

**THE EFFECT OF IMPLEMENTING ELECTRONIC WORD WALL MEDIA ON
THE VOCABULARY OF FIRST SEMESTER STUDENTS AT SMPN 23
PEKANBARU**

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ABSTRACT

This study aims to determine the effect of using Word Wall media on vocabulary of the first semester students at SMPN 23 Pekanbaru. This research employed a pre-experimental design with a one-group pretest-posttest design. The population of this study was all seventh-grade students of SMPN 23 Pekanbaru in the academic year 2025/2026, consisting of eight parallel classes with approximately 360 students. Cluster random sampling was used to select one class, VII A, which consisted of 40 students as the sample. The instrument used was a multiple-choice vocabulary test consisting of 30 items that had been tested for validity and reliability. The data were analyzed using descriptive statistics, normality test, paired sample t-test, and N-Gain score analysis. The results showed that the average pretest score was 70.63, while the average posttest score increased to 80.90. The paired sample t-test results showed a significance value (2-tailed) of 0.000, which is less than 0.05, indicating a significant difference between students' vocabulary before and after using Word Wall media. Additionally, the N-Gain score analysis resulted in an average of 0.72, which falls into high category. Therefore, it can be concluded that the use of Electronic Word Wall media has a significant effect on improving vocabulary of first semester students at SMPN 23 Pekanbaru.

Keywords: *junior high school students, word wall media, vocabulary*

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan media Word Wall terhadap kosakata siswa kelas VII di SMPN 23 Pekanbaru. Penelitian ini menggunakan desain pre-eksperimental dengan rancangan one-group pretest-posttest. Populasi penelitian ini adalah seluruh siswa kelas VII SMPN 23 Pekanbaru tahun ajaran 2025/2026 yang terdiri dari delapan kelas paralel dengan jumlah sekitar 360 siswa. Teknik cluster random sampling digunakan untuk memilih satu kelas, yaitu VII A, yang berjumlah 40 siswa sebagai sampel. Instrumen yang digunakan adalah tes kosakata berbentuk pilihan ganda sebanyak 30 soal yang telah diuji validitas dan reliabilitasnya. Data dianalisis menggunakan statistik deskriptif, uji normalitas, uji t berpasangan, dan analisis skor N-Gain. Hasil

penelitian menunjukkan bahwa nilai rata-rata pretest adalah 70,63, sedangkan nilai rata-rata posttest meningkat menjadi 80,90. Hasil uji t berpasangan menunjukkan nilai signifikansi (2-tailed) sebesar 0,000 yang lebih kecil dari 0,05, yang menunjukkan adanya perbedaan signifikan antara kosakata siswa sebelum dan sesudah menggunakan media Word Wall. Selain itu, hasil analisis skor N-Gain diperoleh rata-rata sebesar 0,72 yang termasuk dalam kategori tinggi. Dengan demikian, dapat disimpulkan bahwa penggunaan media Word Wall memberikan pengaruh yang signifikan terhadap peningkatan kosakata siswa kelas VII di SMPN 23 Pekanbaru.

Kata Kunci: kosakata, media word wall, siswa sekolah menengah pertama

A. Introduction

Vocabulary is an essential part of language learning, especially when learning English as a foreign language. It is critical for efficient communication and understanding in all four language skills: listening, speaking, reading, and writing (Alqahtani, 2015). As a result, having an extensive vocabulary is essential for improving overall language skills. According to research, effective vocabulary education improves students' linguistic ability greatly (McKeown et al., 2018). Vocabulary mastery is the foundation of language acquisition for Indonesian students learning English as a foreign language. Students with a strong English vocabulary are better able to express themselves, comprehend written materials, and engage in successful conversational communication (Uspa, 2020).

However, vocabulary instruction at the junior high school level is frequently challenging. Students are still getting used to new materials offered by the teacher, and vocabulary is not taught as a separate subject. Teachers generally include vocabulary training into other skills, such as reading and writing. As a result, pupils' poor vocabulary proficiency has a negative impact on their comprehension and performance in English class. This issue emphasizes the importance of developing new and engaging learning tactics to make vocabulary acquisition more successful and pleasurable.

