

THE EFFECTIVENESS OF KAHOOT! IN ENGLISH VOCABULARY MASTERY AMONG SECOND SEMESTER STUDENTS AT UNIVERSITAS BHINNEKA PGRI TULUNGAGUNG IN THE ACADEMIC

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Abstrak

Penelitian ini bertujuan untuk mengkaji efektivitas penggunaan Kahoot! sebagai platform pembelajaran digital dalam meningkatkan penguasaan kosakata bahasa Inggris mahasiswa. Penelitian dilakukan pada mahasiswa semester dua di Universitas Bhinneka PGRI Tulungagung tahun ajaran 2024/2025. Pendekatan yang digunakan adalah kuantitatif dengan desain pretest-posttest satu kelompok yang melibatkan 15 peserta. Data dikumpulkan melalui tes kosakata dan angket mahasiswa. Hasil penelitian menunjukkan adanya peningkatan signifikan dalam penguasaan kosakata setelah penggunaan Kahoot!, yang terlihat dari peningkatan skor posttest secara nyata. Analisis statistik menggunakan uji sampel berpasangan menunjukkan perbedaan yang signifikan. Selain itu, respon mahasiswa terhadap penggunaan Kahoot! sangat positif, karena meningkatkan keterlibatan, kesenangan, dan motivasi dalam proses belajar. Berdasarkan temuan tersebut, dapat disimpulkan bahwa Kahoot! merupakan media yang efektif dalam membantu penguasaan kosakata dalam pembelajaran bahasa Inggris.

Kata kunci: Kahoot!, penguasaan kosakata, teknologi pendidikan, keterlibatan siswa, pembelajaran bahasa Inggris

Abstract

This research investigates the effectiveness of Kahoot! as a digital learning platform to enhance students' vocabulary mastery. The study was conducted among second-semester students at Universitas Bhinneka PGRI Tulungagung during the academic year 2024/2025. A quantitative approach with a one-group pretest- posttest design was employed, involving 15 participants. Data were collected through vocabulary tests and student questionnaires. The results indicated a significant improvement in students' vocabulary achievement after using Kahoot!, with a noticeable increase in posttest scores. Statistical analysis through a paired sample t-test confirmed that the difference was significant. Additionally, student responses showed positive perceptions toward the use of Kahoot! in the classroom, highlighting increased engagement, enjoyment, and motivation. Based on the findings, it can be concluded that Kahoot! is an effective tool for improving vocabulary mastery in English language learning.

Keywords: Kahoot!, vocabulary mastery, educational technology, student engagement, English learning

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INTRODUCTION

In recent decades, English language proficiency has become increasingly essential in academic and professional contexts, particularly in non-native English-speaking countries such as Indonesia. Among the core components of language proficiency, vocabulary mastery is foundational, influencing students' abilities in reading, writing, listening, and speaking (Nation,

2001). However, many students, especially at the university level, continue to struggle with vocabulary retention and effective usage. Traditional vocabulary instruction—relying heavily on memorization and repetition—often fails to engage learners, resulting in reduced motivation and limited long-term retention (Cameron, 2001). These challenges indicate a pressing need for more engaging, student-centered learning methods.

To address these concerns, the integration of digital learning tools in language instruction has gained considerable attention. One such tool is Kahoot!, a game-based online learning platform that transforms vocabulary practice into an interactive, competitive activity (Surendelegh et al., 2019). Kahoot! offers real-time feedback, point-based quizzes, and an engaging visual interface, making the learning process more dynamic. According to Hwang and Chen (2017), the use of gamified digital tools such as Kahoot! can significantly enhance motivation, support active recall, and facilitate better vocabulary retention than traditional methods. Despite its global popularity, empirical studies examining Kahoot!’s specific effectiveness in the Indonesian university context, especially in vocabulary acquisition, remain limited.

Vocabulary acquisition involves both receptive and productive knowledge, enabling learners not only to recognize words but also to use them in various communicative contexts (Schmitt, 2000). The distinction between active and passive vocabulary is essential, with active vocabulary being used in speech and writing, while passive vocabulary is recognized in listening and reading (Thornbury, 2002). Effective vocabulary mastery, therefore, requires instructional strategies that provide repeated exposure, meaningful context, and immediate feedback—features that are inherently supported by game-based platforms like Kahoot!. As emphasized by Hiebert and Kamil (2005), vocabulary knowledge is a strong predictor of reading comprehension and academic success, underscoring the need for innovative strategies in vocabulary instruction.

The theoretical foundation supporting Kahoot!’s integration in language learning is multifaceted. Cognitivism posits that learning occurs through active mental engagement, and feedback is critical for memory consolidation (Schunk, 2012). Kahoot!’s instant feedback loop and competitive features align with these principles by reinforcing correct responses and addressing misconceptions in real time. Additionally, Vygotsky’s social interaction theory highlights the role of peer collaboration in language development, which is encouraged through the social dynamics of Kahoot!’s multiplayer quizzes (Daniels, 2016). Game-Based Learning (GBL) theory further supports the use of Kahoot! by emphasizing the motivational benefits and cognitive engagement derived from educational games (Gee, 2007).

