

THE USE OF DIGITAL WORDWALL TO ENHANCE ENGLISH VOCABULARY MASTERY AT FIRST GRADE OF JUNIOR HIGH SCHOOL

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ABSTRACT

This study investigates the effectiveness of Digital Wordwall application in enhancing English vocabulary mastery among first-grade junior high school students compared to conventional teaching methods. A quasi-experimental design was employed with 69 seventh-grade students from SMP Dua Mei Banjaran, divided into experimental (35 students) and control groups (34 students). Data collection utilized pre-tests, post-tests, and attitude questionnaires. The experimental group received instruction using Digital Wordwall activities (Wordsearch, Anagram, and Unjumble), while the control group used conventional methods. Results showed significant improvement in the experimental group's post-test scores (mean: 83.6) compared to the control group (mean: 66.23). T-test analysis revealed a calculated t-value of 3.494, exceeding the critical value of 2.001 ($\alpha=0.05$), indicating statistically significant differences. Student attitude surveys demonstrated overwhelmingly positive responses, with 100% enjoying vocabulary learning through Wordwall and 96% reporting enhanced motivation and comprehension. The findings confirm that Digital Wordwall is significantly more effective than conventional methods for vocabulary instruction, offering an engaging and motivating learning experience for ESL students.

Keywords: Digital Wordwall; vocabulary mastery; ESL learning; educational technology; junior high school

INTRODUCTION

Vocabulary mastery remains a fundamental challenge in English as a Second Language (ESL) education, particularly for junior high school students who struggle with traditional teaching methods and long-term vocabulary retention. The conventional approach to vocabulary instruction often results in student disengagement, limited interaction between teachers and learners, and inadequate retention of newly acquired words. This pedagogical gap necessitates innovative approaches that can transform vocabulary learning into a more interactive and effective experience.

The integration of digital technology in language education has emerged as a promising solution to address these challenges. Digital learning platforms offer interactive features that can enhance student engagement, motivation, and learning outcomes. Among these technological innovations,

Wordwall stands out as a versatile web-based application that enables educators to create various learning activities such as quizzes, matching games, word searches, and anagrams, all customizable to meet specific learning objectives and proficiency levels.

This research addresses the critical need for evidence-based evaluation of digital tools in vocabulary instruction. By examining the effectiveness of Digital Wordwall compared to conventional methods, this study contributes to the growing body of literature on technology-enhanced language learning and provides practical insights for educators seeking to improve vocabulary instruction outcomes.

RESEARCH QUESTION

1. Does Wordwall as a means of teaching vocabulary to the first year of SMP Dua Mei Banjaran have significantly better result than the conventional method?
2. Do the students of the first year of SMP Dua Mei Banjaran enjoy learning with Wordwall?

LITERATURE REVIEW

Learning media plays a crucial role in enhancing teaching effectiveness by making educational materials more specific, facilitating communication, and increasing student interest and motivation. The theoretical framework for this study draws upon constructivist learning theory, which emphasizes active learning through interactive experiences, and the multimedia learning theory, which suggests that combining visual and auditory elements enhances comprehension and retention.

Digital Wordwall represents an innovative online learning application that offers various game-based activities designed to make teaching materials more engaging while enhancing student interest, intelligence, and critical thinking. The platform supports multiple activity types, including Wordsearch (finding hidden words in letter grids), Anagram (arranging letters to form correct words), and Unjumble (sorting random words into correct sentences), each targeting different aspects of vocabulary acquisition.

Vocabulary mastery encompasses several key components: meaning comprehension, spelling accuracy, pronunciation skills, appropriate word usage, word formation understanding, and frequency recognition (Rahayu, 2024). Research indicates that balanced instruction addressing these aspects significantly enhances vocabulary acquisition. Furthermore, vocabulary can be categorized into receptive (understood but not actively used) and productive (actively used in communication) types, with both requiring distinct instructional approaches.

