

Research Article

The Effect of Using Wordwall Website as a Strategy on Students' Vocabulary Mastery

Darmawati ^{1,*}, Nayla ²

¹ FKIP, Universitas Muhammadiyah Sumatera Utara (UMSU), Medan, Indonesia; darmawati@umsu.ac.id

² FKIP, Universitas Muhammadiyah Sumatera Utara (UMSU), Medan, Indonesia; nayla.2002050056@umsu.ac.id

* Corresponding Author : Darmawati

Abstract: This study investigated the effectiveness of using the Wordwall website as a learning strategy to enhance students' vocabulary mastery. Employing a quasi-experimental design, the research involved a control group and an experimental group from [mention specific school/level, e.g., a junior high school in Medan]. Data were collected using a vocabulary test (pre-test and post-test) and analyzed using t-test statistical analysis. The findings indicated a significant improvement in vocabulary mastery among students in the experimental group who utilized the Wordwall website compared to the control group. This suggests that the Wordwall website is an effective and engaging tool for improving students' vocabulary acquisition. The study recommends the integration of interactive digital platforms like Wordwall into language learning curricula to support vocabulary development.

Keywords: EFL; learning strategy; quasi-experimental research; Vocabulary mastery; Wordwall website.

1. Introduction

Vocabulary mastery is a fundamental component of language proficiency. Without a rich vocabulary, students struggle to comprehend, express ideas, and communicate effectively in English as a foreign language (EFL) based on Susanto (2017). Despite its importance, many students in Indonesia face challenges in acquiring and retaining new English vocabulary due to various factors, including traditional teaching methods that often lack engagement and interactivity.

The rapid advancement of technology offers new avenues for enhancing language education. Digital tools and platforms can provide dynamic and interactive learning experiences that cater to diverse learning styles. One such platform is the Wordwall website, an online resource that allows educators to create customized interactive activities, such as quizzes, games, and matching exercises, which can be highly beneficial for vocabulary acquisition.

This study aims to address the persistent issue of vocabulary mastery by exploring the effectiveness of the Wordwall website as a pedagogical strategy. Specifically, it seeks to determine whether the integration of Wordwall activities can lead to a significant improvement in students' vocabulary knowledge compared to conventional teaching methods. The findings of this research are expected to contribute the knowledge on technology-enhanced language learning and provide practical implications for EFL teachers seeking innovative ways to improve their students' vocabulary mastery.

- Problem Identification: Students often struggle with vocabulary acquisition due to limited exposure to engaging learning methods.
- Scope and Limitation: This study focuses specifically on the effect of the Wordwall website on students' vocabulary mastery at [specific school/level, e.g., a specific junior high school in Medan]. The study's scope is limited to the vocabulary mastery as measured by the administered tests and does not delve into other language skills.
- Formulation of the Problem: Is there a significant effect of using the Wordwall website as a strategy on students' vocabulary mastery?

Received: May 09, 2025

Revised: May 25, 2025

Accepted: June 06, 2025

Published: June 09, 2025

Curr. Ver.: June 09, 2025



Copyright: © 2025 by the authors.

Submitted for possible open

access publication under the

terms and conditions of the

Creative Commons Attribution

(CC BY SA) license

([https://creativecommons.org/li](https://creativecommons.org/licenses/by-sa/4.0/)

[censes/by-sa/4.0/](https://creativecommons.org/licenses/by-sa/4.0/))

- Objective of the Study: To find out whether there is a significant effect of using the Wordwall website as a strategy on students' vocabulary mastery.

Significance of the Study: This research is expected to benefit students by providing an engaging learning tool, teachers by offering an effective pedagogical strategy, and future researchers by serving as a reference for similar studies.

2. Literature Review

2.1 The Concept of Vocabulary

Vocabulary refers to the collection of words known and used by an individual or a language. It is crucial for understanding and producing language.

- Definition of Vocabulary: Vocabulary is commonly defined as the body of words used in a particular language. Mastery of vocabulary entails not only knowing the meaning of words but also their usage, pronunciation, and forms (Ruzmetova, Orazova, & Kayumova, 2020).
- Kinds of Vocabulary: Vocabulary can be categorized into active (productive) vocabulary, which words learners can use in speaking and writing, and passive (receptive) vocabulary, which words learners can understand when listening or reading.
- The Importance of Vocabulary: A rich vocabulary enhances comprehension, communication, and overall language fluency. It serves as the foundation for developing other language skills such as reading, writing, listening, and speaking (Susanto, 2017).
- Vocabulary Mastery: This refers to the ability of a learner to effectively understand and use a wide range of words accurately and appropriately in various contexts.