Recent studies offer empirical evidence of Kahoot!’s positive impact on language learning. For instance, Kartini (2021) reported that high school students exhibited increased motivation and engagement during vocabulary sessions using Kahoot!, while Erwin (2022) found that Kahoot! significantly improved students’ vocabulary retention through repeated exposure and immediate correction. At the tertiary level, Sutrisno (2021) noted that Kahoot! enhanced participation and vocabulary acquisition among university students by transforming routine drills into interactive experiences. These findings suggest that game-based learning tools like Kahoot! are not only enjoyable but also pedagogically effective.

Despite the promising results, most existing studies focus on high school contexts or international settings, leaving a research gap regarding its effectiveness in Indonesian universities. Nugroho (2020) emphasized the importance of local research to evaluate how digital tools perform in specific educational and cultural environments, particularly where access to technology may vary. Therefore, this study aims to examine the effectiveness of Kahoot! in improving English vocabulary mastery among second-semester students at Universitas Bhinneka PGRI Tulungagung, providing much-needed insights into its practical implementation in Indonesian higher education.

This study is grounded in the hypothesis that integrating Kahoot! into vocabulary instruction will result in significant improvements in students' vocabulary mastery. By exploring the impact of Kahoot! on vocabulary acquisition, engagement, and motivation, this research seeks to contribute to the growing body of knowledge on educational technology and its role in enhancing English language learning outcomes.

METHODS

This study employed a quantitative research design using a one-group pretest-posttest quasi-experimental approach. This design was selected to examine the effectiveness of Kahoot! in enhancing English vocabulary mastery among second-semester students at Universitas Bhinneka PGRI Tulungagung. The pretest was administered after conventional vocabulary instruction to assess students' baseline understanding, followed by a treatment session using Kahoot!, and then a posttest to evaluate learning improvement (Creswell, 2012).

Participants

The participants were 15 second-semester students enrolled in the English Education Program during the academic year 2024/2025. The sampling technique used was purposive sampling, as the selected class was considered suitable for both conventional and technology-enhanced instruction. All participants engaged in both instructional phases and completed the required instruments.

Research Variables

This study involved two variables:

- The independent variable was the use of Kahoot! as a game-based learning platform for vocabulary instruction.
- The dependent variable was the students' vocabulary mastery, measured through pretest and posttest scores (Ary et al., 2010).

Table 1. Teaching Procedure

Stage	Description
Preparation	Development and validation of learning materials, tests, and Kahoot! quizzes.
Pretest	Students took a vocabulary test after traditional instruction.
Kahoot! Treatment	Students learned the same vocabulary using interactive Kahoot! quizzes.
Posttest	The same test was administered again to measure improvement.
Questionnaire	Students completed a perception survey about their Kahoot! learning experience.

Data Analysis Techniques

The collected data were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics (mean, standard deviation, minimum, maximum) summarized students' test performance. To determine the significance of the improvement, a paired sample t-test was conducted using a significance level of 0.05. In addition, the reliability of the test was measured using the Split-Half Method, with results interpreted using the Spearman-Brown formula (Gay et al., 2012).

Validity and Reliability

To ensure content validity, all test items were reviewed by English language education experts. Reliability of the vocabulary test was confirmed through the split-half method, yielding a reliability coefficient of 0.901, indicating strong internal consistency and dependable measurement.

Ethical Considerations

This study complied with ethical standards. All participants were informed about the research objectives and procedures and gave informed consent. Anonymity and confidentiality were maintained throughout data collection and analysis, and participation was voluntary, with no academic consequences for withdrawal.

RESULTS AND DISCUSSION

Results

This section presents the findings of the research, including the descriptive statistics, the results of the paired sample t-test, and the summary of students' perceptions obtained from the questionnaire.

Descriptive Statistics

To determine students' initial and post-treatment vocabulary mastery, a pretest was conducted after traditional instruction and a posttest after the Kahoot!-based session. The descriptive statistics of students' scores are presented below:

Table 2. Descriptive Statistics of Pretest and Posttest Scores

No	Student Initials	Pretest Score	Posttest Score	Gain Score
1	IP	60	82	22
2	BT	75	90	15
3	ANP	55	88	33
4	ML	80	95	15
5	SS	65	90	25
6	YTK	75	95	20
7	NS	55	85	30
8	APR	67	80	13
9	SPA	85	100	15
10	AC	70	95	25
11	DP	50	85	35
12	FRA	75	90	15
13	MAH	80	75	-5
14	RPW	45	85	40
15	MHK	70	88	18

Summary Statistics:

- Mean Pretest Score: 65.00
- Mean Posttest Score: 88.47
- Standard Deviation (Pretest): 12.17
- Standard Deviation (Posttest): 6.99
- Minimum Score: Pretest = 45, Posttest = 75
- Maximum Score: Pretest = 85, Posttest = 100

The table shows a clear increase in students' vocabulary mastery after the Kahoot! treatment. The mean gain score indicates significant improvement among most participants.

