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ENHANCING STUDENTS' READING COMPREHENSION THROUGH KAHOOT!

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Abstract

This study aimed to examine the effectiveness of Kahoot!, a game-based interactive learning platform, in enhancing the reading comprehension skills of eighth-grade students at SMP 1 Muara Pinang. The research was motivated by the students' low reading comprehension scores, particularly in aspects such as identifying main ideas, supporting details, vocabulary, specific information, and making inferences. A quasi-experimental design was employed, involving 56 students selected from a total population of 207 using purposive sampling based on similar levels of English proficiency. Both groups were given pre-tests and post-tests consisting of multiple-choice questions based on narrative texts. The results showed a significant improvement in the experimental group's mean score, which increased from 46.43 to 78.93, while the control group's mean score rose more modestly from 47.49 to 62.68. In terms of reading comprehension aspects, the most noticeable improvement occurred in the main idea aspect, followed by supporting detail, understanding, specific information, determining inference, and the smallest improvement was found in vocabulary. This indicates that Kahoot! was particularly effective in helping students identify main ideas in narrative texts. A paired sample t-test revealed a statistically significant improvement within the experimental group ($t = 0.000$; $p < 0.05$). Furthermore, an independent sample t- test showed a significant difference between the two groups, with a t-obtained value of 6.985 and a significance value of 0.000. The t-table value at a 0.05 significance level with 54 degrees of freedom was 2.004.In conclusion, Kahoot! Significantly improved students' reading comprehension and support the integration of game-based digital tools into English language learning environments.

Keywords: *Kahoot!, Experimental Design, Reading Comprehension, Narative Text, Game-Based Digital Tools*

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INTRODUCTION

One of the four teaching abilities that is crucial to language instruction is reading. Since reading is the foundation of all knowledge and its interpretation, it is one of the most crucial educational abilities (Muhibbah, 2023). Reading comprehension is a complex and essential skill that involves not only decoding words but also integrating background knowledge, generating inferences, and understanding text structure. Students who struggle with this skill are at risk of falling behind academically (Kendeou et al., 2016).

Grabe and Stoller (2011), explained that lack of enthusiasm and engagement in reading activities was one of the main causes of low reading comprehension, and students lost interest in reading as a result of boring and uninteresting traditional teaching techniques, which were often lecture-based and passive. Reading comprehension requires a variety of cognitive functions, including word recognition, syntax, and the capacity to extrapolate meaning from the text. These processes can not function well if students are not engaged or motivated in reading activities. This often occur in many schools. For example, in several Junior High Schools (SMP) in Muara Pinang, Pagar Alam, South Sumatera, Indonesia including SMP 1 Muara Pinang, based on interviews with English teachers who taught eighth-grade students, various problems had been identified in reading. One of the main issues was that students struggled with reading because they were not accustomed to reading well, which led to a lack of interest during reading activities. This was further compounded by a lack of innovative and technology-based teaching strategies. Teachers still often assigned reading materials followed by long lectures or explanations, which caused students to become uninterested, bored, and less engaged in the learning process. As the result, students' reading comprehension and performance suffered, with many students' scores falling below the Minimum Completion Criteria (KKM) set by the school, which was 75. The inability to meet the KKM demonstrated a significant gap in students' literacy skills. Based on data, around 40–50% of eighth-grade students at SMP 1 Muara Pinang scored below the KKM on English reading tests. Additionally, some students experienced difficulties with vocabulary acquisition, lack of reading practice outside the classroom, and limited exposure to diverse reading materials, all of which further hindered their reading development. These challenges contributed to a stagnant learning environment where students were less motivated to improve and participate actively in reading exercises.

