

## **Gimkit: An Effective Digital Learning Media for Teaching Vocabulary at an Islamic Junior High School**

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### **ABSTRACT**

Vocabulary mastery is a fundamental component of English language proficiency, yet instruction in many Indonesian EFL classrooms often lacks engagement due to a heavy reliance on traditional rote memorization. This study aims to examine the effectiveness of Gimkit, a digital game-based learning platform, in improving students' vocabulary mastery specifically within an Islamic junior high school context. Employing a quantitative pre-experimental one-group pre-test and post-test design, the research involved 32 seventh grade students at an Islamic Junior High School in Jombang. The research instrument was a 20-item multiple-choice vocabulary test focused on the topic "Telling Time," which was administered before and after the two-session treatment. Data were analyzed using a Paired Sample t-Test through SPSS version 27 to determine statistical significance and Cohen's  $d$  to measure effect size. The results revealed a significant improvement in students' vocabulary mastery, with the mean score increasing from 73.28 in the pre-test to 86.25 in the post-test. Statistical analysis showed a Sig. (2-tailed) value of 0.000 ( $p < 0.05$ ) and a large effect size of 1.379. These findings indicate that Gimkit is an effective digital learning medium for enhancing vocabulary mastery by promoting active engagement, competitive gameplay, and instant feedback. Consequently, English teachers are encouraged to integrate such game-based platforms to create more interactive and student-centered learning environments.

**Keywords:** Gimkit; Vocabulary Mastery; English Education; Islamic Junior High School

### **INTRODUCTION**

Vocabulary mastery is a fundamental component of English language proficiency because it enables learners to comprehend texts, express ideas, and participate effectively in communication (Rafique et al. 2023). Vocabulary learning does not only involve understanding word meanings but also includes knowledge of word form, pronunciation, spelling, and grammatical usage in context (Zhang & Huang, 2024). Adequate vocabulary knowledge supports students' ability to understand reading materials, produce written texts, and engage in spoken interaction in English classrooms (Syamsiyah & Ma'rifatulloh 2023).

Despite its importance, vocabulary instruction in many Indonesian EFL classrooms still relies heavily on traditional approaches such as rote memorization, teacher explanation, and translation (Noviana & Ma'rifatulloh, 2024). These methods often create passive learning environments that reduce students' motivation and limit opportunities for active participation in the learning process (Herwiana & Agustina, 2020). As a result, students tend to experience difficulties in retaining and applying newly learned vocabulary in meaningful contexts. This condition indicates the need for instructional media that can actively engage learners in vocabulary learning activities (Qatrunnada & Zuhriyah, 2024).

The integration of digital technology in education has been increasingly recognized as an effective strategy to enhance learning quality (Aprianti & Azzahra, 2024). Digital learning media provide interactive features and immediate feedback that can improve students' motivation and learning outcomes. One digital platform that supports vocabulary learning is Gimkit, an online quiz-based application designed to combine learning with game-based elements (Abdullayevna et al. 2024). Through competitive gameplay and instant feedback, Gimkit encourages students to actively engage with vocabulary items during the learning process.

Several previous studies have reported the positive impact of Gimkit on students' vocabulary mastery. Saari & Varjonen (2021) found that Gimkit improved students' vocabulary acquisition and engagement in English learning. Azizah (2024) reported that students taught using Gimkit achieved higher vocabulary scores than those taught using conventional teaching methods. Similarly, Saputra et al. (2025) found that Gimkit helped students retain vocabulary more effectively and increased their enthusiasm for classroom participation.

However, most previous studies have focused on comparing Gimkit with other digital or conventional learning media or examining its impact on students' motivation, which leaves a lack of empirical evidence regarding how effective Gimkit is as an instructional tool in specific school contexts. Limited attention has been given to investigating the effectiveness of Gimkit in Islamic junior high schools using a pre-experimental one group pre-test and post-test design. In addition, few studies have reported both statistical significance and effect size to clearly demonstrate the magnitude of vocabulary improvement. This study addresses these limitations by providing empirical evidence of Gimkit's effectiveness through statistical analysis and effect size measurement in an Islamic junior high school context. Therefore, this study aims to investigate the effectiveness of using Gimkit for teaching vocabulary to seventh-grade students at an Islamic Junior High School in Jombang.

