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Kahoot! In English Classroom to Improve Reading Students in Madrasah Aliyah Jamiat Kheir

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Abstract. This research presents the results of a small survey study involving 22 high school students at an international educational institution, regarding their experiences in learning languages using Kahoot!, an online quiz game platform. The research sample consisted of 22 students (13 female and 9 male) from Madrasah Aliyah Jamiat Kheir, Central Jakarta, in the period November 2023 to July 2024. This research used quantitative and experimental methods for data collection. The collected quantitative data was analyzed statistically using descriptive statistical methods. Analysis shows that the majority of students responded positively to the use of Information and Communication Technology in classroom learning, especially in the use of Kahoot! Most students felt that Kahoot! increasing their motivation and involvement in the learning process, as well as helping them understand the material better through an interactive and fun approach. This research also emphasizes the important role of teachers in preparing and implementing learning technology effectively. Teachers need to prepare well and use appropriate practices based on their experience and knowledge. Understanding effective reading methods is very important to improve the quality of learning in Indonesia. The results of this research show that implementing appropriate learning technology, such as Kahoot!, can significantly improve students' reading abilities. Additionally, this research highlights the importance of training and professional development for teachers in the use of educational technology. With adequate training, teachers can be more effective in integrating ICT into the curriculum, creating a more dynamic and productive learning environment. This research provides evidence that the use of technology tools such as Kahoot! can be an effective strategy for improving the quality of education, especially in teaching English in Indonesia.

Keywords: Kahoot!, Reading ability, Motivation, Gamification

1. INTRODUCTION

English is a rapidly growing communication tool in society and is also used in science. To facilitate communication in English, we also need other media, such as technology and information, which help achieve English communication. The use of technology in the learning process provides teachers, especially teachers, with opportunities to improve and develop their abilities, especially their professional abilities [1]-[3]. English plays an important role in the educational environment. English is the main medium for the internet, social media, and digital content. According to Bugliarello and Doner, At that time, technology may have referred to materials, tools, systems, and methods, although modern definitions of technology may vary [4]-[6].

The changing profile of students is forcing teachers to rethink their job descriptions and find new ways of teaching. Many teachers now realize that their students need 21st-century skills. Considered an essential skill in today's dynamic world, technical competence entails the ability to use technology meaningfully. Technology has captured the attention of students around the world [7]. While some teachers are new to using technology in the classroom, students are already using different types of technology [8]. According to Graham and Dellos in [9] Kahoot! not only fosters an interactive and fun learning environment but also challenges students in the learning process. Teachers can explore the various features offered by the platform to create their tests or use existing tests created by people around the world. Given the importance of learning strategies in second language acquisition, much attention was given to exploring the theories and the application of such learning strategies [10]-[12].

The concept of 'gamification' involves using game elements and competitive spirit to increase user engagement in an activity [13]. and can be said to be a new method that is starting to be used in various

disciplines to enhance and motivate learning [14]-[16] . Gamification in the context of learning can be referred to as learning that is equipped with game elements [3]-[16]. Gamification applies Game design philosophies, elements, and mechanics in non-game environments to promote certain behaviors and increase the motivation and involvement of people in certain tasks. In other words, game-making combines functionalities that make real games fun and engaging (and even addictive) with useful functionality to improve user experiences in non-game environments such as workplaces, schools, software applications, and customer-oriented websites. [19].

Kahoot! is an online quiz game platform created to increase student engagement in learning activities. In the field of education, especially English subjects, Kahoot! can be an interesting option to increase student motivation [20] [21] . Kahoot! is very user-friendly and comes with a variety of features that are very effective in increasing student engagement, including built-in music, time limits on questions, updates on the highest rank, and attractive graphical displays. After any question, the correct answers are displayed, and the number of students who chose each answer option. Kahoot! It can also be used to collect students' responses about opinions and beliefs that do not have a good or bad answer. Students' responses can form the basis for further discussion [22]. This is a good teaching opportunity as the instructor controls when to move on to the next question. Based on student responses, the instructor can explain concepts previously presented in the course in more detail [23]. Kahoot! is a game-like classroom response system, where the whole class participates live at the same time, or in a live broadcast mode. Kahoot! Implementation Example In the classroom, problems are projected onto the screen during the lesson and students are required to utilize technological devices, such as tablets, smartphones, and computers to answer the questions displayed on the screen [24]-[25].

