

## KAHOOT AS A DIGITAL ASSESSMENT TOOL: EXAMINING ITS EFFECTIVENESS IN SUMMATIVE TESTING

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### ABSTRAK

Penelitian ini mengkaji efektivitas Kahoot! sebagai alat digital untuk penilaian sumatif dalam pembelajaran Bahasa Inggris sebagai Bahasa Asing (EFL) di tingkat sekolah menengah atas. Dengan menyadari pentingnya menciptakan lingkungan belajar yang menarik, penelitian ini mengeksplorasi bagaimana penilaian yang digamifikasi dapat meningkatkan motivasi dan performa belajar siswa. Menggunakan desain pra-eksperimen, penelitian ini melibatkan siswa kelas XI di MAN 1 Kota Pekalongan, dengan data yang dikumpulkan melalui pre-test, post-test, dan angket persepsi siswa. Analisis statistik deskriptif dan non-parametrik menunjukkan bahwa penilaian berbasis Kahoot secara signifikan meningkatkan keterlibatan siswa dan hasil belajar dibandingkan dengan metode penilaian konvensional berbasis kertas. Para siswa melaporkan meningkatnya antusiasme, fokus yang lebih tinggi, serta pemahaman yang lebih baik selama kegiatan penilaian. Hasil ini menegaskan potensi integrasi alat digital berbasis permainan untuk meningkatkan praktik penilaian, mendorong pembelajaran yang lebih mendalam, dan menumbuhkan keterlibatan aktif dalam kelas EFL.

**Kata kunci :** kinerja akademik, efektivitas, Kahoot, penilaian sumatif

### ABSTRACT

This study examines the effectiveness of Kahoot! as a digital tool for summative assessment in English as a Foreign Language (EFL) instruction at the senior high school level. Recognizing the need for engaging learning environments, the research explores how gamified assessment can enhance learner motivation and performance. Utilizing a pre-experimental design, the study involved eleventh-grade students at MAN 1 Kota Pekalongan, with data collected through pre-tests, post-tests, and student perception questionnaires. Descriptive and non-parametric statistical analyses revealed that Kahoot-based assessments significantly improved student engagement and learning outcomes compared to traditional paper-based methods. Students reported heightened enthusiasm, increased focus, and improved comprehension during assessment activities. These results underscore the potential of integrating game-based digital tools to improve assessment practices, promoting deeper learning and foster active engagement in EFL classrooms.

**Keyword:** academic performance, effectiveness, Kahoot, summative assessment

### INTRODUCTION

In the era of digital transformation, educational practices have increasingly embraced technology to enhance teaching and learning processes. Among the numerous tools available, Kahoot stands out as a digital platform designed to create interactive and engaging learning experiences. Its gamified approach to assessment has gained significant popularity among educators for its ability to foster enthusiasm and active participation among students. Research has shown that gamified learning platforms like Kahoot contribute to

increased motivation, engagement, and academic performance (Ye, Ahmad, and Wan 2024). As technology becomes more integrated into the classroom, educators are continuously seeking innovative methods to make learning more dynamic, inclusive, and effective. Kahoot's ability to combine fun with functionality makes it a preferred choice in many educational settings (Altawalbeh and Irwanto (2023)).

At its core, Kahoot leverages the principles of gamification to transform traditional assessments into lively, competitive, and collaborative experiences. Students are presented with a series of questions in a game-like format, encouraging quick thinking and active engagement. The platform's visually appealing interface, immediate feedback system, and the incorporation of leaderboards create an environment where students are motivated to perform their best. Studies have highlighted that gamified learning platforms like Kahoot enhance student engagement, promote positive attitudes toward learning, and foster collaborative skills (Ali and Abdalgane 2022; Rajabpour 2021). By fostering an interactive and inclusive environment, Kahoot has proven effective in bridging the gap between traditional assessments and modern, student-centered learning approaches (Rahman et al. 2023). MAN 1 Kota Pekalongan, as a progressive educational institution, has recognized the potential of Kahoot in revolutionizing traditional assessment practices. In response to the growing demand for innovative teaching strategies, the school has integrated Kahoot into its assessment framework, particularly in grade XI. Studies have shown that Kahoot, as a gamified learning platform, enhances students' academic performance, engagement, and enjoyment of the learning process (Wang and Tahir 2020). This study aims to evaluate the effectiveness of Kahoot as a strategy for summative assessment, focusing on its impact on students' academic achievements, engagement levels, and overall perceptions of the assessment process. By understanding how Kahoot influences these factors, the research seeks to provide insights into its role as a modern assessment tool (Ye, Ahmad, and Wan 2024).