## LITERATURE REVIEW

### Previous Studies on Gimkit in Vocabulary Learning

Several researchers have examined the use of Gimkit as a digital learning medium in English language instruction. Saari & Varjonen, (2021) investigated the effect of Gimkit on students' vocabulary acquisition and motivation, finding that Gimkit significantly improved vocabulary learning through its interactive and competitive features. According to Osadhi, (2024) also reported that students taught using Gimkit achieved higher vocabulary mastery compared to those who learned through conventional teaching methods. Similarly, Saputra et al. (2025) found that Gimkit supported long-term vocabulary retention and increased students' enthusiasm for classroom participation.

Although these studies consistently reported positive outcomes, they also share several similarities and limitations. Most of the previous studies focused on comparing Gimkit with other digital or traditional media and emphasized students' motivation rather than examining instructional effectiveness in depth. In addition, many studies did not report effect size to measure the magnitude of vocabulary improvement, making it difficult to determine the practical impact of the intervention. Furthermore, previous research was generally conducted in secondary school contexts without specifically addressing Islamic junior high school settings, which have distinct learning environments and characteristics. These limitations indicate the need for further research that provides stronger empirical evidence of Gimkit's effectiveness in specific educational contexts.

### Vocabulary Mastery

Vocabulary mastery plays a central role in language learning because it enables learners to understand and express meaning effectively Komalasari & Zuhriyah, (2021) stated that vocabulary is a fundamental component of language proficiency, as learners cannot communicate successfully without sufficient vocabulary knowledge. Vocabulary mastery involves more than memorizing word meanings; it also includes understanding pronunciation, spelling, word forms, and grammatical usage in communication (Agustina & Fajarina, 2023).

In addition, vocabulary learning requires repeated exposure and meaningful practice to support long-term retention. Jeremy (2015) emphasized that effective vocabulary instruction should integrate both understanding and practice, allowing learners to encounter new words in various contexts. Similarly, Syamsiyah & Ma'rifatulloh, (2023) argued that vocabulary mastery develops when learners actively use words in meaningful learning activities rather than relying solely on memorization. Therefore, interactive and student-centered instructional approaches are essential for developing strong vocabulary mastery in EFL classrooms.

## **Digital Learning Media in Vocabulary Teaching**

Digital learning media have become increasingly important in language education because they offer interactive features that enhance student engagement. Wang et al. (2022) highlighted that digital game-based learning positively influences students' learning achievement by providing immediate feedback, repetition, and active learning experiences. These features are particularly beneficial for vocabulary learning, as they allow learners to repeatedly interact with target words in meaningful contexts. One example of digital learning media is Gimkit, which combines quiz based learning with game elements to create an engaging instructional environment. Wright (2024) emphasized that Gimkit promotes active participation and cooperation among students, resulting in a positive learning atmosphere. According to Rahman & Anam, (2024), Gimkit aligns with constructivist learning theory, as it encourages learners to construct knowledge through interaction, feedback, and self-reflection during gameplay.

Furthermore, Abdullayevna et al. (2024) explained that digital platforms such as Gimkit support interactive learning by motivating students through competition and real-time feedback. Compared to traditional vocabulary teaching methods, digital learning media provide more opportunities for active engagement and repeated practice, which are essential for vocabulary retention. This theoretical and empirical foundation supports the use of Gimkit as an effective instructional medium for vocabulary learning in EFL classrooms (Agustina et al. 2024). Based on previous studies and theoretical perspectives, Gimkit has been shown to positively influence students' vocabulary mastery, motivation, and engagement. However, existing research has not sufficiently addressed the magnitude of vocabulary improvement through effect size analysis or explored its effectiveness in Islamic junior high school contexts. Therefore, the present study seeks to fill these gaps by providing empirical evidence of Gimkit's effectiveness using statistical significance and effect size measurements.

## **METHOD**

### **Design and Samples**

This study employed a pre experimental research design using a one-group pre-test and post-test approach to examine the effectiveness of Gimkit in improving students' vocabulary mastery (Creswell, 2023). This design was selected to measure students' vocabulary performance before and after the implementation of the instructional intervention. The population of this study consisted of all seventh grade students at an Islamic Junior High School in Jombang during the academic year 2024/2025. One class, Class VII G, was selected as the sample through purposive sampling. The class was chosen based on several objective considerations. First, the students in Class VII G had similar academic backgrounds and English proficiency levels, making them suitable for observing vocabulary improvement within a single group. Second, the class had not previously been

exposed to digital game-based learning platforms such as Gimkit, ensuring that the observed learning outcomes were not influenced by prior familiarity with the application. Third, the instructional materials and curriculum used in Class VII G were consistent with those of other seventh grade classes, allowing the findings to be relevant to the broader student population. The sample consisted of 32 students enrolled in Class VII G. This class was considered appropriate for the pre-experimental one group design, as it allowed the researcher to examine the effectiveness of Gimkit as an instructional medium under controlled classroom conditions.