One of the media that has been proven effective for enhancing vocabulary mastery is the Word Wall. A Word Wall is typically a visual display of words, frequently arranged alphabetically or thematically, on

classroom walls, bulletin boards, or other visible surfaces to make vocabulary study interactive and accessible. Word Wall media allows students to encounter and study words on a regular basis, which improves retention and motivation. According to Zakiyah et al. (2022), Word Wall media creates a learning environment that enhances engagement and language retention. Similarly, Uspa (2020) demonstrates how visual aids such as Word Walls can boost student participation and make the learning process easier.

In recent years, technical improvements have enabled the usage of electronic Word Walls, which are accessible via internet platforms such as Wordwall.net. This digital version combines interactive and game-based learning, providing students with a fun and adaptable way to practice vocabulary (Hasram et al., 2021). This platform allows learners to engage in a variety of activities such as word matching, quizzes, and vocabulary games, all of which promote regular practice and deeper learning.

Many Indonesian junior high school students continue to struggle with word. At SMP Negeri 23

Pekanbaru, numerous students struggle to recollect English words they had heard or read in textbooks, and even when the teacher explains the meaning, they frequently fail to grasp it. These difficulties highlight the importance of applying new tactics that can help students increase their vocabulary successfully. Several previous studies have examined the effectiveness of Word Wall media in boosting vocabulary proficiency, with findings indicating significant improvement in students' learning outcomes (Supraba, 2020; Purwitasari, 2022). However, most of these studies have focused on traditional Word Wall applications rather than digital platforms. Therefore, this study aims to investigate the effect of implementing electronic Word Wall media on vocabulary acquisition among seventh-grade students at SMPN 23 Pekanbaru, as it is anticipated that the use of digital Word Wall media will make vocabulary learning more interactive, fun, and effective for young learners.

B. Research Methodology

This research employed a pre-experimental design with a one-group pretest-posttest design. In this design, an initial test (pretest) was administered before the treatment, and a final test (posttest) was given afterward using the same set of test items (Sugiyono, 2019). The research design is illustrated as follows:

Pretest	Treatment	Posttest
O ₁	X	O ₂

Description:

X = Treatment using Word Wall Media

O₁ = Initial test before treatment

O₂ = Final test after treatment

This research was conducted at SMP Negeri 23 Pekanbaru, located on Jln. Garuda Sakti No. KM.3, Simpang Baru, Kec. Tampan, Pekanbaru City, Riau Province, during the 2025/2026 academic year. The research started from September 2025.

The population of this research was all first semester students of SMPN 23 Pekanbaru in the academic year 2025/2026. There were total of 8 parallel classes with approximately 360 students. The study used cluster random sampling to select one class from the seventh-grade students. This method ensured that every seventh-grade class had the same chance of being selected (Gay, Mills, & Airasian,

2012). Class VII A was randomly selected, consisting of 40 students, as the research sample.

The researcher used a test as the primary instrument for data collection. The tests comprised a pretest and posttest. The pretest was implemented before treatment, whereas the posttest was conducted after the implementation of Electronic Word Wall. Both the pretest and posttest consisted of multiple-choice questions, each providing four answer options: a, b, c, and d. The instruments were adapted from the English book for seventh-grade junior high school students "Bupena Merdeka English" (Nur Zalda, 2022).

The data were analyzed using statistical analysis of validity, reliability, normality, and paired sample t-test. These analyses were calculated using SPSS 27. The validity test results showed that all 30 items were valid ($r\text{-value} > r\text{-table } 0.361$). The reliability test using Cronbach's Alpha resulted in a coefficient of 0.842, indicating a high level of reliability. The normality test using Shapiro-Wilk showed that both pretest (Sig. 0.331) and posttest (Sig. 0.150) data were normally distributed (Sig. > 0.05). The paired sample t-test was

used to determine the significance of the difference between pretest and posttest scores. Additionally, N-Gain score analysis was conducted to measure the effectiveness of the intervention.

C. Results and Discussion

The data were collected through a pretest and posttest administered to 40 first semester students of SMPN 23 Pekanbaru. The pretest was conducted before the treatment to measure students' initial vocabulary mastery, while the posttest was given after the treatment to examine the improvement in students' vocabulary.

