calculated results, the pre-test standard deviation was 12, 17, and the post-test standard deviation was 10, 10. Furthermore, the standard error of the pre-test was 2, 03, and the standard error of the post-test was 1, 68.

To find out whether there was a significant impact of using fun game *Kahoot* to students in learning vocabulary mastery which is taught by fun game *Kahoot* and who is taught without fun game *Kahoot*, a t-test formula was used. The researchers took the post-test score from the control and experimental class to get the conclusion. The recipe is as follow:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Based on the result, the t-value was 2,004; the researchers compared the t-test to the t-table. It is showed in the table significance that was obtained t-table: 2,000. So there was a significant impact between the control group and the experimental group because the t-test is higher than the t-table; it could be concluded that there was a substantial impact of using the fun game *Kahoot* to students in learning vocabulary mastery which is taught by fun game *Kahoot* and who is taught without fun game *Kahoot*. So the positive hypothesis (Ha) says: "There is a sign of using fun game *Kahoot* to students in learning vocabulary mastery who is taught by fun game *Kahoot* and who is taught without fun game Kahoot in SMAN 1 Boja in the academic year 2021/2022" is accepted.

Discussion

Based on the analysis obtained from the result of tcount (2.004) is higher than t-table (2.000). It indicates that after giving treatment by using Kahoot game the students have better achievement in mastering vocabulary. The researchers have known in the application of treatment the students' attention be focused in learning, and the students easy to understand the lesson. It is in accordance to (Sabandar et al., 2018), one of the fun ways to educate learners is through digital games. Games are usually intended to increase learners' desire for competition, goal achievement, and genuine self-expression. The research showed that students could grasp the new vocabularies and apply them in context. This is in line with Akdogan (2017) who stated that games allow people to communicate and collaborate, to be innovative in the practical use of language. Then, (Khoshsima et al., 2015), Bucky explains that "Games encourage learners by providing them with meaningful contexts to direct their energy towards language learning. In each meeting, there were several vocabularies obtained by the students. The researcherss noticed that students actively participated in speaking using their English ability. The student's feedback in answering the questions demonstrate the effectiveness of Kahoot! in teaching English vocabulary to students. The podium result also motivates the students to get the best score. The vocabulary learning experience that including adrenaline is a very fun activity for the students. Kahoot quiz game questions provide interactive graphics such as pictures and videos to engage students (Dellos, 2015)

However, there were several obstacles found in the meeting. The first is technical, the second thing is the signal. Those obstacles affected the Kahoot! score. The next obstacle is the problem with the devices used, in this case, the student's gadget is unable to access the link given. Kahoot! could be easily paired

with other teaching methods. In the future, the use of technology will be incorporated into teaching and this research could give insight into the national curriculums.

Conclusion

Based on the research results and analysis described in the previous sub-section, the researcherss could conclude this research as follows: 1) The students' ability in vocabulary who were taught using *Kahoot* is good. It can be known from the mean score of students' vocabulary mastery taught using the *fun game Kahoot*; it was 80, 00. 2) The students' ability in vocabulary who were taught without using *Kahoot* is poor. It can be known from the mean score of students"writing recount text mastery who were taught without using *Kahoot*, and it was 64, 94 which was categorized into "Poor." 3) There was a significant difference in vocabulary mastery who were taught without using the *fun game Kahoot* and introduced using *fun game Kahoot*. It can be seen that it was higher than (20, 04>1, 67), Ho (Null Hypothesis) was rejected, and Ha (Alternative Hypothesis) was accepted. It means that the *fun game Kahoot* was effective in teaching vocabulary.

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