

# THE EFFECT OF WORDWALL MEDIA ON STUDENTS' VOCABULARY MASTERY AT THE ELEVENTH GRADE OF MA AT-TAQWA YASTU

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## ABSTRACT

Vocabulary mastery plays a vital role in students' overall English proficiency, yet many learners struggle due to monotonous teaching methods and limited motivation. This research investigates the effectiveness of Wordwall—a game-based interactive media in enhancing vocabulary mastery among eleventh-grade students at MA At-Taqwa YASTU. The study employed a quasi-experimental design involving a control and an experimental group. A pre-test and post-test were conducted to evaluate students' vocabulary mastery before and after the treatment. The findings revealed a significant improvement in the vocabulary scores of the experimental group using Wordwall media compared to the control group. The results were supported by statistical tests showing normality, homogeneity, and a very large effect size (Cohen's  $d = -4.034$ ). The study concludes that Wordwall is a highly effective and engaging tool for improving vocabulary mastery, fostering active student participation, and enhancing learning outcomes.

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## INTRODUCTION

English has become a compulsory subject in Indonesian secondary schools, playing a crucial role not only in academic achievement but also in communication and professional settings. Among the essential components of English learning, vocabulary mastery stands out as a fundamental element. Students with strong vocabulary skills are generally more proficient in reading, writing, speaking, and listening. On the other hand, limited vocabulary often hinders students' ability to comprehend texts, construct

sentences, or engage in meaningful communication.

Indonesian students face significant challenges in mastering English vocabulary due to linguistic differences, lack of motivation, and the use of conventional teaching methods. Vocabulary instruction is often perceived as monotonous, leading to low student engagement and poor retention. Consequently, innovative and interactive media are required to create a more dynamic and student-centered learning environment.

One such innovation is the use of Wordwall media, a digital platform that allows teachers to

create interactive vocabulary games. Wordwall not only makes learning enjoyable but also reinforces vocabulary retention through visual and game-based repetition. Studies by Huda & Kusumawanti, (2024) emphasized that Wordwall fosters an engaging classroom atmosphere, improves vocabulary acquisition, and increases student motivation. In addition, the platform offers flexibility through various game templates such as matching games, quizzes, and word puzzles which are suitable for face-to-face and online learning.

Despite its growing popularity, research on Wordwall remains limited in Islamic senior high school contexts, particularly at MA At-Taqwa YASTU. Previous studies have primarily focused on junior high schools and general secondary education Astin & Khasyi, (2024) leaving a research gap in evaluating Wordwall's effectiveness in more specific learning environments. Moreover, earlier research did not compare digital Wordwall applications with traditional instructional media.

To fill this gap, the present study investigates the effect of using Wordwall media on vocabulary mastery among eleventh-grade students at MA At-Taqwa YASTU. This study aims to determine whether Wordwall significantly improves vocabulary learning outcomes compared to conventional teaching methods. In doing so, it contributes to the body of knowledge on digital learning media in EFL classrooms and offers practical insights for

English teachers seeking effective and engaging instructional strategies.

## RESEARCH METHOD

This study employed a quantitative approach with a quasi-experimental design, specifically using a non-equivalent control group design. The aim was to investigate the effect of using Wordwall media on students' vocabulary mastery among eleventh-grade students at MA At-Taqwa YASTU during the 2024/2025 academic year.

The research involved two classes: one experimental class and one control class, each consisting of 25 students. Both groups were given a pre-test and post-test to measure vocabulary mastery before and after the treatment. The experimental class was taught using Wordwall media, while the control class received conventional instruction.

The research took place at MA At-Taqwa YASTU in Pandeglang, Banten, over a period of one month, from April 1 to April 30, 2025. During this time, the researcher conducted preliminary observations, prepared instruments, administered the pre-test, delivered the treatment, and conducted the post-test.

The sample was selected using purposive sampling. Although the population consisted of all eleventh-grade students, only two classes were available, and the researcher selected them based on accessibility, teacher recommendation, and school scheduling.

The independent variable in this study was the use of Wordwall media, and the dependent

variable was students' vocabulary mastery. Vocabulary mastery in this context refers to students' ability to understand and use English vocabulary, particularly related to nouns and verbs found in narrative texts.

