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# The Use of Kahoot Game to Improve Students' Vocabulary Comprehension

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#### **ABSTRACT**

This study aimed to assess the efficacy of a game called Kahoot to enhance the student's understanding of vocabulary. This study employed quantitative methods, which involved conducting a pre-experimental method and using a one-group pre-test and post-test design. The research sample comprised 30 eighth-grade students from SMP Gajah Mada Medan. Researchers employed pre-test and post-test instruments based on themes mentioned in Things Around Us. According to the research findings, the Kahoot Game can help students improve their vocabulary. The students' average pre-test score demonstrates this was 61.07. After receiving treatment using the Kahoot game, the score increased on the post-test. Students achieved an average score of 75.33. If we look at the descriptive data, there has been quite a significant increase. The researcher assessed each student's understanding of terminology both before and following the administration of treatment. The t-test formula is utilized to evaluate student's proficiency in language comprehension. The research findings indicate that the statistical computation of the value level of significance is 0.000 lower than sig.0.05 (based on a significance level of 5%). This value indicates a considerable difference between the student's pretest and post-test scores. The results showed that eighth graders at Gajah Mada Middle School could use the Kahoot website to enhance their vocabulary comprehension.

Keywords: Vocabulary Comprehension; Kahoot; Game

#### INTRODUCTION

Proficiency in English, as a globally recognized and widely used language, is crucial to acquire in the 21st century. English is the predominant language used in education, business, technology, and global communication. In their 2015 study, Schmitt et al. defined language as a tool humans employ to communicate messages through speech or writing. Language serves as a means for humans to communicate messages and convey meaning, with vocabulary being a necessary tool for its utilization. Undoubtedly, English has been the predominant global language up to this point. English is extensively taught in multiple nations worldwide. In studying

Indonesian and foreign languages, several aspects support the success of learning the language, including vocabulary.

Vocabulary is crucial in English instruction as it forms the foundation of language proficiency. As a part or component of a language, vocabulary plays an important role, and it cannot be separated from other elements, such as phonology, structure, or grammar. Vocabulary is a compilation of many phrases mixed to convey knowledge or importance. The four linguistic abilities to be able to read, write, listen, and speak all depend on vocabulary (Horby: 1984: 959). Moreover, according to Charles D. Fries (1945: 959), vocabulary is crucial to acquiring proficiency in a foreign language. Students must diligently learn and memorize words to expand their vocabulary. Therefore, it can be asserted that students' thorough command of vocabulary will undeniably facilitate their fluency in the language, particularly in English. Understanding vocabulary can help students understand English text more easily, enrich their vocabulary, and improve their speaking and writing abilities.

However, in practice, students often experience obstacles in improving their vocabulary comprehension. In their study titled "Factors Cause of Students' Low English Language Learning; A Case Study at the National University of Laos," (Souriyavongsa et al., 2013) Analyze the factors contributing to students' deficient mastery of the English language. Most students asserted that the English teacher had inadequate training due to their use of the Lao language during instruction, which hindered student engagement. Furthermore, the students' rudimentary understanding of English poses a challenge when attempting to involve them actively in the learning process. Moreover, the students possess a deficient knowledge of the fundamental principles of the English language. Third, due to their shyness and fear of making mistakes, students lack the confidence to use English. Fourth, the curriculum is not designed to help students become more fluent in English. Finally, students lacking learning strategies, encouragement, and motivation find it challenging to acquire English.

The researcher's observation at a junior high school in Medan led the researcher to conclude that many students still struggle to pick up new vocabulary because of the dull teaching methods. Additionally, it was discovered that most of the activities in the classroom used a teacher-centred approach, in which the teacher provided the students with explanations of the material using traditional methods rather than using media to help them 2 learn English. However, suppose the approach to teaching vocabulary is not structured appropriately and engagingly. In that case, the outcome often compels students to commit the words to memory, which puts them under pressure and stress. It implies that educators ought to be imaginative and creative. A teacher's professionalism is critical in science and technology education in this fast-paced era. Student's learning abilities are perceived to be incomplete, so teachers must be able to control the surrounding environment and information to encourage students' activities. Technology influences the learning process, aided by many learning media sources such as the internet, films, slides, and others. The

teacher must be professional while using different media sources to improve learning. In this matter, educators must introduce new vocabulary to students through specific techniques.