Inferential Statistics - Paired Sample t-Test

To determine whether the improvement in scores was statistically significant, a paired sample t-test was conducted. The results are as follows:

- Mean Difference (Posttest - Pretest): 23.47
- t (df = 14): 10.53
- p-value: < 0.0001

Since the p-value is less than 0.05, the null hypothesis is rejected. This confirms that the use of Kahoot! had a statistically significant positive effect on students' vocabulary mastery.

Questionnaire Results - Students' Perceptions

After the posttest, a questionnaire was administered to gather students' perceptions of Kahoot! as a vocabulary learning tool. The analysis revealed three major themes:

- **Engagement:** Students reported that Kahoot! made learning fun and interactive, keeping them focused and active throughout the lesson.
- **Motivation:** The gamified format and competitive environment increased their enthusiasm and willingness to learn new vocabulary.
- **Ease of Use:** Students found the Kahoot! platform user-friendly, accessible across devices, and enjoyable to navigate.

These responses suggest that in addition to improving test scores, Kahoot! also enhanced the overall learning experience. The platform fostered a more dynamic, motivating, and student-centered classroom environment.

CONCLUSION

The findings of this study demonstrate that the use of Kahoot! significantly improved students' vocabulary mastery. The increase in mean test scores from 65.00 (pretest) to 88.47 (posttest), as supported by a highly significant p-value ($p < 0.0001$), confirms the effectiveness of game-based learning in enhancing language outcomes. This result aligns with Gee's (2007) Game-Based Learning theory, which emphasizes that gamification elements such as competition, feedback, and rewards can foster motivation and deeper cognitive engagement.

One of the key factors contributing to the success of Kahoot! was its ability to increase student engagement. The questionnaire results revealed that students found the learning process enjoyable and exciting. These findings are consistent with Surendele et al. (2019), who argued that gamified platforms promote student participation and reduce learning fatigue by transforming academic tasks into interactive challenges. In the present study, the engaging nature of Kahoot! appeared to encourage even less active students to participate, resulting in a more inclusive classroom dynamic.

Furthermore, the use of Kahoot! supports the principles of cognitivist learning theory, which highlights the importance of feedback and active processing in knowledge retention (Schunk, 2012). In this study, students benefited from immediate feedback after each quiz item, allowing them to correct mistakes and reinforce correct answers. This aligns with findings by Hwang and Chen (2017), who reported that instant feedback enhances vocabulary recall and helps learners track their progress effectively.

The social aspect of learning was also evident in this study. Kahoot! facilitated collaboration and communication among peers, aligning with Vygotsky's social interaction theory which posits that knowledge is constructed through social engagement (Daniels, 2016). Students in the present study often discussed answers and engaged in friendly competition, which likely contributed to higher motivation and learning outcomes.

Additionally, the results confirm previous studies in the field. For example, Kartini (2021) and Erwin (2022) both reported improved vocabulary retention and student motivation following the implementation of Kahoot!. Similarly, Sutrisno (2021) highlighted Kahoot!'s potential to foster an enjoyable classroom atmosphere and to enhance participation in language learning, findings that are mirrored in the current study's qualitative responses.

However, it is important to acknowledge potential limitations. Although most students showed improvement, one student experienced a decline in performance (as indicated by a negative gain score), suggesting that not all learners may respond equally to gamified methods. This supports Zainuddin and Perera's (2020) assertion that while Kahoot! is generally effective,

its impact depends on instructional design, individual learning preferences, and students' technological access or comfort.

In summary, this study confirms that Kahoot! is an effective instructional tool for vocabulary learning. It not only led to measurable improvements in student achievement but also fostered a more engaging, motivating, and interactive classroom environment. The integration of Kahoot! offers educators a practical, evidence-based method for enhancing vocabulary acquisition in higher education, particularly in EFL contexts.

CONCLUSION AND SUGGESTION

Conclusion

This study examined the effectiveness of using Kahoot! as a digital learning platform to improve English vocabulary mastery among second-semester students at Universitas Bhinneka PGRI Tulungagung. The results revealed a significant improvement in students' vocabulary scores after the implementation of Kahoot!, as confirmed by both descriptive and inferential analyses. In addition, students expressed highly positive perceptions of Kahoot!, noting increased engagement, motivation, and ease of use. These findings support the integration of game-based learning in language instruction and demonstrate that Kahoot! can be a powerful tool for enhancing vocabulary acquisition in a student-centered, enjoyable learning environment.

Suggestions

Based on the findings of this study, several suggestions are offered. First, language teachers are encouraged to incorporate digital platforms like Kahoot! to enrich classroom instruction and promote active learning, particularly in vocabulary-focused lessons. Second, future researchers may explore the long-term impact of Kahoot! on vocabulary retention or compare its effectiveness with other gamified tools in larger and more diverse populations. Lastly, educational institutions should support access to adequate technology and training to ensure that both teachers and students can maximize the benefits of game-based learning platforms in various learning contexts.

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