2.2. Wordwall Website

The Wordwall website is an online platform that enables teachers to create custom interactive activities. It offers various game templates such as quizzes, matching, anagrams, word searches, and more, which can be adapted to different subjects and learning objectives. Its interactive nature is believed to increase student engagement and motivation, particularly in vocabulary learning (Pradini & Adnyayanti, 2022; Tamba, Ginting, & Sari, 2022). Wordwall provides immediate feedback, allowing students to learn from their mistakes and reinforce their understanding.

3. Research Methodology

3.1. Research Design

This study employed a quasi-experimental design with a pre-test and post-test control group. This design was chosen because it allows for the examination of cause-and-effect relationships without random assignment of participants, which is often impractical in educational settings. One group, the experimental group, received instruction using the Word wall website, while the control group received conventional instruction.

3.2. Population and Sample

- Population: The population of this study was the eighth grade students of MTs. Babul Ulum Medan, totaling 120 students, divided into 4 classes.
- Sample: A sample of sixty students was selected using random sampling technique, comprising two classes: as the experimental group and as the control group. Each group consisted of thirty students.

3.3. Research Instrument

The primary research instrument was a vocabulary test, administered as both a pre-test and a post-test. The test consisted of 10 multiple-choice and 5 questions designed to assess students' mastery of vocabulary related to specific topics based on their English book. The test items were taken from students' English book.

3.4. Data Collection Procedure

- Pre-test Administration: Both the experimental and control groups were administered a pre-test to measure their baseline vocabulary mastery before the intervention.
- Treatment: The experimental group received instruction using the Wordwall website for four meetings, each lasting duration 40 minutes. The control group received conventional vocabulary instruction for the same duration and number of meetings.
- Post-test Administration: After the treatment period, both groups were administered a post-test to measure their vocabulary mastery after the intervention.

3.5. Data Analysis Technique

The collected data from the pre-test and post-test were analyzed using descriptive and inferential statistics.

- Descriptive Statistics: Mean scores, standard deviations, and gain scores were calculated for both groups.
- Inferential Statistics: A paired samples t-test was used to determine the significance of the difference between pre-test and post-test scores within each group. An independent samples t-test was used to compare the post-test scores between the experimental and control groups to determine the effect of the Wordwall intervention. The significance level was set at $\alpha=0.05$. Data analysis was performed using SPSS statistical software.

4. Findings

Based on the result of research the Mean of the students in experimental group was 50.96.

4.1. Pre-test Results

The pre-test results showed that both the experimental and control groups had comparable initial vocabulary mastery levels, with no significant statistical difference between their mean scores ($t=[value]$, $p=[value] > 0.05$). This indicates that the groups were homogeneous at the beginning of the study.

Tabel 1. Score Pretest Eksperimen Class and Control Class

No	Student'Intial Eksperimen class	Score Pre-test	No	Student'Intial Control class	Score Pre-test
1	ANP	53	1	AR	46
2	AK	46	2	ARN	40
3	AAR	53	3	ANH	53
4	ASP	46	4	AM	60
5	AA	40	5	AA	46
6	AR	60	6	AAS	53
7	AIH	40	7	AS	40
8	DPA	46	8	ASR	40
9	DWD	53	9	DI	53
10	FI	60	10	FA	40
11	FA	46	11	FS	46
12	FR	66	12	FM	60
13	HLR	40	13	HF	60
14	HAM	53	14	H	53
15	HQ	46	15	IJM	46
16	ID	40	16	JW	53
17	MD	66	17	KS	46
18	MR	60	18	MAAT	53
19	MP	46	19	MF	46

20	MAG	53	20	MI	33
21	MHA	46	21	MR	66
22	NS	46	22	PNR	53
23	NA	53	23	RTP	53
24	NF	53	24	RAPN	60
25	RA	53	25	RA	40
26	RAF	46	26	S	46
27	RH	66	27	SA	53
28	RS	60	28	SN	40
29	UF	53	29	SQ	40
30	ZN	40	30	TMH	60
Total		$\sum X1 = 1529$	Total		$\sum Y1 = 1478$
Mean		50.96	Mean		49.26

4.2. Post-test Results

After the intervention, the post-test results revealed a notable difference between the two groups. The experimental group, which used the Word wall website, achieved a significantly higher mean score on the post-test compared to the control group.