Learning through media is an important aspect of the learning process. It is hoped that good media can help different learning styles. Instructional media is a technology used to deliver messages from teachers to students (Kandia et al., 2023). The utilization of the Kahoot application is a technological innovation that enhances the learning environment by promoting interactivity and interest. Additionally, it enables teachers to assess students' progress and performance effectively. The Kahoot application can help teachers evaluate more efficiently. Kahoot is a preferred option among a range of interactive educational tools that enhance the learning experience and prevent it from becoming monotonous for both students and teachers. This game software promotes an interactive learning strategy that encourages involvement and competition among students. (Kurniawan, 2020).

Kahoot is an affordable and user-friendly game-based interactive learning platform. (Sabandar et al., 2018). Kahoot is an online learning platform that features games and quizzes. Kahoot is an interactive educational tool that facilitates various teaching and learning activities, including pre-tests, post-tests, questions for practice, material encouragement remedial exercises, enrichment activities, and more. Games and quizzes can be played individually or together with groups. The Kahoot app aims to enhance learning by increasing participation and creating an engaging and enjoyable experience. A study (Permana, 2021) states that this application is ideal for the digital generation, who value attractive appearances and features. Utilizing games in a foreign language classroom also has the benefit of reducing stress. An environment conducive to relaxation should be provided in a language-learning setting (Gozcu & Canaga, 2016, p. 127). The problem that needs to be solved are: (1) How to enhance student's vocabulary comprehension through the Kahoot game? (2) Is the Kahoot game helpful for enhancing students' vocabulary comprehension?

## LITERATURE REVIEW

#### **Previous Related Study**

In the initial study, Adinda Riezky (2019), a study titled "Enhancing Students' Vocabulary Comprehension through the Use of Kahoot Game", employed a quasi-experimental design and utilized quantitative data collection methods. The pre-and post-test design was employed as the research methodology. The researcher employed pre-test, treatment, and post-test measures to collect the data. The figures indicated that the control group had a mean score of 72.11, whereas the experimental group had a mean score of 74.45. The average scores of both groups increased following the administration of the treatment. The control group achieved a score of 81.05 in the post-test. The experimental group achieved a score of 86.81. The researcher discovered that the scores of the students who received conventional

instruction and those who received Kahoot Game instruction differed after analysing the data. As such, Kahoot Game outperforms the traditional approach in raising students' vocabulary knowledge.

The second study was conducted by Muhammad Rizky (2022). The research identified "The Use of Kahoot Game on Student's Vocabulary Knowledge; A Quasi-Experimental Study", aims to examine the influence of employing Kahoot games on the vocabulary knowledge of eighth-grade students. The study utilized a pre-test to evaluate the student's initial comprehension, as per the writer's methodology. The Kahoot game has a significant influence on students' vocabulary proficiency, as evidenced by the administration and subsequent assessment results. The results suggest that students in the experimental group attained greater scores on the post-test compared to those in the control group.

The last (Awaludin, 2023) Conducted a study on the Kahoot application's impact on student's vocabulary mastery. The study employed a quasi-experimental methodology, exclusively utilizing a post-test design. The data collected from the post-test were evaluated using the t-test formula. Through the data calculations, the researcher discovered that the control class had a greater average score than the experimental class, as indicated by the statistical results of the t-test. The significance value was determined to be 0.056, higher than the 0,05 significance level. The Kahoot application does not affect students' vocabulary mastery.

#### Vocabulary

Mastering vocabulary is the primary and essential aspect of learning any language. Vocabulary, as defined by Hatch and Brown (1995), refers to a collection of terms that are distinctive to a certain language or a collection of words that speakers of that language can use. In this context, vocabulary refers to the entirety of words that are commonly recognised and used by individuals, encompassing all the words within a specific language. Proficiency in vocabulary is crucial for students as it enhances their ability to communicate effectively. Individuals who lack proficiency or need to improve in language will encounter difficulties in expressing their intended message or conveying their thoughts to others, as well as comprehending the speech of others. As stated by Wardani (2015), vocabulary is an essential element in language learning as it is found in all language skills, including the ability to listen, speak, read, and write. This phrase implies that vocabulary plays a crucial role in a language as it is essential for speaking, reading, and writing. Consequently, an individual's limited proficiency in verbal communication is strongly correlated with their vocabulary richness. Students with an extensive vocabulary will employ a broader range of words to articulate their ideas. Students should strive to learn and practise vocabulary and skills. For an educator, introducing new words is similar to acquiring a second language, as vocabulary serves as the foundation for attaining expertise in English instruction. Students encounter challenges in acquiring English proficiency when the teacher fails to employ effective and understandable teaching methods. If the teacher is incapable

of matching the technique, the efficacy of teaching vocabulary will be diminished. Implementing an accurate approach could effectively enhance students' motivation to learn vocabulary and facilitate their retention of the meanings (Muhammad Rizky, 2022). As per the definition provided by the expert cited above, teaching vocabulary refers to the employment of different methods to assist students in understanding the meaning of Utilizing vocabulary from other languages for communication purposes correctly.

