

The Effect of Kahoot! to Enhance 11th graders student's Reading Comprehension of Discussion Texts

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ABSTRACT

Penelitian ini bertujuan untuk menyelidiki pengaruh Kahoot! dalam meningkatkan pemahaman membaca siswa kelas XI pada teks diskusi. Penelitian ini menggunakan Kahoot! sebagai media pembelajaran interaktif untuk mendukung proses belajar siswa dalam kegiatan membaca. Penelitian ini menggunakan desain kuasi-eksperimental kuantitatif yang melibatkan dua kelas siswa kelas XI, dengan masing-masing kelas terdiri atas 24 siswa. Satu kelas ditetapkan sebagai kelompok eksperimen dan kelas lainnya sebagai kelompok kontrol. Kedua kelompok diberikan pre-test dan post-test yang terdiri atas 20 soal. Kelompok eksperimen diajar menggunakan Kahoot!, sedangkan kelompok kontrol menggunakan media pembelajaran konvensional. Data dianalisis menggunakan uji Mann-Whitney U untuk menentukan signifikansi perlakuan. Hasil penelitian menunjukkan bahwa tidak terdapat perbedaan yang signifikan secara statistik antara kelompok kontrol dan kelompok eksperimen dalam pemahaman membaca siswa terhadap teks diskusi. Namun, hasil effect size menunjukkan adanya efek sedang, yang menunjukkan bahwa Kahoot! tetap memberikan kontribusi praktis yang bermakna terhadap hasil belajar siswa. Sebagai kesimpulan, Kahoot! dapat digunakan sebagai media pembelajaran alternatif untuk menciptakan lingkungan belajar yang lebih interaktif dan menarik dalam pembelajaran pemahaman membaca, khususnya pada teks diskusi.

This study aimed to investigate the effect of Kahoot! on enhancing 11th graders' reading comprehension in discussion texts. The research used Kahoot! as an interactive teaching media to support students' learning process in reading activities. This study employed a quantitative quasi-experimental design involving two classes of 11th grade students, with 24 students in each class. One class was assigned as the experimental group and the other as the control group. Both groups were given pre-test and post-test consisting of 20 questions. The experimental group was taught using Kahoot!, while the control group used conventional teaching media. The data were analyzed using the Mann-Whitney U test to determine the significance of the treatment. The result showed that there was no statistically significant difference between the control and experimental groups in students' reading comprehension of discussion texts. However, the effect size result indicated a moderate effect, showing that Kahoot! still gave a meaningful practical contribution to students' learning outcomes. In conclusion, Kahoot! can be used as an alternative teaching media to create a more interactive and engaging learning environment in teaching reading comprehension, particularly in discussion texts.



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INTRODUCTION

Reading comprehension is a fundamental skill in education that allows students to understand, analyze, and interpret written texts effectively. Reading comprehension is a complex cognitive task in which readers must be able to integrate the meanings of words and sentences into a coherent whole, with the ultimate goal of constructing a complete mental representation of the text they are reading (Oakhill et al., 2015, p. 1). The formation of this skill is a complex and continuous process that requires active engagement, tailored teaching strategies, and the right resources to meet the diverse needs of each student. Understanding a text is not sufficient by merely knowing the meaning of each word separately. Readers must be able to connect the information as if assembling puzzle pieces, so that in the end they can grasp the bigger picture or the complete main message in their minds. Furthermore, the process of assembling these puzzle pieces must occur within a very short period of time. Grabe & Stoller (2013, pp. 8–9) emphasize that reading comprehension generally requires very fast, automatic, and coordinated word processing under time constraints. This complexity is often unnoticed by proficient readers, but it becomes a major challenge for learners of English as a Foreign Language (EFL) who have not yet achieved such a level of automaticity.

To help students overcome challenges in building their reading habits and comprehension, teachers must create an interactive learning environment. In today's digital era, this is achieved by integrating technology, specifically gamified learning media. Gamification transforms traditional reading exercises into engaging, interactive challenges, providing an effective platform that motivates students, sustains their focus, and ultimately improves their overall reading comprehension outcomes.

One of the main advantages of technology in education is its ability to present material in an engaging and easy-to-understand manner. These changes have created a growing interest in leveraging technology to gain students' engagement and learning outcomes. In the field of English as a Foreign Language (EFL), reading comprehension become a critical role in students' academic development.

To overcome these obstacles, educators have begun integrating gamification into classroom practices. The use of game elements in non-game contexts or gamification, has gained popularity for its potential to promote motivation, active participation, and enjoyment in learning. Several studies have shown that gamified learning platforms such as Kahoot! can transform traditional classrooms into interactive and engaging environments, thereby enhancing students' reading comprehension.