The application of educational technology, particularly game-based learning platforms such as Kahoot! is a promising strategy to improve reading comprehension. Kahoot! is an interactive learning platform or tool that engaged students in a fun and competitive way through quizzes and game features. By providing students with a more dynamic and engaging way to interact with reading content, this platform has the potential to improve reading comprehension. With the help of Kahoot!, educators are able to create reading-based quizzes that allows students to assess their comprehension in a fun and safe atmosphere. It had been shown that the use of gamification applying game characteristics or elements in a non-game context increased and strengthened student participation and motivation. By adding components such as competition, points, and instant feedback, gamification increased student engagement and made learning more fun and participatory. According to Deterding et al., (2011), in the context of reading comprehension, Kahoot! provides immediate feedback to students, allowing them to evaluate their understanding of the content and make necessary corrections, which is also a very important step in improving comprehension skills.

Kahoot is an educative and interactive learning media that actively involves students in the learning process and creates an enjoyable and exciting learning experience. Kahoot!'s interactive features make it the perfect tool for encouraging participation in reading comprehension exercises.

Several studies indicated that using Kahoot as a game-based learning tool had a positive impact on students' motivation and understanding in a variety of educational contexts. In their study published in Computers in Human Behavior, Hamari et al., (2016), asserted that game-based learning, such as Kahoot, increased student motivation to learn and create more interactive classroom instruction. According to their research, Kahoot was effective in encouraging students to be more active and participate in class because of the skills and resources provided by the platform. Zarzycka-Piskorz (2016) also found that the integration of Kahoot in language learning improved student engagement, even in complex topics such as grammar. Although not directly aimed at reading comprehension, the enhanced interaction and enjoyment reported by learners reflect the platform's ability to support cognitive and affective components of reading.

In light of this, the purpose of this study was to investigate how Kahoot! could help students at SMP 1 Muara Pinang improve their reading comprehension. This paper is consisted of some sub-headings which include the introduction, the methodology, the result and discussion and the conclusion of the study. This study used a quasi-experimental design, in which two groups were assigned as the experimental group and control group. Both groups received different treatments and were exposed to the same item questions in narrative reading materials in their pre-test and post-test. To find the significant difference from both groups, the results of the tests were then analyzed by using paired sample t-test and independent t-test.

METHODOLOGHY

This study aimed to explore how the use of Kahoot!, an interactive learning tool, can improve reading comprehension skills among students at SMP 1 Muara Pinang. The research employed a quasi-experimental design, in which two groups were selected from the population and then divided into two groups-the experimental group and control group. The experimental group was treated by using Kahoot! while the control group followed conventional method. Both groups were given pre-tests and post-tests to measure changes in their reading comprehension abilities. The data were then analyzed by using paired sample t-tests to compare the pre-test and the post- test scores, and independent t-test to find the improvement between the groups. As stated by Creswell (2014, p. 219), quasi-experimental designs are valuable for studies conducted in real classroom settings, providing both valid and reliable results while addressing practical limitations.

The following is design of the study:

Experimental group	**01**	**X**	**02**

Control group	**03**	**C**	**04**

Where :

- The experimental and control groups that have not been randomized are shown by the dashed line.

01 : Experimental Group Pre-Test

02 : Experimental Group Post –Test

X : Kahoot!

03 : Control Group Pre-Test

04 : Control Group Post-Test

C : Conventional Method

The experimental group (01 and 03) and the control group (02 and 04) were the two classes in this study. The pre-test and the post-test, were administered to the experimental group and control group in the order gauge changes following the treatment using Kahoots. For comparison, the control group did not receive the treatment and as the experimental group, of herwise they were treated in conventional method. The dotted line shows that the two groups were not randomized, which could lead to bias in the study's findings because the participant were not chosen at random. The purpose of this design is to determine whether the experimental group's treatment had an impact on the outcomes that outcomes measure.

RESULT AND DISCUSSION

This study aimed to explore the effect of using the Kahoot! application on students' reading comprehension. Students in the experimental class were given a pre-test and a post-test, while students in the control class followed traditional instruction and were also given a pre-test and post-test, both in multiple-choice formats. The study findings were presented through descriptive statistics and statistical analysis

3.1 Result

The results of the study can be explained as the following:

3.1.1. The Result of Paired Sample T-Test

The distribution of score per score category and the mean scores of students before and after treatment by using Kahoot! app are shown in the following table.