Previous studies have demonstrated the positive impact of gamification and interactive digital tools on language learning outcomes. However, limited research specifically examines Wordwall's effectiveness in ESL vocabulary instruction, particularly within the Indonesian junior high school context, highlighting the significance of this investigation.

RESEARCH METHOD

This study employed a quantitative approach using a quasi-experimental design to compare vocabulary learning outcomes between Digital Wordwall and conventional instruction methods. The research was conducted at SMP Dua Mei Banjaran during the 2025/2026 academic year, involving seventh-grade students as the target population.

The sample comprised 69 students selected through cluster random sampling, divided into two groups: the experimental group (VII B, 35 students) receiving Digital Wordwall instruction, and the control group (VII C, 34 students) receiving conventional instruction. This sample size was deemed adequate for detecting significant differences between groups while maintaining statistical power.

Data collection utilized three instruments: pre-tests, post-tests, and student attitude questionnaires. The pre-test consisted of 20 questions (matching, multiple-choice, essay, and true/false formats) administered to assess initial vocabulary mastery. The post-test, also containing 20 questions (matching, fill-in-the-blank, true/false, and essay formats), measured vocabulary improvement following treatment. The attitude questionnaire comprised 10 items designed to evaluate student perceptions and experiences with Digital Wordwall instruction.

Statistical analysis primarily employed t-tests to determine significant differences between groups, with questionnaire data analyzed using percentage calculations. The research maintained ethical standards through informed consent and confidentiality protocols.

FINDINGS AND DISCUSSION

The pre-test results revealed comparable baseline vocabulary levels between groups, with the experimental group achieving a mean score of 51.2 and the control group scoring 46.26. Both groups fell below the minimum Learning Objective Achievement Criteria (KKTP) of 71, confirming the need for improved vocabulary instruction.

Post-test results demonstrated substantial improvement in both groups, with the experimental group achieving a mean score of 83.6 compared to the control group's 66.23. The experimental group's score range extended from 40 to 100, while the control group ranged from 36 to 92. These results indicate that both instructional methods produced learning gains, but Digital Wordwall yielded superior outcomes.

Statistical analysis confirmed significant differences between groups. The calculated t-value of 3.494 exceeded the critical t-table value of 2.001 at $\alpha=0.05$ (df=58), leading to rejection of the null hypothesis and acceptance of the alternative hypothesis. This finding provides strong evidence for Digital Wordwall's superior effectiveness in vocabulary instruction.

The attitude questionnaire revealed overwhelmingly positive student responses to Digital Wordwall instruction. All students (100%) reported enjoying vocabulary learning and improved pronunciation practice through the platform. Additionally, 96% of participants indicated that Wordwall enhanced vocabulary retention, made learning more enjoyable, improved comprehension, increased motivation, and effectively supported vocabulary acquisition. Furthermore, 93% felt more motivated to learn vocabulary and found spelling instruction more accessible, while 90% reported increased confidence in using newly acquired vocabulary.

These findings align with multimedia learning theory, suggesting that Digital Wordwall's combination of visual, auditory, and kinesthetic elements enhances cognitive processing and retention. The

gamification aspects appear to address motivational challenges commonly associated with traditional vocabulary instruction, creating a more engaging and effective learning environment.

CONCLUSION

This study conclusively demonstrates that Digital Wordwall is significantly more effective than conventional methods for enhancing English vocabulary mastery among first-grade junior high school students. The substantial difference in post-test scores, coupled with overwhelmingly positive student attitudes, provides compelling evidence for integrating this digital tool into ESL vocabulary instruction.

The research contributes to the growing understanding of technology-enhanced language learning by providing empirical evidence for Digital Wordwall's effectiveness. The findings suggest that interactive, gamified approaches to vocabulary instruction can address traditional challenges of student engagement, motivation, and retention while producing superior learning outcomes.

Future research should explore Digital Wordwall's long-term retention effects, its effectiveness across different proficiency levels, and optimal implementation strategies. Additionally, investigating the platform's impact on other language skills beyond vocabulary would provide valuable insights for comprehensive language instruction design.

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