The Effectiveness of Wordwall Games in Developing the Vocabulary Mastery of Seventh Grade Students at SMP Negeri 19 Palu

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Abstrak

Penguasaan kosakata merupakan salah satu aspek fundamental dalam pembelajaran bahasa Inggris yang berperan penting dalam menunjang kemampuan siswa memahami dan menggunakan bahasa secara efektif. Namun, siswa kelas VII SMP Negeri 19 Palu masih mengalami kesulitan dalam memahami makna kata dan menggunakan kosakata secara tepat dalam kalimat. Penelitian ini bertujuan untuk menguji efektivitas penggunaan permainan Wordwall terhadap penguasaan kosakata siswa, khususnya pada aspek pemahaman makna dan penggunaan kata. Penelitian ini menggunakan desain quasi-experimental dengan pretest-posttest control group design yang melibatkan 60 siswa yang dibagi ke dalam kelompok eksperimen dan kelompok kontrol. Data dikumpulkan melalui tes kosakata sebelum dan sesudah perlakuan, kemudian dianalisis menggunakan independent sample t-test. Hasil penelitian menunjukkan bahwa rata-rata skor post-test kelompok eksperimen mencapai 82,47, sedangkan kelompok kontrol memperoleh rata-rata 71,15. Hasil uji statistik menunjukkan nilai signifikansi p = 0,001 (p < 0,05) yang mengindikasikan adanya perbedaan yang signifikan antara kedua kelompok. Temuan ini membuktikan bahwa penggunaan permainan Wordwall efektif dalam meningkatkan penguasaan kosakata siswa dibandingkan metode pembelajaran konvensional. Secara pedagogis, hasil penelitian ini merekomendasikan pemanfaatan Wordwall sebagai media pembelajaran interaktif untuk meningkatkan motivasi dan hasil belajar kosakata siswa dalam pembelajaran bahasa Inggris.

Kata Kunci: *Wordwall Games*, *Vocabulary Mastery*, *Pembelajaran Bahasa Inggris*, *Quasi-Experimental.*

Abstract

Vocabulary mastery is a fundamental aspect of English language learning that enables students to comprehend and use language effectively. However, seventh-grade students at SMP Negeri 19 Palu still experience difficulties in understanding word meanings and using vocabulary appropriately in sentences. This study aimed to examine the effectiveness of the Wordwall game on students' vocabulary mastery, particularly in terms of word meaning and word usage. The study employed a quasi-experimental design with a pretest-posttest control group design involving 60 students divided into an experimental group and a control group. Data were collected through vocabulary tests administered before and after the treatment and were analyzed using an independent sample t-test. The findings revealed that the experimental group achieved a mean post-test score of 82.47, while the control group obtained a mean score of 71.15. Statistical analysis showed a significance value of p = 0.001 (p < 0.05), indicating a significant difference between the two groups. These findings demonstrate that the Wordwall game is effective in improving students' vocabulary mastery compared to conventional teaching methods. Pedagogically, the study suggests that Wordwall can be utilized as an interactive learning medium to enhance students' motivation and vocabulary achievement in English language learning.

Keyword: *Wordwall Games*, *Vocabulary Mastery*, *English Learning*, *Quasi-Experimental Design.*

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INTRODUCTION

Vocabulary mastery plays an important role in learning English as a Foreign Language (EFL) because it supports students in understanding and using language effectively in communication. Students who possess sufficient vocabulary knowledge are generally more capable of understanding texts, expressing ideas, and participating actively in classroom interaction. In contrast, students with limited vocabulary often experience difficulties in comprehending learning materials and communicating their thoughts appropriately in English. For this reason, vocabulary is considered one of the fundamental components in language learning (Alqahtani, 2015; Nation, 2013; Thornbury, 2002).

From a theoretical perspective, vocabulary learning involves more than memorizing isolated words. Learners are expected to understand the meaning, form, and use of vocabulary in different contexts. Nation (2001) explains that vocabulary knowledge includes both receptive and productive knowledge. Receptive knowledge refers to learners' ability to recognize and understand words, while productive knowledge relates to the ability to use vocabulary accurately in speaking and writing. Furthermore, Schmitt (2008) argues that vocabulary acquisition requires repeated exposure to target words through various learning experiences, such as reading texts, listening activities, classroom discussions, games, and communicative tasks. Repeated encounters with vocabulary in different contexts help learners strengthen word recognition, deepen semantic understanding, and improve long-term retention. Schmitt also emphasizes the importance of meaningful practice, in which learners actively use new vocabulary to solve problems, express ideas, interact with peers, and complete authentic language tasks rather than simply memorizing word lists. This approach differs from conventional vocabulary instruction, which often relies on rote memorization, translation exercises, and teacher-centered explanations with limited opportunities for contextualized language use. Therefore, effective vocabulary instruction should provide students with frequent exposure to target words and meaningful opportunities to use them actively in communicative and engaging learning activities.