To collect the data, the researcher used a vocabulary test consisting of 25 multiple-choice questions developed according to the curriculum for grade XI. The test was administered as both a pre-test and post-test. Validity was assessed through expert judgment and item analysis, and reliability was confirmed with the KR-20 formula, resulting in a high reliability score ( $r_{11} = 0.81$ ).

The treatment was conducted in three sessions for the experimental class using five Wordwall game templates: Match Up, Quiz, Random Wheel, Open the Box, and Find the Match. Students engaged in interactive game-based learning to reinforce vocabulary understanding. The control group, meanwhile, received traditional instruction using printed materials and whiteboard explanation.

Data analysis involved both descriptive and inferential statistics. Descriptive analysis was used to determine the mean and standard deviation of test scores, while inferential analysis included:

Normality test (Shapiro-Wilk)

Homogeneity test (Levene's Test)

Paired sample t-test (within-group comparison)

Independent sample t-test (between-group comparison)

Effect size calculation (cohens, 2018).

These statistical tests were used to determine whether the Wordwall media had a significant effect on students' vocabulary mastery compared to conventional methods.

## RESULTS AND DISCUSSION

This section presents the findings from the data analysis and discusses their implications in light of the research objectives.

### 1. Descriptive Statistics

The vocabulary test scores of both the experimental and control groups were analyzed using descriptive statistics. The experimental group had a pre-test mean score of 56.08 and a post-test mean score of 74.17, with a gain score of 18.08. The control group had a pre-test mean of 55.25 and a post-test mean of 65.04, resulting in a gain of 9.79.

These results show that although both groups improved, the experimental group showed a greater improvement, suggesting that Wordwall media had a stronger impact on vocabulary acquisition.

### 2. Normality and Homogeneity Testing

Normality testing using the Shapiro-Wilk test confirmed that both groups' scores were normally distributed ( $p > 0.05$ ). Levene's Test indicated that the data were homogeneous, fulfilling the assumptions required for parametric tests.

### 3. Hypothesis Testing

The paired sample t-test in the experimental group revealed a significant difference between pre-test and post-test scores ( $p < 0.001$ ), indicating that the treatment was effective. The control group also showed significant

improvement ( $p < 0.001$ ), although the gain was smaller.

An independent sample t-test comparing post-test scores between groups found a significant difference ( $p < 0.001$ ), confirming that students taught with Wordwall media outperformed those taught with conventional methods.

#### 4. Effect Size Analysis

The Cohen's  $d$  value for the experimental group was  $-4.034$ , and the Hedges' correction was  $-3.900$ , both of which indicate a very large effect. This means that Wordwall media not only had statistical significance but also a strong practical impact on student learning.

#### 5. Discussion

The findings align with previous research by Fitria, (2023), (Astin & Khasyi, 2024), and Huda & Kusumawanti, (2024), which emphasized the benefits of digital learning platforms like Wordwall in vocabulary instruction. Wordwall creates a gamified learning environment that boosts engagement and encourages students to actively participate in class.

Furthermore, the variety of interactive templates helps reinforce vocabulary in a contextual and repetitive manner, which enhances retention. The results support the idea that when students are engaged through enjoyable learning tools, their motivation and outcomes improve significantly.

This study also adds new insight by applying Wordwall in a Madrasah Aliyah setting, which has been less explored in previous research. Additionally, the study involved a direct

comparison between traditional instruction and Wordwall-enhanced learning, offering clear evidence of the media's effectiveness.

#### CONCLUSION

Based on the results of this study, it can be concluded that the use of Wordwall media has a significant and positive impact on students' vocabulary mastery. The experimental group, which was exposed to interactive learning using Wordwall, demonstrated a greater improvement in post-test scores compared to the control group that received conventional instruction. Statistical tests confirmed a highly significant difference, and the effect size calculation showed a very large impact (cohens, 2018).

These findings indicate that Wordwall media is an effective tool in English language teaching, particularly in enhancing vocabulary learning. Its engaging, game-based design increases student motivation, supports retention, and fosters a more interactive classroom environment. Teachers are therefore encouraged to integrate digital tools such as Wordwall into their instructional strategies to support students' vocabulary development and overall language proficiency.

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