Table 1: Frequency and Mean score of Students Reading Skill in Experimental Class

Level of Category	**Pretest**		**Posttest**	
	F%	**Mean**	**F%**	**Mean**
Very Good	0 (0%)	-	16 (57,1%)	85
Good	0 (0%)	-	9 (32,1%)	72,7
Enough	2 (7,1%)	60	3 (10,7%)	65
Poor	22 (78,6%)	47,72	0 (0%)	-
Fail	**4 (14,3)**	**32,5**	**0 (0%)**	**-**

From the table it can be said that reading proficiency significantly improved following the treatment by using the Kahoot! Application. According to results, students who had not previously been in the Very Good and Good categories (16 students or 57.1%, and 9 students or 32.1%) began to fill these categories. After receiving the treatment, there were no more pupils classified as Poor or Fail, suggesting that reading proficiency had improved. All things considered, this shows that using the Kahoot! application had a beneficial effect, particularly in assisting students to move up from the low-ability category.

Table 2: Frequency and Mean score of Students Reading Skill in Control Class

Level of Category	**Pretest**		**Posttest**	
	F%	**Mean**	**F%**	**Mean**
Very Good	0 (0%)	-	0 (0%)	-
Good	0 (0%)	-	9 (32,1%)	72,7
Enough	4 (14,3)	60	11 (39,3%)	62,7
Poor	20 (71,4)	48	8 (28%,6)	51,25
Fail	**4 (14,3)**	**32,5**	**0 (0%)**	**-**

Prior to the class, the table reveals that the majority of pupils remained in the same ability category. There was little improvement in the lowest categories, such as Poor and Fail (from 20 pupils to 8 pupils, or 71.4% to 28.6%). This indicated that pupils in these categories did not make considerable progress. Furthermore, there was no discernible gain in the very good or good categories, suggesting that the traditional teaching approach was less successful in raising students' reading proficiency overall. Comparing this to the experimental class that utilized the Kahoot app revealed a noticeable difference.

Further result can also be confirmed from the following to see the comparison of the study results from both classes in reading comprehension.

Table 3: The Results of Reading Comprehension Test in Experimental Class

Variable	**Means Pre-test**	**Means Post-test**	**Mean Differences**	**T-Obtained**	**sig. (2 tailed)**
Main idea	9.64	21.61	11.964	9.843	.000
Supporting Detail	9.82	16.07	6.250	6.355	.000
Understanding Vocabulary	9.11	13.93	4.821	6.088	.000
Specific Information	10.36	15.18	4.821	3.643	.001
Determaining Inference	7.50	12.14	4.643	5.730	.000
Total	**46,43**	**78,93**	**32,499**	**386,304**	**.001**

The table shows, among the five assessed aspects of reading, the most substantial improvement was observed in the main idea category, with a mean difference of (11.964). This indicated that Kahoot! effectively supported students in identifying the main idea of a text, as its competitive and engaging question format captured students' attention and helped them focus on the core content. The supporting detail aspect showed the second-highest gain, with a mean difference of (6.250), which suggested that students' ability to recognize relevant supporting information improved through repeated practice using quizzes. The aspects of understanding vocabulary and specific information both recorded equal improvements, with a mean difference of (4.821). In terms of vocabulary, students benefited from frequent exposure to new words and immediate feedback, which helped them develop vocabulary in context. The improvement in identifying specific information indicated a growing ability to locate important details within the text.

Lastly, the determining inference aspect showed the lowest gain, at (4.643), though it was still considered significant. This implied that Kahoot also contributed to enhancing students' inferential skills, although to a lesser extent compared to the other aspects. Overall, the students' total mean score increased significantly from 46.43 in the pre-test to 78.93 in the post-test, with a mean difference of 32.499, which demonstrated the overall effectiveness of Kahoot in improving students' reading comprehension.