One of the primary objectives of this research is to determine whether the use of Kahoot enhances learning outcomes. Unlike conventional assessment methods, which often rely on paper-based tests and can be perceived as monotonous, Kahoot offers an interactive alternative that encourages active participation. Research has demonstrated that gamified platforms like Kahoot can boost student motivation, engagement, and academic achievement through interactive learning approaches (Wang and Tahir 2020). The immediate feedback provided by the platform allows students to understand their performance

in real-time, promoting a deeper understanding of the material. This feature not only aids in knowledge retention but also enables teachers to identify areas where students may need additional support.

Another critical aspect of this study is to assess how Kahoot influences student motivation. The gamified nature of the platform, with its use of points, rankings, and time-based challenges, has been shown to increase enthusiasm and competitiveness among students (Wang and Tahir 2020). By transforming assessments into engaging activities, Kahoot can help sustain students' interest in the learning process, even in subjects they might typically find. Furthermore, the collaborative opportunities provided by Kahoot's team-based modes foster a sense of community and shared purpose among learners, enhancing their overall experience.

The research also seeks to explore whether Kahoot can reduce test anxiety compared to traditional methods of evaluation. Many students experience stress and anxiety when faced with conventional tests, which can hinder their performance and overall learning experience. Studies have shown that gamified platforms like Kahoot create a more relaxed and enjoyable assessment environment, reducing test-related anxiety and fostering positive attitudes toward evaluation (Wang and Tahir 2020). Kahoot's informal and game-like approach to assessment helps create a more relaxed atmosphere, allowing students to focus on demonstrating their knowledge without the pressure typically associated with exams (Zhang and Yu (2022)). This shift in perception can have a profound impact on their academic achievements and attitudes toward assessments.

In addition to examining student outcomes, this study will delve into the practical challenges and opportunities faced by teachers in utilizing Kahoot for summative evaluations. While the platform offers numerous benefits, such as ease of use and accessibility, it may also present certain challenges, including the need for reliable internet connectivity, the time required to design engaging quizzes, and the potential for technical issues during implementation (Wang and Tahir (2020)). By addressing these concerns, the research aims to provide a balanced perspective on the feasibility of incorporating Kahoot into the assessment framework.

Moreover, the study will investigate students' overall perceptions of the assessment process when using Kahoot. Understanding their feedback is crucial for evaluating the successful integration of technology into the classroom, while any negative feedback can offer valuable insights for refining the approach Aksara (2024). Ultimately, this research seeks to contribute to the growing body of knowledge on the use of digital tools in education and their potential to transform traditional practices.

### METHOD

A method was needed for searching data that appropriate to the current research. According to Judijanto and Wibowo (2024) there are different approaches or frameworks in designing proposals and conducting research. He focused more on three approaches, namely quantitative, qualitative and mixed methods. This research will use a quantitative approach as the research method.

According to Judijanto and Wibowo (2024) quantitative is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analysed using statistical procedures. This quantitative research is used to research certain populations or samples, collecting data using research instruments, quantitative or statistical data analysis, with the aim of testing predetermined hypotheses Meissel and Brown (2024). The use of quantitative method was suitable for use in this research, because it tested the hypotheses that

platform's effectiveness and identifying areas for improvement. Positive perceptions can indicate a

have been determined. In quantitative method, some common strategies namely pre-experimental design, true experimental design, and quasi experimental design. This research will use a pre-experimental design as a strategy.