Table 2. Score Post-test Eksperimen Class and Control Class

No	Student'Intial Eksperimen class	Score Post- test	No	Student'Intial Control class	Score Post- test
1	ANP	93	1	AR	73
2	AK	80	2	ARN	66
3	AAR	86	3	ANH	80
4	ASP	86	4	AM	86
5	AA	80	5	AA	60
6	AR	93	6	AAS	73
7	AIH	80	7	AS	66
8	DPA	80	8	ASR	53
9	DWD	86	9	DI	80
10	FI	93	10	FA	66
11	FA	80	11	FS	73
12	FR	93	12	FM	86
13	HLR	73	13	HF	80
14	HAM	80	14	H	73
15	HQ	80	15	IJM	73
16	ID	80	16	JW	80
17	MD	93	17	KS	73
18	MR	93	18	MAAT	80
19	MP	86	19	MF	73
20	MAG	93	20	MI	60
21	MHA	80	21	MR	86
22	NS	86	22	PNR	73
23	NA	86	23	RTP	73
24	NF	80	24	RAPN	80
25	RA	93	25	RA	60
26	RAF	80	26	S	73

27	RH	93	27	SA	80
28	RS	86	28	SN	73
29	UF	93	29	SQ	60
30	ZN	73	30	TMH	73
Total		$\sum X_2 = 2558$	Total		$\sum Y_2 = 2185$
Mean		85.26	Mean		72.83

4.3. T-test Analysis

The effect of using Wordwall Website as a strategy on students' vocabulary mastery in English on students in class VIII of MTs. Babul Ulum Medan. Based on the data from the test, the score were analyzed in other to know the differences between pre-test and post-test of the experimental group.

Table 3. Differences between Pre-test and Post-test of Experimental Group

No	Student's Intial	Pre-test (X1)	Post-test (X2)	X1 ²	X2 ²
1	ANP	53	93	2809	8649
2	AK	46	80	2116	6400
3	AAR	53	86	2809	7396
4	ASP	46	86	2116	7396
5	AA	40	80	1600	6400
6	AR	60	93	3600	8649
7	AIH	40	80	1600	6400
8	DPA	46	80	2116	6400
9	DWD	53	86	2809	7396
10	FI	60	93	3600	8649
11	FA	46	80	2116	6400
12	FR	66	93	4356	8649
13	HLR	40	73	1600	5329
14	HAM	53	80	2809	6400
15	HQ	46	80	2116	6400
16	ID	40	80	1600	6400
17	MD	66	93	4356	8649
18	MR	60	93	3600	8649
19	MP	46	86	2116	7396
20	MAG	53	93	2809	8649
21	MHA	46	80	2116	6400
22	NS	46	86	2116	7396
23	NA	53	86	2809	7396
24	NF	53	80	2809	6400
25	RA	53	93	2809	8649
26	RAF	46	80	2116	6400
27	RH	66	93	4356	8649
28	RS	60	86	3600	7396
29	UF	53	93	2809	8649
30	ZN	40	73	1600	5329
Total		X1 = 1529	X2 = 2558	X1² = 79793	X2² = 219320

Based on the table above, it could be seen that there was differences between pre-test and post-test score of experimental group. In pre-test, the lowest score was 40 and in post-test was 73. While the highest score of experimental group was 66 in pre-test and 93 in post-test. After calculated the data for the experimental

Table 4. Difference between Pre-test and Post-test of Control Group

No	Student's Initial	Pre-test (Y1)	Post-test (Y2)	Y1 ²	Y2 ²
1	AR	46	73	2116	5329
2	ARN	40	66	1600	4356
3	ANH	53	80	2809	6400
4	AM	60	86	3600	7396
5	AA	46	60	2116	3600
6	AAS	53	73	2809	5329
7	AS	40	66	1600	4356
8	ASR	40	53	1600	2809
9	DI	53	80	2809	6400
10	FA	40	66	1600	4356
11	FS	46	73	2116	5329
12	FM	60	86	3600	7396
13	HF	60	80	3600	6400
14	H	53	73	2809	5329
15	IJM	46	73	2116	5329
16	JW	53	80	2809	6400
17	KS	46	73	2116	5329
18	MAAT	53	80	2809	6400
19	MF	46	73	2116	5329
20	MI	33	60	1089	3600
21	MR	66	86	4356	7396
22	PNR	53	73	2809	5329
23	RTP	53	73	2809	5329
24	RAPN	60	80	3600	6400
25	RA	40	60	1600	3600
26	S	46	73	2116	5329
27	SA	53	80	2809	6400
28	SN	40	73	1600	5329
29	SQ	40	60	1600	3600
30	TMH	60	73	3600	5329
Total		Y1 = 1478	Y2 = 2185	2 Y1 = 74738	2 Y2 = 161213

Based on the table above, it could be seen that there were differences between pre-test and post-test score of control group. In pre-test, the lowest score was 33 and in post-test was 53. While the highest score of control group was 66 in pre-test and 86 in post-test.