### **Instruments and Procedures**

The research instrument used in this study was a vocabulary test designed to measure students' vocabulary mastery before and after the implementation of Gimkit. The test consisted of 20 multiple choice items covering vocabulary materials taught during the treatment sessions. Vocabulary tests are commonly used to assess learners' mastery of word meaning, form, and usage in language learning research (Cobern & Adams, 2020).

The vocabulary test was administered as a pre-test and a post-test to examine students' vocabulary improvement following the instructional intervention. The same instrument was used for both tests to ensure consistency in measuring students' learning outcomes. To ensure the validity of the instrument, the vocabulary test was reviewed by two English education experts. The expert validation focused on content relevance, language clarity, and the suitability of test items with the learning objectives. Based on the experts' suggestions, revisions were made to improve item clarity and content appropriateness before the test was administered.

In addition to expert validation, the reliability of the vocabulary test was examined using internal consistency analysis. The reliability testing was conducted using Cronbach's Alpha to determine the consistency of the test items. The result indicated that the instrument achieved a reliability coefficient of 0.82 which is categorized as reliable for educational research. This result suggests that the vocabulary test provided consistent measurements of students' vocabulary mastery. The research procedure consisted of three main stages: pre-test, treatment, and post-test, which are commonly used in experimental research to measure the effectiveness of a learning intervention (Kurniawan et al. 2025).

#### **a. Pre-test stage**

Before the treatment, students were given a pre-test to measure their initial vocabulary mastery. The pre-test consisted of 20 multiple choice questions and was administered in one meeting lasting about 30 minutes.

#### b. Treatment stage

The treatment was conducted over two meetings, with each meeting lasting 80 minutes. At the beginning of each session, the researcher introduced the learning objectives and explained the vocabulary topic to be learned, namely Telling Time. Students were then guided to access the Gimkit platform using their smartphones and join the game through a code provided by the researcher.

During the main activity, Gimkit was used as the primary teaching medium through its Live Mode feature. Students were not required to answer vocabulary questions individually in a formal manner; instead, the learning activity was designed as a point-based competition in which students aimed to collect as many points as possible. Vocabulary questions related to the topic were presented through the game, and students actively participated by answering questions to earn virtual points for each correct response. This competitive point system encouraged students to stay engaged, focused, and motivated throughout the learning process.

Throughout the sessions, the researcher provided guidance, clarification, and feedback when students encountered difficulties, while the English teacher monitored classroom activities to ensure that the learning process ran effectively. The use of repetition in vocabulary questions and interactive gameplay was intended to help students recognize, understand, and use vocabulary more effectively. At the end of each meeting, the researcher briefly reviewed the vocabulary items that had been learned to reinforce students' understanding.

#### c. Post-test stage

After the treatment, the same test format was administered as a post-test to evaluate students' vocabulary improvement. The post test was conducted in one meeting lasting approximately 30 minutes. After collecting the test results, the data were analyzed quantitatively using SPSS version 27. Descriptive statistics were used to calculate the mean and standard deviation, while the Paired Sample t-Test was employed to examine whether the difference between pre-test and post-test results was statistically significant at the 0.05 level (Creswell, 2023).

### **Data Analysis**

After collecting the test results, the data were analyzed quantitatively using SPSS version 27. The first step involved testing the prerequisite assumptions, specifically the normality of the data distribution, to ensure the validity of the parametric test. Subsequently, descriptive statistics were used to calculate the mean and standard deviation for both the pre-test and post-test scores. Finally, the Paired Sample t-Test was employed to examine whether the difference between pre-test and post-test results was statistically significant at the 0.05 level, thus determining the effectiveness of the Gimkit intervention.

## RESULT AND DISCUSSION

The purpose of this research was to examine the effectiveness of Gimkit in improving students' vocabulary mastery. The data were collected from 32 students of Class VII G at Islamic Junior High School in Jombang through a pre-test and a post-test conducted before and after the treatment using Gimkit. The detailed results of the data analysis are presented below.

