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The Effect of Kahoot-Based Learning on Students' Vocabulary Mastery

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abstrak— Dalam pembelajaran bahasa Inggris, penguasaan kosakata sangat penting karena mendukung kemampuan siswa dalam membaca, menulis, berbicara, dan mendengarkan. Karena tidak ada media pembelajaran yang menarik dan interaktif, banyak siswa masih menghadapi kesulitan menguasai kosakata. Tujuan penelitian ini adalah untuk mengetahui bagaimana penggunaan Kahoot berdampak pada penguasaan kosakata siswa di kelas X SMKN Dander. Sampel penelitian terdiri dari 26 siswa kelas X SMKN Dander, yang dikumpulkan melalui pendekatan pre-test satu kelompok dan post-test satu kelompok. Metode kuantitatif yang dirancang secara eksperimen digunakan. Data diperoleh melalui tes kosakata sebelum dan sesudah tes, yang dilakukan dengan Kahoot dalam pembelajaran. Uji-t digunakan untuk menganalisis data penelitian dengan bantuan statistik IBM SPSS. Hasil penelitian menunjukkan bahwa perawatan Kahoot meningkatkan nilai rata-rata siswa. Selain itu, nilai signifikansi (sig. 2-tailed) adalah 0,000 di bawah taraf signifikansi 0,05. Hal ini menunjukkan hasil bahwa H₀ ditolak dan H₁ diterima dan menunjukkan bahwa game Kahoot memiliki efek yang signifikan terhadap peningkatan penguasaan kosakata siswa kelas sepuluh di SMKN Dander.

Kata kunci— Kahoot, Penguasaan Kosakata

Abstract— In English language learning, vocabulary mastery is crucial because it supports students' reading, writing, speaking, and listening skills. Due to the lack of engaging and interactive learning materials, many students still struggle to master vocabulary. The purpose of this study was to determine how the use of Kahoot impacts vocabulary mastery among 10th-grade students at SMKN Dander. The research sample consisted of 26 10th-grade students at SMKN Dander, collected through a one-group pre-test and one-group post-test approach. An experimentally designed quantitative method was used. Data were obtained through pre- and post-vocabulary tests, which were conducted using Kahoot in the classroom. A t-test was used to analyze the research data with the aid of IBM SPSS statistics. The results of the study indicate that the use of Kahoot improved students' average scores. Furthermore, the significance value (sig. 2-tailed) was 0.000, which is below the significance level of 0.05. This indicates that H₀ was rejected and H₁ was accepted, demonstrating that the Kahoot game has a significant effect on improving the vocabulary mastery of 10th-grade students at SMKN Dander.

Kata kunci— Kahoot, Vocabulary Mastery

INTRODUCTION

In this increasingly advanced era, English has become one of the most important subjects in education because it plays a key role in fostering communication skills. English proficiency is considered essential because it has become the universal language in fields beyond education, such as science, technology, and the workplace.

Vocabulary mastery is one of the key aspects of learning English. If you want to learn English, vocabulary is one of the things you must focus on (Aisyah & Salmiah, 2024). Vocabulary is essential for developing all four English language skills; understanding and applying English with ease is the first step (Chyntia et al., 2022). A vocabulary is a group of terms used for a variety of purposes, including speaking, listening, reading, and writing (Rahmah et al., 2023). However, in reality, many students struggle to master English vocabulary. This is due to several factors, namely a lack of motivation and teaching methods that do not capture students' interest, and limited use of interactive media.

In the classroom, conventional teacher-centered methods are often used. These methods make students passive and prone to boredom, resulting in poor learning outcomes, particularly in terms of English vocabulary mastery. To help students better understand and retain vocabulary, teaching methods that spark interest and encourage engagement are necessary (Fuadul, 2025). Teachers need to choose appropriate teaching methods to attract and maintain students' attention (Mawarni et al., 2021).

There are many game-based learning tools designed to engage students during lessons. The researchers selected one such tool: Kahoot. Kahoot is a learning platform with numerous features that can assist students (Quiroz et al., 2021). With Kahoot, students can take engaging and interactive quizzes, thereby boosting their motivation to learn and their understanding of the material, particularly in terms of vocabulary acquisition. Additionally, Kahoot fosters a collaborative and healthy competitive environment.

This study examines the effect of Kahoot on vocabulary mastery among 10th-grade students at SMKN Dander, using only one class for a pre- and post-treatment

comparison. Ultimately, this study will provide insights for developing new, more innovative, and effective teaching methods. However, the study acknowledges its limitations, as it drew on a small sample from a single tenth-grade class within the school, which may affect the interpretation of the findings.

METHOD

This study employed a quantitative approach using a quasi-experimental design. According to Goertzen (2017:12) as cited in (Rohimajaya & Munawaroh, 2023), quantitative research focuses on the collection and analysis of structured data. In this study, the researcher selected 26 tenth-grade students at SMKN Dander as the research subjects. The sample of this study consisted of one class. The students were given a vocabulary proficiency test through Kahoot, which included 20 multiple-choice questions administered during both the pre-test and post-test sessions. Although additional questions were provided during the treatment session, the results obtained from these activities were not included in the data analysis and were not used for the purposes of this study. The questions administered during these processes were, of course, different.