According to Wang & Lieberoth (2016), Kahoot! was first used mainly for educational purposes. It is known as a game-based learning tool that is widely applied in schools and other learning settings. This platform is designed to help students understand the material more easily, increase their motivation and engagement, improve focus, and provide useful feedback. Several advantages are highlighted, such as clearer presentation of material so learning objectives can be achieved more effectively, increased student attention which leads to higher enthusiasm, and the introduction of a more engaging teaching approach. In addition, students tend to participate more actively in classroom activities because Kahoot! uses quiz-based games that encourage healthy competition. Overall, it can be suggested that students' reading comprehension may improve through the use of Kahoot!, making it a helpful solution to address their learning difficulties.

Various previous studies have consistently demonstrated the effectiveness of using Kahoot! in improving students' reading comprehension achievement across different text types, including both narrative and descriptive (Hasanah et al., 2023; Marsa et al., 2021; Safira et al., 2026; Setiawan, 2020; Syahri et al., 2026). Quantitatively, all of these studies reported a significant improvement in students' learning outcomes. Beyond mere score improvements, the integration of this platform yielded highly positive psychological and behavioral impacts. The interactive visual design and the ranking system in Kahoot! successfully transformed reading comprehension exercises into a competitive and entertaining learning experience (Marsa et al., 2021; Syahri et al., 2026). Consequently, the platform is not only effective in reducing anxiety and boredom but also directly encourages students to become more focused, motivated, and active in posing critical questions during the learning process (Setiawan, 2020; Safira et al., 2026).

Based on the studies reviewed above, it can be observed that the use of learning media such as Kahoot! has become increasingly common in educational environments. Despite differences in research contexts and participants, these studies consistently reported positive outcomes regarding the effectiveness of Kahoot! in supporting students' learning. However, its application in teaching

discussion texts has not yet been investigated, at least to the best of the researcher's knowledge. Therefore, research examining the impact of Kahoot! on students' reading comprehension of discussion texts is necessary and worthy of investigation.

METHOD

The researcher conducted a study using the quasi-experimental method to break down the results of how influential Kahoot is for reading comprehension. Paramita et al. (2021, p. 2) defined methods for quantitative studies as those that use statistics to convey findings. The researcher primarily collects quantitative data for a quantitative study. Emphasizes the importance of properly presented quantitative data in predicting study outcomes. Quasi-Experimental consist of two groups, one group get treatment or commonly called the experimental group. While the other, namely the control group, is not given treatment. Pre-test and post-test are given to two groups, before and after treatment.

The population for this study used 11th grade students from a Senior high school in Surabaya which consisted of 4 classes with a total of 120 students. A sample is a subgroup of a population that is made to generalize the characteristics of the entire population. Due to the large number of populations, researchers used random sampling techniques to facilitate research. Researchers conducted random selection using a picker wheel. The results of random sampling show that classes 11-3 and 11-4 are the research sample. Later, class 11-3 is the control group with no treatment from the researcher, while 11-4 is the experimental group that receive treatment in the form of using Kahoot during reading learning.

The main data required in this study are the results of the pre-test and post-test undertaken by each group. For the treatment given in the form of using Kahoot in discussion text material. The use of Kahoot in the experimental group is only for student worksheets, the provision of material still uses conventional methods such as books and power points. As for the control group, the provision of worksheets and materials will take place conventionally. At the end of the meeting there will be a post-test given to each group to show empirical evidence that there is or is not development after treatment.

In the pre-test all samples get the same test questions, as well as in the post-test. There are 20 multiple choice questions with four options, with a total of 2 discussion texts in each set of 10 questions. Paper-based test is conducted to take the pre-test. It will assess students' reading comprehension of discussion texts before receiving treatment. The pre-test is conducted in 45 minutes. After the pre-test, the instrument is given to the experimental class. The researcher uses Kahoot! as a learning medium for the discussion text material. Meanwhile, in the control class, no media such as Kahoot! is used in learning, which mean that the class is conducted in the conventional manner as usual. The treatment is given for two days to both groups.

To systematically analyze the collected data and evaluate the effectiveness of the treatment, this study employed several statistical procedures computed through SPSS version 26. Initially, the validity and reliability of the 30-item multiple-choice instrument were established using the Pearson Product-Moment Correlation and the Spearman-Brown formula, respectively. Prior to hypothesis testing, prerequisite tests were conducted to assess the data characteristics; specifically, the Shapiro-Wilk test was utilized to determine the normality of the score distribution, while Levene's Statistic was used to check the homogeneity of variances between the sample groups. Finally, to determine the significance of the difference in reading comprehension abilities between the group taught using Kahoot! and the control group, the data were analyzed using an Independent Samples t-test or the Mann-Whitney U test as a non-parametric alternative if the data were not normally distributed or not homogeneous. The analysis concluded with an effect size calculation to measure the magnitude of Kahoot!'s impact on the students' learning outcomes.