### Students' Vocabulary Mastery Before Being Taught Using Gimkit

*Table 1. Pre Test*

Test	N	Minimum Score	Maximum Score	Mean	Standard Deviation (SD)
Pre Test	32	35,00	95,00	73,28	12,93

Table 1 presents the descriptive statistics of students' vocabulary mastery prior to the implementation of Gimkit. The pre-test involved 32 students and yielded a minimum score of 35 and a maximum score of 95, with a mean score of 73.28 and a standard deviation of 12.93. The mean score indicates that, on average, students' initial vocabulary mastery was at a moderate level. However, the relatively wide range between the minimum and maximum scores suggests notable differences in individual students' vocabulary knowledge.

The high standard deviation (12.93) further indicates substantial variability in students' pre-test performance. This finding implies that while some students had already developed adequate vocabulary knowledge related to the topic *Telling Time*, others still struggled with basic vocabulary items. Such variation reflects unequal learning readiness among students at the beginning of the study and suggests that existing instructional practices had not supported all learners equally.

This condition highlights the need for an instructional intervention that can accommodate diverse student abilities and provide more engaging and inclusive vocabulary learning experiences. Therefore, the pre-test results serve as a baseline indicating that improvement was necessary, particularly for students with lower initial vocabulary mastery, before the implementation of Gimkit as a learning medium.

### Students' Vocabulary Mastery After Being Taught Using Gimkit

Table 2 presents the descriptive statistics of students' vocabulary mastery after being taught using Gimkit.

*Table 2. Post Test*

Test	N	Minimum Score	Maximum Score	Mean	Standard Deviation (SD)
Post Test	32	70,00	100,00	86,25	9.25

After the treatment using Gimkit over two instructional sessions, a post-test was administered using the same test format as the pre-test. The post-test consisted of 20 multiple-choice questions and was given to 32 students of Class VII G to measure their vocabulary mastery after the implementation of the Gimkit-based learning activities. As presented in Table 2, the post-test scores ranged from 70.00 to 100.00, with a mean score of 86.25 and a standard deviation of 9.25. The obtained mean score indicates that students achieved a higher level of vocabulary mastery after learning through Gimkit. When compared with the pre-test results, the increase in the mean score reflects a noticeable improvement in students' vocabulary performance following the instructional treatment.

In addition, the lower standard deviation in the post-test scores suggests that students' performance became more evenly distributed. This finding indicates that students with lower initial vocabulary mastery were able to improve their achievement after participating in the Gimkit-based learning activities. The reduced variability in scores implies that the instructional intervention contributed to narrowing the gap between students with different levels of vocabulary mastery. The post-test results therefore demonstrate that the use of Gimkit facilitated more effective vocabulary learning and supported more consistent learning outcomes among students after the treatment.

### **The Effectiveness of Gimkit for Teaching Vocabulary**

To examine whether the improvement in students' vocabulary scores was statistically significant, a paired sample t-test was conducted. The results of the analysis are presented in Table 3.

*Table 3. Paired Sample t-Test Results*

Pair	Mean Difference	T- Value	Degrees of Freedom	Sig.(2-tailed)
Pre Test and Post Test	12,969	-7,799	31	0.000

As shown in Table 1.3, the paired sample t-test revealed a mean difference of 12.969 between the pre-test and post-test scores. The obtained significance value (Sig. 2-tailed = 0.000) was lower than the 0.05 significance level, indicating a statistically significant difference between students' vocabulary mastery before and after the treatment. In addition, effect size analysis was conducted to determine the magnitude of the treatment effect. The result showed a Cohen's d value of 1.379, which is categorized as a large effect size. This finding indicates that the use of Gimkit had a substantial impact on improving students' vocabulary mastery.

The findings of this study demonstrate that the use of Gimkit contributed to a significant improvement in students' vocabulary mastery, indicating that interactive digital media can support vocabulary development in EFL classrooms. Vocabulary

mastery plays a crucial role in enabling learners to comprehend texts, express ideas, and engage effectively in communication, and improvements in vocabulary achievement directly support overall language proficiency (Rafique et al. 2023). The improvement in students' vocabulary mastery can be explained by the nature of vocabulary learning, which involves not only understanding word meanings but also recognizing word forms, pronunciation, and appropriate usage in context. Gimkit provides repeated exposure to vocabulary items through interactive questioning, which supports deeper processing of vocabulary knowledge and reinforces learners' understanding of word usage in meaningful contexts (Zhang & Huang, 2024). In addition, the interactive and game-based features of Gimkit encouraged students to actively participate in the learning process rather than remaining passive recipients of information. Active participation is essential in vocabulary learning because students need opportunities to practice, recall, and apply new words in engaging learning situations (Wu et al. 2020).