The study spanned two weeks with three sessions. A pre-test was given during the first week's session to gauge students' initial vocabulary proficiency; the treatment was given during the second session of the same week; and the post-test was given in the second week to make sure there was enough time between the treatment and the post-test. At the end of the study, a questionnaire was administered to gather students' responses to the use of Kahoot in the classroom. The data obtained from the questionnaire served as supporting evidence to complement the findings from the pre-test and post-test.

FINDINGS AND DISCUSSION

Findings

Based on the results of the analysis, this study involved 26 students as respondents. The mean score of the students' learning outcomes was 43.46, with a standard deviation of 14.749. These results indicate that students showed varying

levels of vocabulary mastery after participating in Kahoot-based learning activities. Before conducting the hypothesis test, a normality test was carried out to ensure that the data met the assumptions required for further statistical analysis. The Shapiro-Wilk test was selected to assess the normality of the data because the sample size of the study consisted of fewer than 50 students ($N = 26$).

Table 1. Normality Test Results (Shapiro-Wilk)

Variable	Statistic	df	Sig.	Description
Pre-test	0.978	26	0.825	Normally Distrubuted
Post-test	0.928	26	0.068	Normally Distrubuted
Questionnaire	0.958	26	0.356	Normally Distrubuted

Based on Table 1, the results of the Shapiro-Wilk normality test show that the significance (sig.) Three variables have values higher than the significance level of 0.05. The sig. values for the pre-test data were 0.825 ($0.825 > 0.05$), for the post-test data 0.068 ($0.068 > 0.05$), and for the questionnaire data 0.356 ($0.356 > 0.05$). The results of the normality test indicate that all research data are normally distributed. Thus, the data satisfy the requirements for conducting parametric statistical analysis using the Paired Sample T-Test.

Following the normality test, a Paired Sample T-Test was performed to examine the effectiveness of the treatment provided. The results of the analysis can be seen in Table 2 below.

Table 1. Paired Sample T-Test Result

Description	Result
Number of Students (N)	26
Mean	43.46

Mean Difference	41.462
Standard Desiation	14.211
t-value	14.877
Degree of Fredom (df)	25
Sig.	0.000
Interpretation	Significant

Based on the results of the Paired Sample T-Test, the significance value (Sig. 2-tailed) was 0.000, which is lower than the significance level of 0.05 ($0.000 < 0.05$). This result indicates that the null hypothesis (H_0) is rejected, while the alternative hypothesis (H_1) is accepted. Therefore, it can be concluded that Kahoot-based learning has a significant effect on the vocabulary mastery of tenth-grade students at SMKN Dander.

Discussion

The study's findings suggest that Kahoot-based instruction improves students' vocabulary mastery. The Paired Sample T-Test results, which revealed a significant value of 0.000 and demonstrated a difference in learning outcomes before and after Kahoot was used in the classroom, make this clear.

The characteristics of Kahoot as a game-based learning tool can explain the improvement in students' vocabulary mastery. During the learning process, Kahoot provides various features such as interactive quizzes, time limits, scoreboards, and direct feedback. These features provide a learning environment that is more engaging, competitive, and motivating for students to participate in the learning process. In addition to boosting motivation, the use of Kahoot also encourages student engagement in the ongoing learning activities. Through Kahoot, students actively participate by answering questions and understanding the material presented. In traditional classroom settings, students typically receive information passively from the teacher.

The results of this study align with game-based learning theory, which states that game-based learning can provide a more enjoyable learning experience. These findings also support previous studies showing that Kahoot is effective in English language learning, particularly for improving vocabulary mastery. In addition to

helping students comprehend the subject matter, the usage of digital tools like Kahoot encourages student-centered learning and a healthy competitive environment among peers.

Overall, the results of this study indicate that Kahoot-based learning can serve as an effective alternative learning medium to improve students' vocabulary mastery. Therefore, English teachers can utilize Kahoot as one of their instructional strategies to create an engaging, interactive, and effective learning process.

CONCLUSION

Based on the research findings and data analysis, it can be concluded that the use of Kahoot in the learning process has a significant effect on the vocabulary mastery of tenth-grade students at SMKN Dander. The results of the Shapiro-Wilk normality test showed a significance value of 0.825, which is higher than 0.05. This indicates that the data are normally distributed and meet the assumption required to proceed with the Paired Sample T-Test analysis.

Moreover, the significance value (Sig. 2-tailed) obtained from the Paired Sample T-Test was 0.000, which is lower than 0.05 ($0.000 < 0.05$). Based on this result, the alternative hypothesis (H_1) is accepted and the null hypothesis (H_0) is rejected. Thus, it can be concluded that the implementation of Kahoot significantly improves students' vocabulary mastery.

Using Kahoot to teach English makes classes more interactive, engaging, and fun. Interactive quizzes, leaderboards, and instant feedback boost student engagement and motivation throughout the learning process. Therefore, Kahoot is an alternative learning tool that can help students expand their vocabulary.

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