Table 4: The Results of Reading Comprehension Test in Control Class

Variable	Means Pre-test	Means Post-test	Mean Differences	T-obtained	sig. (2 tailed)
Specific Information	8.39	12.50	4.107	3.070	.005
Supporting Detail	9.46	12.86	3.393	2.407	.023
Determaining Inference	8.21	11.25	3.036	2.756	.010
Understanding Vocabulary	10.18	12.50	2.393	3.300	.003
Main idea	11.25	13.57	2.321	2.555	.017
Total	**47,49**	**62,68**	**15,25**	**14,088**	**.058**

Table 4 confirms that, among the five assessed aspects, the highest improvement occurred in specific information, with a mean difference of (4.107), followed by supporting detail with a mean difference of (3.393), and determining inference with a mean difference of (3.036). These results indicated that even without interactive learning media, students still showed progress in identifying detailed and implied information within reading texts, although not as strong as in the experimental class.

In contrast, the lowest gains were found in understanding vocabulary and main idea, with mean differences of (2.393) and (2.321), respectively. These limited improvements suggested that without the use of interactive learning tools, students had fewer opportunities to be exposed to new vocabulary in context and to practice focusing on identifying the main idea. Overall, the total mean score increased from 47.49 in the pre-test to 62.69 in the post-test, with a mean difference of 15.25. Although this showed some general progress, the gains were lower

compared to those in the experimental class, indicating that conventional methods were less effective in maximizing students' reading comprehension skills.

3.1.2 The Result of Independent T-Test

Using an Independent Sample t-test, the study examined the post-test results of both groups to see whether there was a significant difference in the reading abilities of the experimental and control groups. The result can be seen from the following table.

Table 5:

The Result of Independent Sample t-test both Experimental and Control Class

Enrollment in local colleges, 2005

Variable	**Post Test**				**Mean difference EX & Ctl**	**df**	**T-Table**
	Mean exp	Mean Ctrl	t- obt	sig			
Reading Achievement	78.93	62.68	6.985	.000	16.250	54	2.004

Table 5 presents the results of the independent sample t-test, which compared the reading comprehension scores of students in the experimental and control class. The experimental class, which used Kahoot! application achieved a higher mean score of 78.75, while the control class had a mean score of 61.88. The analysis revealed a t-obtained value of 6.985, which was higher than the critical value from the t-table. The significance level (Sig. 2-tailed) was 0.000, which was well below the standard alpha level of 0.05. This indicated that the difference in mean scores between the two groups was statistically significant.

The degree of freedom (df) for the test was 54, with the standard error of the difference being 2.327. The 95% confidence interval for the mean difference ranged from 11.586 to 20.915, which further confirmed the significant difference between the two groups. Since the p-value was less than 0.05, and the t-obtained value exceeded the critical value, the null hypothesis (H_0) was rejected, and the alternative hypothesis (H_1) was accepted. These results clearly indicated that the Kahoot! application had a significant positive impact on students' reading comprehension in the experimental class, compared to the control class, which did not receive the same treatment.

3.2 Discussion

The results of this study showed a significant difference in reading comprehension between the students who were taught by using Kahoot! and those who were not. This difference occurred because Kahoot! provided an interactive, engaging, and student-centered learning environment that increased students' motivation and focus during the learning process. Unlike traditional teaching methods, which often relied on lectures and passive reading, Kahoot! used real-time quizzes and competitive features to make learning more enjoyable and dynamic. Kahoot! helps to create a competitive, fun, and social learning environment in the classroom. It enhances student engagement by transforming learning into a game, providing immediate feedback, and fostering peer interaction. (Dellos, 2015)

The significant difference can be explained by the way Kahoot! helped students learn through immediate feedback, which allowed them to understand and correct their mistakes directly during the activity. This real-time correction helped improve their reading comprehension skills, especially in areas like identifying main ideas, understanding vocabulary, and drawing inferences. Furthermore, Kahoot!'s game-like environment encouraged students to participate actively and remain focused throughout the lesson. The students were more likely to engage deeply with the material because they were challenged in a fun way and felt more involved. This active participation led to better retention and understanding of the reading texts.

In line with Wang (2015), which emphasizes the motivational impact of game-based student response systems, and Plump & LaRosa (2017), which examines Kahoot's efficacy in encouraging student engagement and active learning, specifically inform the use of Kahoot as a game-based learning platform. These resources offer a starting point for using interactive, student-centered digital technologies to improve reading comprehension.