RESULTS AND DISCUSSION

The researcher formulated the research question: "What is the effect of Kahoot! on reading comprehension of discussion texts among eleventh-grade students in Indonesia?" The answer to this research question is presented through the results of data analysis conducted on two groups: the experimental group and the control group.

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
Nilai	Based on Mean	.102	1	46	.751
	Based on Median	.040	1	46	.842
	Based on Median and with adjusted df	.040	1	45.999	.842
	Based on trimmed mean	.109	1	46	.743

Picture 1. Levene's test measure the homogeneity of variance test

The result of the homogeneity of variance test using Levene's Test showed that the significance value (Based on Mean) was 0.751. Since this value is greater than 0.05 (Sig. > 0.05), it can be concluded that the variances between the groups are homogeneous.

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
Nilai		Statistic	df	Sig.	Statistic	df	Sig.
Kelas	PreKon	.354	24	<.001	.685	24	<.001
	PostKon	.177	24	.049	.906	24	.028
	PreExp	.287	24	<.001	.807	24	<.001
	PostExp	.163	24	.097	.894	24	.016

a. Lilliefors Significance Correction

Picture 2. Shapiro-Wilk Test assess the normality of data distribution

Based on the results of the normality test using the Shapiro–Wilk test, the significance values for each group were as follows: the control group pre-test was 0.000 ($p < 0.05$), the control group post-test was 0.028 ($p < 0.05$), the experimental group pre-test was 0.000 ($p < 0.05$), and the experimental group post-test was 0.016 ($p < 0.05$).

Since all significance values are less than 0.05 ($p < 0.05$), it can be concluded that the data in all groups are not normally distributed. Therefore, the data analysis was continued using a non-parametric test, namely the Mann Whitney U test, to examine the differences between the control and experimental groups.

Test Statistics^a

Nilai	
Mann-Whitney U	197.500
Wilcoxon W	497.500
Z	-1.910
Asymp. Sig. (2-tailed)	.056

a. Grouping Variable: Kelas

Picture 3. Man-Whitney U Test as a non-parametric test

Based on the results of the Mann Whitney U test, the U value was 197.500, with a Z value of -1.910 and a significance value (Asymp. Sig. 2-tailed) of 0.056. Since the significance value is greater than 0.05 ($p > 0.05$), it can be concluded that there is no significant difference between the control group and the experimental group

The results of the Mann–Whitney test indicate that there is no significant difference between the control and experimental groups ($Z = -1.910$, $p = 0.056$). However, the effect size value of $r = 0.39$ falls into the moderate category, suggesting a practically meaningful effect.

H_0 is accepted, meaning there is no significant difference between the control group and the experimental group in reading comprehension ability regarding discussion texts. According to the results of the Mann–Whitney U test, the U value was 197.500, $Z = -1.910$, and the significance level (Asymp. Sig. 2-tailed) was 0.056. Since the significance value is greater than 0.05 ($p > 0.05$). Nevertheless, the effect size calculation yielded a value of $r = 0.39$, which falls into the moderate category. This indicates that the use of Kahoot! has a practically meaningful effect, even though it has not yet shown a statistically significant difference.

CONCLUSION

Based on the findings and discussion, it can be concluded that the use of Kahoot! did not have a statistically significant impact on students' reading comprehension of discussion texts among 11th grade students. The results of the Mann–Whitney U test showed a significance value greater than 0.05, which indicates that no meaningful difference was found between the experimental group and the control group.

In previous studies, Kahoot! produced positive results. According to (Hasanah et al., 2023; Marsa et al., 2021; Syahri et al., 2026), the use of Kahoot! resulted in significantly different learning outcomes because game-based learning media encouraged students to participate more actively in the learning process. This increased engagement subsequently had a positive impact on students' academic achievement. Based on interview findings reported in their study, these positive outcomes were attributed to students' competitiveness and their sense of satisfaction when achieving a position in the top five rankings.

Similarly, other studies have reported positive findings. The studies conducted by (Safira et al., 2026; Syahri et al., 2026) also demonstrated favorable results regarding the implementation of Kahoot! in learning activities. Motivation plays a crucial role in reading comprehension because students with higher levels of motivation tend to engage more actively with texts and apply effective reading strategies. Although according to (Safira et al., 2026) encountered a situation similar to that of the present research, in which the participants' pre-test scores were relatively high, the study still produced significantly positive results. However, these findings differ from those obtained in the present study.

Contrary to the findings of previous studies, the present research did not find sufficient evidence that Kahoot! significantly improved students' reading comprehension achievement. Although Kahoot! successfully created a more interactive and competitive learning atmosphere, such engagement was not translated into statistically significant learning gains. This suggests that student motivation and classroom participation alone may not be sufficient to enhance reading comprehension. Other factors, such as prior knowledge, reading ability, text difficulty, and the duration of the treatment, may play a more substantial role in determining students' reading performance. Therefore, the positive findings reported in previous studies may not be generalizable to all educational contexts.

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