Wang and Lieberoth in [26] Dissecting Kahoot! To find out which gamification elements had a positive impact on the student experience, Kahoot! not just one part, but the total plays a role in increasing focus and excitement [27]. What's more, Kahoot! can be an evaluative tool for teachers to evaluate students' understanding and keep a comprehensive eye on class progress and individual learning trajectories. Kahoot! It is claimed to provide many benefits as it allows educators to explore their creativity and motivate learners both Innate and externally [21]-[27]. Education that uses games provides a different feel that does not exist in traditional classrooms or everyday life. As a result, tools like Kahoot! allow students to continue to enjoy and complete tasks that they would not normally complete. In his comments on gamification [26].

According to Wixson and others in [28] The reading process involves several additional aspects and phenomena, such as (1) the reader's understanding of the text, (2) interpretation of the meaning of the text context, and (3) interpretation of the meaning of the content of the text itself. The conclusion of the text is that reading is considered a crucial skill in education and life in general. English is often used as the main medium in higher education to search for information and gain knowledge. Reading is not only important for success in school but also for success throughout one's life [29]. Reading comprehension is a complex cognitive endeavor. It requires integrating information within and between units of text, from words to phrases and sentences, paragraphs and chapters, and articles and books as a whole [30]. Reading is often considered one of the language skills that students should master and is one of the promising skills they can learn because reading is one of the language skills that students must master [31]. Reading is an important skill for learners to master [32]. Reading is a process of making meaning, which is carried out in an organized environment using good knowledge, appropriate methods, and objectives, and is based on effective communication between writers and readers [33].

Reading motivation as a goal and individual beliefs about reading suggest that the factors that influence engagement in reading are different from those that influence engagement in other areas [34]. Motivation is a complex aspect of human psychology and behavior that influences the way individuals choose to invest time, the amount of energy they devote to specific tasks, the way they think and feel about tasks, and the length of time they continue to complete them [35]. The motivation in classrooms appears to be influenced by at least five factors: learning, education, course content, teaching methods, and learning environments [36]. Motivation is defined as a force that stimulates and guides behavior towards a goal. In the field of education, motivation refers to the creation of conditions to encourage learners to perform best in the academic environment. [21].

2. METHOD

The Objective of the Research

It is hoped that it can increase students' motivation in reading English, especially in English texts such as recount text.

The Method of the Research

This research was planned to use quantitative methods and experimental methods by teaching students in class in 6 meetings. Experimentation is an essential research approach. The systematic and continuous process of evaluating the benefits of potential software changes is referred to as "continuous experimentation" [37] [38] . The data instrument used in this study is using experiments. This is where researchers conduct teaching first before taking data for research.

The Statistical Hypothesis

Statistics hypothesis testing is one of the most often misunderstood methods for quantitative analysis in data science [39] [40]. Multiple correlation analysis is a statistical method used to identify the relationship between two or more variables. In this context, there is no determination of which variable affects the other. The closer the value to one, the stronger the relationship between the variables; while the closer to zero, the absolute value of the correlation coefficient indicates the direction of the relationship.

Table 1. Statistical Hypothesis

The magnitude of the r value	Interpretation
0.00 – 0.199	Very low
0.20 – 0.399	Low
0.40 – 0.599	Medium
0.60 – 0.799	High
0.80 – 1.00	Very High

Based on table 1 above, contains information on statistical hypotheses, which includes the different types of hypotheses, the testing methods used, and the interpretation of the results. This table aims to provide a deeper understanding of the basic concepts and practical applications of statistical hypothesis testing in data analysis.

So the following is the categorization:

1. Height

High category = $X \geq$ Mean + 1SD
= $X \geq 74.54 + 17.51$
= $X \geq 92.05$

2. Medium

Medium category = (mean – 1SD)
= (74.54 – 17.51)
= 58.03 $X \geq 92.05$

3. Low

Low Category = X < mean – 1SD
= $X < 74.54 – 17.51$
= $X < 58.03$

If ro > rt, there is a correlation, so H1 is accepted, while H0 is rejected.
If ro < rt, there is no correlation, sp H1 is rejected, while H0 is accepted.
H0: There is no effect of using learning using Kahoot in improving students' reading ability.
H1: There is an influence of using learning using Kahoot in improving students' reading ability.