#### Kahoot Game

Educational games are innovative and attractive educational tools that aim to engage the mind and enhance user focus. This demonstrates that educational games enhance the learning process by making it more enjoyable. Kahoot is an educational tool that can be played in the classroom setting to entertain students. The student's reaction system can be described as this reason. The Kahoot program allows for the creation of a discussion format and multiple-choice inquiries, which is suitable for every student to play (Bicen, 2018). Kahoot is an interactive educational platform that facilitates real-time classroom engagement through gamification. It is a technologically advanced tool designed to assist with facilitating questions, discussions, or votes. On the display, there are several multiple-choice inquiries. The writers have extensively acknowledged the use of Kahoot! in teaching the English language. Nguyen and Yukawa (2019: 23) discovered that this game had a beneficial influence on the acquisition of the English language. Kahoot is a free and enjoyable educational platform that employs game-based learning to deliver specific and adaptable learning resources. It offers a substitute for online education by presenting educational assessments in the form of enjoyable quiz games. According to (Sholihah et al., 2023), through the use of Kahoot, students have the opportunity to actively engage in answering questions. Kahoot quizzes are not limited to text; they may also include images and videos. This feature aligns well with the 2013 curriculum, which emphasises the development of higher-order thinking.

## **METHOD**

#### **Design and Samples**

This study used a quantitative methodology to determine the effect of using Kahoot! games on vocabulary development. The research approach is pre-experimental, with a one-group pre-test and post-test design. This study employed the t-test to examine notable disparities in students' comprehension of vocabulary before and during the treatment period. The researcher endeavours to ascertain the impact of utilizing the Kahoot game on enhancing student's understanding of vocabulary. In January 2024, the study was carried out at the Gajah Mada Junior High School, placed at JL H.M Said No 19 Medan Timur, North Sumatra. Thirty students in grade VIII of Gajah Mada Junior High School participated in this study. The goal of this

research was to assess the impact of the game called Kahoot on improving students' understanding of vocabulary in a specific classroom setting.

## **Instrument and Procedure**

Tools used in research operations to measure and gather data are called research instruments. The following tool was employed by the researcher in this study:

#### a. Pre-test

Before carrying out treatment, researchers gave a pretest to determine students' previous knowledge. In this situation, the pre-test was presented as a worksheet with questions that assessed students' abilities. The researcher created multiple vocabulary exercises using traditional methods. The pretest was given to students for 15 minutes.

## b. Treatment

The treatment carried out in this research was providing material regarding vocabulary. Treatment will only be carried out in two meetings, and at the second meeting, the researcher will start using Kahoot as observation material. The procedures during the treatments were as follows: 1. The researcher verified the student's presence. 2. The researcher motivated the class before instruction. 3. The researcher provided a warm-up. 4. The researcher described the Kahoot website's learning techniques. 5. The researcher gave the students a vocabulary lesson. 6. The researcher provided word examples. 7. The researcher asked the students to count the words they were independently familiar with.

#### c. Post-test

After their treatment, students take the post-test. The post-test aims to determine whether there have been any notable changes.

#### **Data Analysis**

a) The following equation is used to calculate the scores of students' Pre-Test and Post-Test.

No	Scores	Categories
1	96-100	A
2	86-95	A-
3	76-85	В
4	66-75	B-
5	56-65	C
6	46-55	D
7	0-45	Е

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## b) Using IBM SPSS 25 statistics to present descriptive data

This descriptive analysis is a statistical analysis that describes the data used to draw general inferences from research. The descriptive data analysis summarizes the samples to be processed, such as average, median, modus, and others. In addition to summary statistics, descriptive analysis can use tables, graphs, and other visual aids. Descriptive data analysis is done initially to understand better the current data, followed by different analyses. Descriptive data analysis will be critical so that data practitioners can identify the data used to know basic information about the variables in the data and emphasize connected factors.