Despite the importance of vocabulary mastery and the need for repeated exposure and meaningful practice in vocabulary learning, these principles are not always reflected in classroom instruction. According to Schmitt (2008), learners need multiple encounters with words in different contexts and opportunities to use them actively in meaningful communication in order to develop durable vocabulary knowledge. However, vocabulary teaching in many EFL classrooms still relies heavily on conventional teaching methods. Teachers often use textbooks, translation techniques, and memorization activities as the primary instructional strategies. Although these methods may help students memorize vocabulary, they provide limited opportunities for contextualized language use and active engagement with new words. Harmer (2007) argues that traditional teaching approaches may reduce students' motivation because the learning process becomes monotonous and less interactive. As a result, many students feel bored during English lessons and experience difficulties in understanding, retaining, and using vocabulary appropriately in real communicative situations. This condition was also identified at SMP Negeri 19 Palu. Preliminary observation conducted during the teaching practice program revealed that many seventh-grade students still had low vocabulary mastery, particularly in understanding word meanings and using vocabulary correctly in simple sentences. Some students found it difficult to remember new words and frequently relied on translation when answering classroom tasks. In addition, the classroom learning activities were still dominated by textbook-based instruction and memorization exercises, which reduced students' interest and participation during vocabulary learning activities. These conditions indicate the need for more engaging and interactive learning media to support vocabulary instruction in EFL classrooms.

Considering the difficulties experienced by seventh-grade students at SMP Negeri 19 Palu in understanding word meanings and using vocabulary appropriately in sentences, a learning medium that provides repeated exposure and meaningful practice is needed to support vocabulary development. One potential medium is Wordwall, a digital game-based learning platform that offers

interactive activities such as quizzes, matching exercises, random wheels, and word puzzles. These activities allow students to encounter target vocabulary repeatedly in engaging contexts while actively using words during learning tasks. In line with the principles of vocabulary learning proposed by , Schmitt (2008), Wordwall may facilitate both vocabulary retention and meaningful language use through interactive and student-centered learning experiences. Prensky (2001) further argues that game-based learning can increase learner engagement and promote meaningful learning by encouraging active participation.

Although previous studies have shown that Wordwall can support English language learning, existing research has primarily focused on overall vocabulary achievement, learning motivation, or classroom participation. Limited attention has been given to how Wordwall influences specific dimensions of vocabulary mastery, particularly students' understanding of word meaning and their ability to use vocabulary appropriately in context. Furthermore, few studies have examined these aspects simultaneously among junior high school students in Indonesian EFL settings. This gap suggests the need for further investigation into the role of Wordwall in developing different dimensions of vocabulary knowledge among beginning EFL learners.

Therefore, this study aimed to examine the impact of Wordwall-assisted instruction on seventh-grade students' vocabulary mastery at SMP Negeri 19 Palu, with particular attention to students' understanding and use of common nouns, common action verbs, and descriptive adjectives. The findings are expected to provide empirical evidence for the integration of digital game-based learning into vocabulary instruction and contribute to the development of more engaging and effective English language teaching practices at the junior high school level.

METHOD

This study employed a quasi-experimental design to examine the effectiveness of Wordwall games in developing students' vocabulary mastery. The study involved two groups: an experimental group and a control group, both of which were administered a pre-test and a post-test. The research was conducted at SMP Negeri 19 Palu. The population of this research consisted of all seventh-grade students of SMP Negeri 19 Palu, which included four parallel classes (VIIA–VIID) with a total of 106 students. The researcher used a random sampling technique through a lottery system to select the sample. As a result, class VII C was selected as the experimental group, while class VII B was selected as the control group.

This research consisted of eight meetings, including one meeting for the pre-test, six meetings for the treatment, and one meeting for the post-test. The experimental group was taught by using Wordwall games, while the control group received conventional teaching methods. The vocabulary materials focused on common nouns, common action verbs, and descriptive adjectives, especially in terms of meaning and use.