The Technique of Collecting Data

The data collection techniques use test and teaching methods. which tests are carried out after teaching for 6 meetings. for the test is done by working on 20 multiple-choice questions. After that students choose the most correct and appropriate answer from the questions that have been given. Experimentation is an essential research approach. The systematic and continuous process of evaluating the benefits of potential software changes is referred to as "continuous experimentation" [37]. The data instrument used in this study is using experiments. This is where researchers conduct teaching first before taking data for research. After the study numerical data from all 22 respondents. Data analysis, whether in the form of software analysis, will be compiled as part of the final product to compare the results with the hypotheses that were made before the quantitative data collection. The quantitative data will be evaluated to establish the final results and conclude the findings.

3. FINDINGS

Description Data

Data description has become one of the key activities in most data analysis, as this step allows researchers to understand the basic characteristics of the dataset, identify patterns and anomalies, and provide a basis for more in-depth statistical analysis. Through data description, important information such as distribution, central tendency, and variability of data can be revealed, which ultimately helps in making more informed and accurate decisions [41]. This study used an experimental design with a pre-test to assess initial reading abilities, six learning meetings, and a post-test to measure improvement. These findings indicate whether students' reading skills improved through the use of Kahoot! as a teaching medium.

Categorical Test of Student Values

Quasi-experimental designs have been commonly used research methods have been used for centuries. Pre- and post-test designs are quasi-experimental research that allows simple evaluation of interventions that apply to group participants. Although it is difficult to establish the validity of pre-and post-test studies because of the inherent weaknesses in this research design, strategies such as randomization, internal and external bias limitations, and the proper application of basic statistics can help researchers make links between these popular research design and the measurement of results [42].

1. Pre-Test Score

Table 2. Pre-Test Score

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Nilai_Siswa	22	5,00	95,00	58,1818	24,76295
Valid N (listwise)	22				

Based on Table 2 above, it can be concluded that the results of the students' posttest scores show that the average score is 58.18 and the standard deviation is 24.76. With a minimum value of 5 and a maximum value of 95.

2. Post-Test Score

Table 3. Post-Test Score

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Nilai_Siswa	22	45,00	100,00	74,5455	17,51932
Valid N (listwise)	22				

Based on Table 3 above, the results of the students' post-test scores show that the average score is 74.54 and the standard deviation is 17.51. With a minimum value of 45 and a maximum value of 100.

Validity Test

Validity refers to the accuracy of tests and is considered an assessment measure [43]. The results of the pre-test and post-test validity tests are shown in the following table:

Table 4. Validity Test

Question Item	R Tabel	R Count	Description
Q 1	0,444	0,465	Valid
Q 2	0,444	0,502	Valid
Q 3	0,444	0,667	Valid
Q 4	0,444	0,614	Valid
Q 5	0,444	0,480	Valid
Q 6	0,444	0,545	Valid
Q 7	0,444	0,529	Valid
Q 8	0,444	0,532	Valid
Q 9	0,444	0,453	Valid
Q 10	0,444	0,647	Valid
Q 11	0,444	0,535	Valid
Q 12	0,444	0,523	Valid
Q 13	0,444	0,702	Valid
Q 14	0,444	0,620	Valid
Q 15	0,444	0,481	Valid
Q 16	0,444	0,646	Valid
Q 17	0,444	0,721	Valid
Q 18	0,444	0,449	Valid
Q 19	0,444	0,587	Valid
Q 20	0,444	0,529	Valid

Based on the result of Table 4 on the pre-test and post-test questions, the validity test results show results of 0.465 for number 1 and 0.529 for number 20, so the validity of the pretest and post-test questions is declared valid.

Reliability Test

Scale reliability indicates the degree to which the scale is free from random errors. Two indicators commonly used to evaluate scale reliability are test and test reliability (also known as "temporal stability") and internal consistency [44]. This test is calculated using SPSS software. The results of the reliability analysis are shown in the following table.