The findings also suggest that the use of Gimkit addressed common challenges found in traditional vocabulary instruction in Indonesian EFL classrooms, where learning often relies on memorization and teacher-centered explanations. Such conventional approaches frequently limit student engagement and reduce motivation, which can negatively affect vocabulary retention (Noviana & Ma'rifatulloh, 2024). By incorporating competitive gameplay and immediate feedback, Gimkit helped create a more dynamic learning environment that supported students' motivation and sustained attention during vocabulary learning activities (Jelita & Nurhamidah, 2024). Learning environments that promote interaction and immediate response have been shown to reduce student passivity and encourage greater involvement in classroom activities (Herwiana & Agustina, 2020).

The positive outcomes of this study are consistent with research emphasizing the importance of engaging instructional media in vocabulary learning. The use of interactive learning tools allows students to experience vocabulary learning as an enjoyable activity rather than a repetitive task, which can enhance students' willingness to participate and persist in learning (Qatrunnada & Zuhriyah, 2024). Furthermore, the effectiveness of Gimkit in this study supports the broader integration of digital technology in education as a means to enhance learning quality. Digital learning media provide interactive features and instant feedback that help students monitor their learning progress and improve learning outcomes more effectively (Aprianti & Azzahra, 2024).

The results also align with previous studies that reported positive effects of Gimkit on students' vocabulary achievement and engagement. Gimkit has been shown to improve vocabulary acquisition by combining learning activities with game-based elements that motivate students to actively engage with instructional content (Saari & Varjonen, 2021). Similarly, research has indicated that students taught using Gimkit tend to achieve higher vocabulary scores compared to those taught through conventional instructional methods. These findings suggest that Gimkit can serve

as an effective alternative learning medium for vocabulary instruction in EFL classrooms (Azizah, 2024).

In addition, Gimkit's competitive features and repeated exposure to vocabulary items have been found to support vocabulary retention and increase students' enthusiasm for classroom participation. These features encourage learners to remain focused and motivated throughout the learning process, contributing to improved learning outcomes (Wahid & Putra, 2025). Despite the positive findings, this study has several limitations that should be considered. The research employed a pre-experimental one-group pre-test and post-test design, which limits the ability to compare the effectiveness of Gimkit with other instructional methods. The sample was also limited to one class in an Islamic junior high school, which may restrict the generalizability of the findings to other educational contexts.

In terms of research implications, the findings suggest that English teachers can consider integrating Gimkit as an instructional medium to enhance vocabulary learning in EFL classrooms. The use of game-based digital platforms can help create more interactive and student-centered learning environments that support vocabulary development. Future research is recommended to employ experimental or quasi-experimental designs with larger and more diverse samples to further investigate the effectiveness of Gimkit across different educational settings and learner characteristics.

## CONCLUSION

The present study found that the use of Gimkit significantly improved the vocabulary mastery of seventh-grade students at an Islamic Junior High School. The implementation of interactive and game-based activities through Gimkit facilitated active engagement, repeated exposure to vocabulary items, and immediate feedback, which contributed to more effective and consistent learning outcomes. These findings support the effectiveness of digital game-based learning media in enhancing vocabulary acquisition, in line with constructivist learning theory and previous research highlighting the benefits of interactive instructional approaches.

A critical reflection on this study reveals some limitations. The research employed a pre-experimental one-group pre-test and post-test design, which limits the ability to compare Gimkit with other instructional methods. In addition, the study was conducted with a single class in one school, which may affect the generalizability of the results. Future studies are recommended to use experimental or quasi-experimental designs with larger and more diverse samples to provide stronger evidence of Gimkit's effectiveness across different educational contexts. Based on the findings, English teachers are encouraged to integrate Gimkit or similar game-based digital platforms into vocabulary instruction to create more interactive, student-centered learning environments. The use of such platforms can help increase motivation, support repeated practice, and reinforce students'

understanding of vocabulary. Researchers and educators are also advised to explore the potential of digital game-based learning tools in various instructional contexts to further enhance language learning outcomes.

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