## c) Using Kolmogorov Smirnov to check the normality test

The Normality Test assesses whether the independent and dependent variables of the regression model had a normal distribution. The data distribution of a good regression model is normal or almost normal. The normality of the data was examined using the test known as Kolmogorov-Smirnov, which is a statistical testing method to determine regularity. The hypothetical formulas are:

Ha =The data results in a normal distribution.

Ho = The data results in an abnormal distribution.

The standards for accepted or rejected the hypothetical test:

Ha is accepted if Sig. > = 0.05

Ho is rejected if Sig.  $\leq 0.05$ 

d) A paired sample t-test is employed to ascertain the statistical significance of the data.

The difference between two paired samples is calculated using a paired sample t-test. The individuals in paired samples are the same but get different treatments. The research model is compared before and after using this particular test model. A paired sample t-test is a statistical approach used to evaluate the efficacy of a treatment by measuring the differences in the mean values before and after the treatment is delivered. The main reason for using this test is that each pair's observation or study must be conducted under identical settings. The mean difference must follow a normal distribution. The variance of each variable can be the same or different. Data on an interval or ratio scale are needed to complete this test. Using the same sample but administering the test twice at various times or intervals is known as paired sampling. The association between the independent and dependent variables was tested at a significance threshold of 0.05 ( $\alpha=5\%$ ). The hypothesis to accept or reject Ho in the test is based on the following criteria:

- 1. As the significance level is greater than 0.05, Ho is accepted, and Ha is rejected (There are no improvements after using the Kahoot game)
- 2. As the significance level is less than 0.05, Ho is rejected, and Ha is accepted (There are improvements after using the Kahoot

## RESULT AND DISCUSSION

## The Classification of Students' Score

Researchers present information about test outcomes completed by students. This test was completed by 30 students in class VIII, and it consisted of 25 questions comprised of multiple-choice and fill-in-the-blank questions. Two tests were given: one on the 18th of January 2024, which served as a pre-test before students received treatment using the Kahoot game, and another on the 7th of March 2024, which served as a post-test after the Kahoot game.

Table 1. Students Vocabulary Score

		Siuaenis voc					
CLASSIFICATION SCORE							
Student	Pre-Test	Classificatio	Post-Test	Classification			
Code	7.6	n	100				
M1	76	В	100	A			
M2	36	E	56	C			
M3	76	В	96	A			
M4	72	B-	84	A-			
M5	52	D	84	A-			
M6	72	B-	80	В			
M7	52	D	68	B-			
M8	56	С	76	В			
M9	32	Е	40	E			
M10	52	D	52	D			
M11	76	В	92	A-			
M12	80	В	100	A			
M13	76	В	92	A-			
M14	40	Е	64	С			
M15	36	Е	44	Е			
M16	84	В	92	A-			
M17	80	В	88	A-			
M18	60	С	72	B-			
M19	56	C C	76	В			
M20	40	Е	72	B-			
M21	84	В	96	A			
M22	72	B-	72	B-			
M23	40	Е	44	Е			
M24	80	В	100	A			
M25	40	Е	44	Е			
M26	68	B-	84	В			
M27	80	В	100	A			
M28	48	D	52	D			
M29	64	C	80	В			
M30	52	D	60	C			
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Table. 1 Table of Descriptive Statistical Data

**Descriptive Statistics** 

		Minimu	Maximu			Std.
	N	m	m	Sum	Mean	Deviation
PRE-TEST	30	32	84	1832	61.07	16.838
VOCABULARY						
POST-TEST	30	40	100	2260	75.33	19.171
VOCABULARY						
VALID N (listwise)	30					

From the data provided, it can be inferred that a total of thirty students completed both the pre-test and post-test. The data in the pre-test table indicates that the student's scores range from a minimum of 32 to a maximum of 84, resulting in a cumulative score of 1832 and a mean score of 61.07. The post-test table indicates that the student's scores range from a minimum of 40 to a maximum of 100. The cumulative score achieved was 2260, while the mean score was 75.33.

## **Normality Test**

The normality test determines whether a sample with a regular distribution or a normal curve is from a data set. The investigator performed a normality test before computing the t-test. The objective was to determine if both pre-and post-test data demonstrated a normal distribution. The investigator employed the Komogorov-Smirnov test to evaluate normality. The findings are as follows.

Table 3. One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		30
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	7.35370837
Most Extreme Differences	Absolute	.158
	Positive	.059
	Negative	158
Test Statistic		.158
Asymp. Sig. (2-tailed)		.054 <sup>c</sup>

a. Test Distribution Is Normal.