Table 5. Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
,883	20

It can be seen in Table 5, that the requirements for the reliability test above are a value above 0.6. The results of the reliability test with Cronbach's Alpha showed a value of 0.883, which means it passed the reliability test and was categorized as very high reliability. Reliability in tests is useful for providing consistent measurement results.

4. DISCUSSION

4.1. Conclusion of data processing results

Through data processing carried out using the Normality test, the experimental class data is said to be normally distributed. After that, a different test (t-test) was carried out in which it was said that the experimental class had an increase in students' reading abilities.

4.2. Factors that form the basis for acceptance or rejection

As has been done by researchers, most students do not like literacy or reading, especially reading English. In theory, reading English requires more focus because it can influence the entire reading being discussed in a reading. This research has the advantage of wanting to know how interested children are in reading, especially reading English texts. Kahoot! It is a very interesting, interactive learning medium between teachers and students, and can increase children's focus in reading English texts because students are required to think critically when reading which is Kahoot! There is time for students to answer a question that has been given. After conducting observations and experimental classes, it can be concluded that acceptance or rejection of a hypothesis in research on improving students' ability to read English texts is based on several factors.

These factors include data obtained from hypothesis testing, and the validity of the measurement instruments used, as well as data analysis that shows the significance of differences between the experimental group and the control group. The results of the data that have been processed and analyzed show that the intervention or method applied significantly improves students' reading abilities, so the hypothesis is accepted. There is an average difference between the Pre-Test learning results and the Post-Test learning results, which means that there is an influence of using learning using Kahoot in improving students' reading ability.

Based on the results above, it shows a significance value of 0.000 < 0.05, so H1 is accepted, and H0 is rejected. So, there is an average difference between the Pre-Test learning results and the Post-Test learning results, which means there is an influence of using learning using Kahoot in improving students' reading ability.

Difference Test (T-Test)

T-test is a parametric method used to meet normal, equal, and independent conditions for samples. T-tests have two types: independent T-tests when two groups are compared independently, and pair T-tests when two groups are compared independently [45]. In this research, the difference test (t-test) shows the results:

Table 6. Difference Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreTest	11,6364	22	4,95259	1,05590
	PostTest	14,9091	22	3,50386	,74703

Based on Table 6 above, the statistical results on the PreTest show an average score of 11.63 with a sample of 22 students, a standard deviation is 4.95 and an average standard error is 1.05. Statistical results on the post-test show an average score of 14.90 with a sample of 22 students, a standard deviation is 3.50 and an average standard error is 0.74. If you look at the average results, it shows an increase.

Normality Test

Assessing the normality of data before performing a statistical analysis is very important. Otherwise, we may make erroneous conclusions. Normality can be assessed either visually or through a normality test [46] [47]. Normality tests are performed to determine whether the data before and after the test are normally distributed. In the normality test, this research used the Shapiro-Wilk test technique in the SPSS 20 program.

Table 7. Normality Test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Soal_PreTest	,133	22	,200*	,947	22	,281
Soal_PostTest	,147	22	,200*	,940	22	,199

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on Table 7, the number of participants in this study was 22 students, so this normality test refers to Shapiro-Wilk.

Test criteria:

- If the significance value is <0.05 then the data is not normally distributed
- If the significance value is > 0.05 then the data is normally distributed

Based on the results above, it shows that in the pretest questions with a significance of 0.281 > 0.05 and the posttest questions 0.199 > 0.05, it can be concluded that both data are normally distributed, so the next test is the parametric difference test..

5. CONCLUSION

This research underscores the importance of English as a communication tool and the role of technology in enhancing English learning. Using Kahoot! as a gamification tool significantly increases student engagement and motivation. Reading is critical for educational and career success, necessitating the development of reading skills from an early age. The study, conducted at Madrasah Aliyah Jamiat Kheir with 22 tenth-grade students, used pre-tests and post-tests over six meetings. The findings show that Kahoot! effectively improves students' reading abilities, with significant improvements in post-test scores, demonstrating high validity and reliability. Enhanced teacher skills in effective reading methods are essential for better learning outcomes.

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