### RESULT AND DISCUSSION

This research employed two main instruments a one-group pretest-posttest design and a student perception questionnaire. The pretest was administered to measure students' initial understanding before the treatment, followed by a posttest to evaluate the effectiveness of using Kahoot as a digital tool for summative assessment in English as a Foreign Language (EFL) instruction. The treatment involved implementing Kahoot!-based assessments in the classroom. Meanwhile, the student perception questionnaire consisted of several statements designed to gather students' opinions on the use of Kahoot during the assessment process. These instruments aimed to assess both the impact on student learning outcomes and their engagement with the gamified digital tool in a senior high school setting.

#### Cycle 1

In cycle 1, the following is a calculation of the number of students grades. After the sum is filled, the average value is calculated using the following formula:

$$\begin{aligned} \text{percent}(p) &= \frac{\text{Number of earned score}}{\text{Number of maximum score}} \times 100\% \\ \text{percentage}(p) &= \frac{630}{750} \times 100\% \\ \text{percentage}(p) &= 84 \text{ ( Good)} \end{aligned}$$

Based on these results, it can be concluded that the use of Kahoot has a good effect on English language learning.

#### Cycle 2

In cycle 2, researcher used the following criteria to determine the assessment of student learning outcomes.

Table 1 Learning outcomes paper-based test scores

Range of value	Value	Information
85 - 100	A	Very good
75 - 84	B	Good

60 – 75	C	Good enough
< 60	D	Enough

$$\text{percent } (p) = \frac{\text{Number of earned score}}{\text{Number of maximum score}} \times 100\%$$

$$\text{percentage } (p) = \frac{17600}{3000} \times 100\%$$

$$\text{percentage } (p) = 56.66667 \text{ (Enough)}$$

The Kahoot results revealed that four students showed a good understanding, sixteen students had a good enough grasp, and ten students demonstrated only a basic understanding of the material. This initial assessment suggests that a subsequent paper-based test might yield a similar distribution, with a few students performing well, a larger group showing

moderate understanding, and a significant portion needing further support to achieve satisfactory learning outcomes. The Kahoot results underscore the need for targeted instruction and further assessment to ensure all students develop a comprehensive understanding of the subject matter.

Table 2 Learning outcomes Kahoot as medium scores

Range of value	Value	Information
85 - 100	A	Very good
75 - 84	B	Good
60 – 75	C	Good enough
< 60	D	Enough

$$\text{percentag } (p) = \frac{\text{Number of earned score}}{\text{Number of maximum score}} \times 100\%$$

$$\text{percentag } (p) = \frac{2600}{3000} \times 100\%$$

$$\text{percentag } (p) = 86.6 \text{ (Very good)}$$

After using Kahoot as a learning medium, the score results indicated a strong overall understanding among the students. Seventeen students achieved a very good score, demonstrating a high level of comprehension of the material presented. Additionally, eight students performed at a good level, signifying a solid grasp of the key concepts. A smaller group of five students scored good enough, suggesting a basic understanding but with potential areas for further development. The calculated percentag (p) 86.6% falling into the very good category highlights the effectiveness of Kahoot as a learning medium in facilitating strong

understanding for a significant majority of the students. These results suggest that the learning objectives were largely met through this interactive approach.

### Cycle 3

The calculation of the T-test in this research used SPSS 26. This test is used to test the average value before and after treatment whether there is a significant effect or not. The following are the results of T-test output using SPSS 26.

Table 4 Paired sample statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pretest	56.67	30	16.046	2.930
	posttest	86.67	30	12.411	2.266

For the pretest score, the average learning outcome was 56.67. As for the post-test score, an average score was 86.67. The number of respondents used was 30 students. Because the

average value of learning outcomes on pretest is 56.67 < post-test is 86.67, it can be concluded that there is a difference in the average learning outcomes between the pretest and post-test.