According to the data in the table, the researcher may conclude that the level of significance among student Pre-Test and Post-Test results, as assessed by the One-Sample Kolmogorov-Smirnov method, is greater than 0.05. The significance level is 0.054. In plain terms, there is a significant difference between the students' pretest and post-test results, demonstrating some consistency. Furthermore, these numbers show that the data is frequently disseminated. Moreover, the normalcy test

b. Calculated From Data.

c. Lilliefors Significance Correction.

supplemented the graphical normality check. When considering a variable, it is necessary to assess the normality of its data distribution.

## The Independent Sample t-test

Table 4. T-test

	14010 1.1 1001							
Paired Samples Test								
Pai Pre-Test r l Vocabulary— Post-Test Vocabulary	Mean -14.267	Std. Deviation 8.383	Std. Error Mean 1.530	95% (Interval Difference Lower -17.397	Confidence of the e Upper -11.136	T -9.322	Df 29	Sig. (2-tailed)

The table above presents the results of the paired sample t-test, which indicates the significance level is less than 0.05. Based on the test results, the obtained value is 0.000. The alternative hypothesis, or Ha, is accepted, indicating an improvement in the grades received by students after receiving treatment from the Kahoot game.

This study aims to examine the effectiveness of employing the Kahoot game as an instrument to improve vocabulary among eighth-grade students at SMP Gajah Mada Medan. Vocabulary is an important component of any language. The richness of a word-specific language is known as vocabulary. It's crucial to organize a sentence to become successful because it's challenging to construct appropriate and well-written sentences without a strong vocabulary. Vocabulary is the rich language contained within a language. The richness of a person's vocabulary also indicates the capability of their language proficiency, making vocabulary an essential component of learning a foreign language and possibly even the key to it. According to the information previously given, the observation that students continue to struggle with vocabulary comprehension and the general perception that the students struggle with conventional methods of learning. The researcher is interested in comparing the outcomes of the two tests, pre-test and post-test, to assess students' improvement in skills through the Kahoot game.

According to the data the researcher examined, There's a substantial discrepancy among the grades of pre and post-test. According to the previous data, the pre-test average score before using the Kahoot game treatment was 61.07, and the post-test average score after using the Kahoot game treatment was 75.33. Following the descriptive analysis, the one-sample Kolmogorov-Smirnov test was employed to perform a normality test; the test result was 0.054. When a hypothesis is applied for analysis, a value exceeding 0.05 indicates that the data is normally distributed. The final test was a T-test with the independent sample test, which compared the average

pre-test score before and after the Kahoot game. Based on the data obtained following testing, which was 0.000. When a hypothesis is tested, the result is less than 0.05, suggesting a significant difference among the grades of pre and post-test.

This study's findings indicate that Kahoot engages and encourages classroom involvement for both students and teachers. Lee's research (Isnaniah et al. 2022) shows increased student learning motivation. The results revealed that the students were enthusiastic, enjoyed studying, and desired to study more. High-performing students allowed into Kahoot could concentrate on the teaching-learning activity while checking for misconceptions or mistakes in their knowledge. Although some students, particularly those with low performance, made no progress, their willingness to study has increased dramatically. Kahoot catalyzes for students to maintain focus during the vocabulary test due to their strong aspiration to do admirably. (Muhammad Rizky, 2022). This encourages students to complete the assessments set by the teacher. Kahoot encourages classroom competitiveness by allowing students to see their names on the leaderboard, which makes them more attentive during vocabulary examinations. When students respond to game-based questions, their attention and motivation grow. Furthermore, teachers must balance testing students on new subjects to keep them involved and maintain Kahoot's effectiveness as a learning tool

#### **CONCLUSION**

This study aims to examine the effectiveness of using a game called Kahoot to enhance vocabulary understanding among eighth-grade students at Gajah Mada Junior High School in Medan. The researcher starts by administering a pre-test to assess students' primary comprehension based on the research and interpretation of test results, it is justifiable to conclude that using a game called Kahoot has a substantial impact on students' acquisition of vocabulary. The data indicates that the student's test scores showed improvement after undergoing treatment with the Kahoot games. The findings of the previous paired sample t-test suggest that the p-value is less than 0.05, indicating statistical significance. According to the test results, the value obtained is 0.000. The alternative hypothesis (Ha) is accepted, while the null hypothesis (Ho) is rejected, indicating that students' grades show improvement after receiving exposure to Kahoot games. It has been discovered that the Kahoot game effectively

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