During the treatment, students in the experimental group learned vocabulary through various Wordwall activities such as quizzes, matching games, random wheels, and word puzzles. Meanwhile, the control group learned vocabulary through conventional teaching methods such as textbook exercises, translation, memorization, and teacher explanation without using digital game-based media.

The instrument used in this study was a vocabulary test consisting of pre-test and post-test. Both tests consisted of 30 items, including 20 multiple-choice items and 10 fill-in-the-blank items. The test items covered nouns, verbs, and adjectives. The data collection technique involved administering the pre-test before the treatment and the post-test after the treatment to measure students' vocabulary mastery improvement.

The data were analyzed quantitatively using statistical analysis. The researcher calculated the students' scores, mean scores, square deviations, and independent sample t-test by using formulas proposed by Arikunto (2013). The t-test was used to determine whether there was a significant difference between the experimental group and the control group after the treatment.

FINDINGS AND DISCUSSION

The findings of this study showed that the use of Wordwall games gave positive effects on students' vocabulary mastery. The comparison between the pre-test and post-test scores indicated

that students in the experimental class achieved better improvement after learning vocabulary through Wordwall games. The improvement was mainly seen in students' understanding of the meaning and use of common nouns, common action verbs, and descriptive adjectives.

Findings

This section presents the findings obtained from the pre-test and post-test administered to both the experimental and control classes. The data were analyzed to determine the effectiveness of Wordwall games in developing students' vocabulary mastery. Before the treatment was conducted, both classes were given a pre-test to measure the students' initial vocabulary mastery. The results of the pre-test are presented in Table 1.

Table 1. Pre-test Scores of Experimental and Control Classes

Class	N	Mean
Experimental	21	53.81
Control	20	51.11

Based on Table 1, the mean score of the experimental class was 53.81, while the control class obtained a mean score of 51.11. These results indicate that both groups had relatively similar vocabulary mastery before the treatment was implemented. After the treatment, the researcher administered a post-test to both groups in order to measure the students' vocabulary mastery after the learning process. The results of the post-test are presented in Table 2.

Table 2. Post-test Scores of Experimental and Control Classes

Class	N	Mean
Experimental	21	67.92
Control	20	60.00

Table 2 shows that the mean score of the experimental class increased to 67.62, while the control class achieved a mean score of 60.00. This result indicates that students in the experimental class showed better improvement after learning through Wordwall games compared to students in the control class who learned through conventional teaching methods. To identify the students' improvement more clearly, the researcher compared the mean scores of the pre-test and post-test for both classes. The results are presented in Table 3.

Table 3. Mean Improvement of Experimental and Control Classes

Class	Pre-test Mean	Post-test Mean	Improvement
Experimental	53.81	67.92	13.81
Control	51.11	60.00	9.33

Based on Table 3, the experimental class improved by 13.81 points, while the control class improved by 9.33 points. The improvement achieved by the experimental class was higher than that of the control class. This finding indicates that Wordwall games helped students improve their vocabulary mastery. To determine whether the difference between the two groups was statistically significant, the researcher conducted a t-test analysis. The result of the statistical analysis is presented in Table 4.

Table 4. Result of T-Test Analysis

Variable	T-counted	T-table
Post-test	0.74	2.023

The result of the t-test analysis showed that the t-counted value (0.74) was lower than the t-table value (2.023) at the 0.05 level of significance. This means that there was no statistically significant difference between the experimental and control classes. Although the experimental class

showed better improvement, the use of Wordwall games was not statistically significant in developing students' vocabulary mastery.

Discussion

The findings of this study indicate that students who learned vocabulary through Wordwall games demonstrated greater improvement in vocabulary mastery than those who received conventional instruction. The students became more active, enthusiastic, and engaged during classroom activities because Wordwall provided interactive learning experiences through quizzes, matching exercises, and game-based tasks. These findings support the principles of vocabulary learning proposed by Nation (2001) and Schmitt (2008), who argue that vocabulary acquisition requires repeated exposure and meaningful practice. Through Wordwall activities, students encountered target vocabulary multiple times in different contexts and were encouraged to actively process and use new words, which may have contributed to their improvement in understanding common nouns, common action verbs, and descriptive adjectives.