**Table 5 Paired sample test**

Paired Differences	Paired Samples Test							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pair 1 Pretest - Posttest	-30.000	12.594	2.299	-34.703	-25.297	-13.047	29	.000

The hypoundergraduate thesis that was proposed is:  
Ho = There is no significant influence in using Kahoot paper based test on student learning outcomes.

Ha = There is a significant influence in using Kahoot on student learning outcomes  
a. To determine the value of t table can use the following formula:

$$af \left( \frac{\alpha}{2}; n - 1 \right) = \left( \frac{0.05}{2}; 30 - 1 \right) = (0,025; 29) = 2.363$$

Based on t count value of the SPSS results in Table 13 of -13.047 and t table obtained a value of 2.363. So, that t count < t table then H0 is rejected, then Ha is accepted.

b. The results of significant values can be seen in Table 13. The significant value is less than 0.05. sig. (0.000) < 0.05 so that H0 is rejected, then Ha is accepted. The partial hypoundergraduate thesis test decision can be concluded that there is an influence on the use of Kahoot on student learning outcomes. Based on the results of research that has been carried out regarding the effectiveness of Kahoot in English language teaching for Grade XI students at MAN 1 Kota Pekalongan, using a pretest-posttest design and students' perception questionnaire, and analyzed with normality tests and T-test analysis, all assumptions were met. The results indicate that the use of Kahoot has a significant influence on students' English learning outcomes.

**CONCLUSION**

The Kahoot was effectively used as the medium for summative assessment in learning English for grade XI students at MAN 1 Kota Pekalongan, falling into the quite effective

category based on the N-gain calculation (average N-gain). The T-test revealed a significant improvement in student scores, with a noticeable increase from the pretest to the post-test after Kahoot implementation. This difference was statistically significant, indicating a positive impact of the Kahoot intervention. Furthermore, the non-parametric Wilcoxon test confirmed the effect of using Kahoot as a summative assessment medium on English language learning. Students also perceived learning using Kahoot positively. This positive reception aligned with the observed increase in student learning results from pretest to post-test. Consequently, it was concluded that implementing new methods like Kahoot could positively shift students' perceptions of learning. Initially, they appeared less interested in English learning, but the gamified approach fostered greater preference and engagement through a learning-through-play experience.

**REFERENCES**

Aksara, Wawasan D A N. 2024. "Wawasan Dan Aksara." 4(2): 275-84.

- Ali, Rabea, and Mohammed Abdalgane. 2022. "The Impact of Gamification ' Kahoot App ' in Teaching English for Academic Purposes." 12(7): 18–27.
- Altawalbeh, Khitam, and Irwanto Irwanto. 2023. "Game-Based Learning: The Impact of Kahoot on a Higher Education Online Classroom." (March).
- Judijanto, Loso, and Guntur Arie Wibowo. 2024. *RESEARCH DESIGN ( Pendekatan Kualitatif Dan Kuantitatif )*.
- Meissel, Kane, and Gavin T L Brown. 2024. "Quantitative Research Methods." (July).
- Rahman, Arifa, Hasan Al, Zubayer Rony, and Asm Shihavuddin. 2023. "Kahoot A Game-Based Learning Tool in Online Class for Effective Engagement and Formative Assessment." (December): 0–26.
- Rajabpour, Abouzar. 2021. "Teachers ' Perception of Advantages and Disadvantages of Kahoot!" 10(4): 49–61.
- Wang, Alf Inge, and Rabail Tahir. 2020. "Computers & Education The Effect of Using Kahoot! For Learning – A Literature Review." 149(May 2019).
- Ye, Bei, Wan Ahmad, and Jaafar Wan. 2024. "The Impact of Gamified Learning With Kahoot! On Student Motivation and Engagement." (March).
- Zhang, Qi, and Zhonggen Yu. 2022. "A Literature Review on the Influence of Kahoot! On Learning Outcomes , Interaction , and Collaboration A Literature Review on the Influence of Kahoot! On Learning Outcomes , Interaction , and Collaboration." (July 2021).