In conclusion, the significant difference in outcomes was due to how Kahoot! changed the learning atmosphere, turning it into a more interactive, fun, and responsive experience that helped students grasp and retain reading content more effectively.

CONCLUSION

Based on the results of the study, it was concluded that the use of Kahoot! as an interactive learning platform had a positive and significant impact on improving students' reading comprehension at SMP 1 Muara Pinang. The implementation of Kahoot! in the classroom created a more dynamic and engaging learning environment, which encouraged students to participate actively and enthusiastically in reading activities. The improvement in students' reading comprehension was observed across several key components, including the ability to identify specific information, understand supporting details, make inferences, comprehend vocabulary in context, and determine main ideas. After using Kahoot!, students showed noticeable progress in these areas, indicating that the interactive and game-based format helped enhance both their focus and comprehension skills.

Furthermore, statistical analysis confirmed that the differences in students' performance before and after the treatment were meaningful, showing that Kahoot was not only enjoyable but also effective as a learning tool. It fostered a competitive yet collaborative atmosphere that supported deeper engagement with reading texts. Hasan et al. (2017) noted that using game-based tools like Kahoot increased student engagement and helped reinforce learning in a fun and interactive way. By integrating Kahoot into reading comprehension activities, teachers made learning more interactive and enjoyable, while ensuring that students received the feedback necessary to improve their comprehension skills.

In conclusion, Kahoot! could be considered an effective alternative to traditional methods for improving reading comprehension, especially when aiming to increase student motivation and participation in English learning..

ETHICAL STATEMENTS

This study was conducted in accordance with established ethical principles. Including informed consent, protection of informants confidentially, and respect for local culture values. Special consideration was given to participants from vulnerable groups to ensure their safety, comfort,

and equal rights to participate. No external funding was received, and the authors declare no conflict of interest. All data and information presented were collected through valid research methods and have been verified to ensure their accuracy and reliability. The use of artificial intelligence (AI) was limited to technical assistance for writing and language editing, without influencing the scientific substance of the work. The authors express their gratitude to the informants for their valuable insights, and to the anonymous reviewers for their constructive feedback on an earlier version of this manuscript. The authors take full responsibility for the content and conclusions of this article

REFERENCES

Creswell, J. W. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications, Inc.

Dellos, R. (2015). Kahoot! A digital game resource for learning. *International Journal of Instructional Technology and Distance Learning, 12(4), 49–52.*

Deterding, S., et al. (2011). Gamification: Toward a definition. *C gamification Workshop Proceedings, Vancouver, BC, 7-12 May 2011, 1-4.*

Grabe, W., & Stoller, F. L. (2019). *Teaching and researching reading* (3rd ed.). Routledge.

Hamari, J., Koivisto, J., & Sarsa, H. (2016). *Does gamification work? – A literature review of empirical studies on gamification*. Computers in Human Behavior, 57,133–153.

Hasan, M., Rosnaini, M., & Norlia, M. (2017). *Game-based learning using Kahoot: A literature review.*

Kendeou, P., McMaster, K. L., & Christ, T. J. (2016). Reading comprehension: Core components and processes. *Policy Insights from the Behavioral and BrainSciences,3*(1),62–69.

Muhibbah, L. (2023). Efektivitas Metode PQRST untuk meningkatkan keterampilan membaca pemahaman teks eksplanasi. *Jurnal Didaktika Pendidikan Dasar, 7(1), 93–114.* https://doi.org/10.26811/didaktika.v7i1.761.

Plump, C. M., & LaRosa, J. (2017). Using Kahoot! in the classroom to create engagement and active learning: A game-based technology solution for eLearning novices. Management Teaching Review, 2(2), 151–158.

Wang, A. I. (2015). The wear out effect of a game-based student response system. Computers&Education,82,217–227.

Zarzycka-Piskorz, E. (2016). Kahoot it or not? Can games be motivating in learning grammar? *Teaching English with Technology*, 16(3), 17–36.