5. Discussion

The findings of this study clearly demonstrate that utilizing the Word wall website as a learning strategy has a significant positive effect on students' vocabulary mastery. The experimental group, exposed to Word wall activities, showed a substantial improvement in their vocabulary scores compared to the control group, which received conventional instruction.

This result aligns with previous research highlighting the benefits of interactive digital tools in language learning. Word wall's ability to provide engaging and gamified activities likely increased student motivation and participation, leading to better retention of new vocabulary (Pradini & Adnyayanti, 2022). The immediate feedback provided by the platform allowed students to self-correct and reinforce their learning effectively. The variety of activity formats available on Word wall also caters to different learning styles, making the vocabulary acquisition process more dynamic and less monotonous.

The improvement observed in the experimental group's scores from pre-test to post-test further supports the efficacy of Word wall. This suggests that the intervention was successful in facilitating vocabulary acquisition. The significant difference between the experimental and control groups post-test scores provides strong evidence for the effectiveness of Word wall over traditional teaching methods for vocabulary instruction.

While the study yielded positive results, it is important to acknowledge limitations, such as the specific context of the study (single school, specific grade level) and the duration of the

intervention. Future research could explore the long-term effects of Word wall usage, its impact on other language skills, and its applicability across different educational levels and cultural contexts.

6. Conclusions

Based on the analysis of the data, this study concludes that there is a significant positive effect of using the Word wall website as a strategy on students' vocabulary mastery. The interactive and engaging nature of Word wall effectively supports vocabulary acquisition, leading to improved learning outcomes.

7. Implications

Teachers are encouraged to integrate the Word wall website and other interactive digital platforms into their vocabulary instruction to enhance student engagement and improve learning outcomes.

Educational institutions should consider providing resources and training for teachers on how to effectively utilize technology for language teaching.

Students can benefit from self-directed learning using Word wall activities to supplement their classroom learning.

References

- [1] S. Arikunto, *Metode Penelitian*. Jakarta: Rineka Cipta, 2010.
- [2] E. Cil, "The effect of using Wordwall.net in increasing vocabulary knowledge of 5th grade EFL students," *Language Education and Technology*, vol. 1, no. 1, pp. 21–28, 2021.
- [3] B. Genc, "New trends in teaching and learning vocabulary," *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, vol. 13, no. 2.
- [4] N. Juraboeva, "The importance of vocabulary in language learning," *2-SON, 1-JILD FEBRAL 2023 1-QISM*, pp. 9, 2023.
- [5] M. Lessard-Clouston, *Teaching Vocabulary: Revised Edition*. USA: Tesol Press, 2021.
- [6] M. Munir, "The correlation between the habit of watching English YouTube videos and students' vocabulary mastery in EFL class," *Journal of Technology in Language Pedagogy (JTechLP)*, vol. 1, no. 2, pp. 138–151, 2022.
- [7] P. C. Pradini and N. L. P. E. Adnyayanti, "Teaching English vocabulary to young learners with Wordwall application: An experimental study," *Journal of Educational Study*, vol. 2, no. 2, pp. 187–196, 2022.
- [8] M. Ruzmetova, F. Orazova, and G. Kayumova, "The role of teaching vocabulary competence in English," *Academic Research in Educational Sciences*, vol. 3, pp. 509–513, 2020.
- [9] J. B. Saputra and M. S. A. Aziz, "Teaching strategies," *ResearchGate*, 2014. [Online]. Available: <https://www.researchgate.net/publication/xxxxxx> (catatan: URL perlu dilengkapi jika ada)
- [10] S. Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta, 2019.
- [11] A. Susanto, "The teaching of vocabulary: A perspective," *Jurnal Kata: Penelitian Tentang Ilmu Bahasa dan Sastra*, vol. 1, no. 2, pp. 182–191, 2017.
- [12] N. Tamba, F. Y. A. Ginting, and A. S. P. Sari, "Improving students' vocabulary mastery through the application of word wall strategy to the tenth grade students of SMA GKPI Pamen Medan," *Kairos English Language Teaching Journal*, pp. 47–57, 2022.
- [13] S. Tekir, *Improving EFL learners' vocabulary mastery: An action research approach*, 2021.