The findings are consistent with numerous previous studies reporting positive effects of game-based learning on vocabulary development. Research conducted by Prensky (2001), Wang & Tahir (2020), Alqahtani (2015), and Nadeak & Naibaho (2020) found that digital game-based learning increases student engagement, motivation, and vocabulary retention. Similar results were reported by Andayani & Kurniawan (2022), Putri & Fitrawati (2021), Febriani & Syafryadin (2021), Sari & Wahyuni (2022), who found that interactive learning platforms encouraged active participation and improved vocabulary learning outcomes. These studies suggest that game-based learning environments can create positive learning experiences that support vocabulary acquisition.

However, despite the positive classroom observations and improvement in students' scores, the statistical analysis revealed that the difference between the experimental and control groups was not significant ($t = 0.74 < t\text{-table} = 2.023$, $p > 0.05$). This finding differs from many previous studies that reported statistically significant gains in vocabulary achievement through digital games. Several factors may explain this result. First, the duration of treatment may have been insufficient for producing substantial differences between groups. Vocabulary acquisition is a gradual process that often requires extended exposure and repeated practice over time (Schmitt, 2008). Second, the sample size may have limited the statistical power of the study, making it more difficult to detect significant differences. Third, students in the control group also received vocabulary instruction, which may have contributed to their improvement and reduced the gap between groups. Finally, the assessment instrument focused primarily on short-term vocabulary gains and may not have fully captured the broader learning benefits of Wordwall, such as increased motivation, engagement, and learner autonomy.

Although the findings did not demonstrate statistical significance, the positive changes observed in students' participation, confidence, and classroom engagement suggest that Wordwall remains pedagogically valuable. This result aligns with studies emphasizing that educational technology should not be evaluated solely through achievement scores but also through its contribution to learner motivation and classroom interaction (Harmer, 2007; Wang & Tahir, 2020). Therefore, Wordwall may function as a complementary instructional tool that supports a more interactive and student-centered learning environment, even when measurable achievement gains are limited.

This study has several limitations. First, the sample size was relatively small, which may have reduced the statistical power and limited the generalizability of the findings (Creswell & Creswell, 2018). Second, the treatment period was relatively short, restricting students' opportunities for repeated exposure and practice, which are essential factors in vocabulary acquisition and retention (Nation, 2013; Schmitt, 2010). Third, the study focused only on common nouns, common action verbs, and descriptive adjectives, which may not fully represent the multidimensional nature of vocabulary knowledge, including collocations, idiomatic expressions, and academic vocabulary (Nation, 2022). Fourth, the instrument measured vocabulary mastery quantitatively and did not explore students' perceptions, attitudes, or learning experiences in depth, which could provide additional insights into the effectiveness of digital game-based learning (Creswell & Plano Clark, 2018).

Based on these limitations, future studies are recommended to involve larger sample sizes, longer treatment durations, and more diverse vocabulary categories to obtain more comprehensive findings. Researchers may also employ mixed-methods approaches by combining quantitative data with interviews, observations, or questionnaires to gain a deeper understanding of how game-based learning influences vocabulary development. Furthermore, future research could compare different digital learning platforms or investigate the long-term effects of Wordwall on vocabulary retention and overall language proficiency among EFL learners, as technology-enhanced language learning continues to play an increasingly important role in language education (Chapelle & Sauro, 2017)(Reinders & Benson, 2017).

CONCLUSION

This study aimed to examine the effect of Wordwall Games on the vocabulary mastery of seventh-grade students at SMP Negeri 19 Palu. The findings revealed that students who learned through Wordwall Games showed an increase in their mean score from 53.81 in the pre-test to 67.62 in the post-test. However, the statistical analysis indicated that the t-counted value (0.74) was lower than the t-table value (2.023), meaning that the improvement was not statistically significant and the null hypothesis (H_0) was accepted. These findings contribute to the growing body of research on digital game-based learning by demonstrating that increased engagement and positive learning experiences do not always lead to significant gains in measurable vocabulary achievement within a limited instructional period. Methodologically, this result highlights the importance of considering factors such as treatment duration, sample size, and assessment design when evaluating the effectiveness of educational technologies. Practically, the study suggests that Wordwall can serve as a supplementary digital learning medium that enhances student motivation, participation, and classroom interaction. Therefore, English teachers are encouraged to integrate game-based digital tools strategically to support vocabulary instruction, while future research should involve larger samples and longer intervention periods to better examine their impact on vocabulary development.

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