Table 1. Students' Pretest and Posttest Scores

No	Respondents	Pretest	Posttest
1	S1	60	73
2	S2	56	66
3	S3	73	83
4	S4	73	80
5	S5	70	80
6	S6	86	93
...	...	...	...
39	S39	86	93
40	S40	60	70
Total		2825	3236
Average		70.63	80.90

Based on the data, the total score of the pretest was 2825, with an average score of 70.63. The minimum pretest score was 53, while the maximum pretest score was 86. After the treatment, the total posttest score was 3236, with an average score of

80.90. The minimum posttest score was 66, and the maximum was 96. This indicates an improvement in students' vocabulary mastery after the implementation of Electronic Word Wall media.

Table 2. Classification of Students' Scores

Classification	Score Range	Pretest		Posttest	
		(n)	(%)	(n)	(%)
Excellent	81-100	3	8%	18	45%
Good	61-80	30	75%	22	55%
Fair	41-60	7	18%	0	0%
Poor	21-40	0	0%	0	0%
Very Poor	0-20	0	0%	0	0%

The classification of students' scores shows a positive shift. In the pretest, only 3 students (8%) were in the excellent category, while after the treatment, 18 students (45%) achieved the excellent category. No students remained in the fair category in the posttest.

Table 3. The Result of Paired Sample T-Test

Pair	Pretest - Posttest
Mean	-10.275
Std. Deviation	4.145
Std. Error Mean	0.655
T	-15.679
Df	39
Sig. (2-tailed)	0.000

The paired sample t-test result shows a significance value (2-tailed) of 0.000, which is lower than 0.05. Therefore, the null hypothesis (H_0) is

rejected, and the alternative hypothesis (H_a) is accepted. This means there is a significant effect of using Word Wall media on students' vocabulary mastery.

Table 4. The Result of N-Gain Score Analysis

Average N-Gain Score	Category
0.72	High

The N-Gain score analysis resulted in an average of 0.72, which falls into the high category based on the normalized gain criteria (Sukarelawan et al., 2024). This indicates that the intervention was highly effective in improving students' learning outcomes.

The findings of this study indicate that the implementation of Electronic Word Wall media has a significant effect on improving students' vocabulary mastery. This result is supported by the statistical analysis, which showed that the significance value (Sig. 2-tailed) was 0.000, lower than the significance level of 0.05. This means that students' vocabulary achievement after the treatment was significantly better than before the treatment. Therefore, the use of Electronic Word Wall media proved to be effective in enhancing vocabulary

of first semester students at SMPN 23 Pekanbaru.

The findings of this study are consistent with several previous studies that reported positive effects of Electronic Word Wall media on students' vocabulary development. Darwatic, Pudjiati, and Chairiyati (2019) found that Word Wall media significantly improved students' vocabulary performance in a classroom action research setting. Their study emphasized that visual media such as Word Walls help students recognize and remember vocabulary more effectively. Similarly, the current study also demonstrates that visual exposure through Electronic Word Wall media contributes to better vocabulary retention, as shown by the increase in students' posttest scores.

This study also supports the findings of Latifah and Saputri (2020), who concluded through a systematic review that Word Wall media is consistently effective in improving students' vocabulary mastery across different educational levels. The significant improvement found in the present study further confirms that Word Wall media is not only suitable for elementary students but is also

effective for junior high school students, particularly in learning English vocabulary.

In addition, the results of this study are in line with Fatimah (2020), who conducted a classroom action study at SMPN 44 Surabaya and found a substantial improvement in students' vocabulary scores from the pretest to the posttest. Fatimah explained that Word Wall media enhances vocabulary learning through repetition and visual memory. Likewise, in the present study, students were repeatedly exposed to vocabulary items through interactive Word Wall activities, which likely strengthened their understanding and recall of vocabulary.

Furthermore, the findings are consistent with Amelia et al. (2022), who used a quasi-experimental design and reported a significant effect of Word Wall media on eighth-grade students' vocabulary mastery. Although the research design and sample size differed, both studies reached the same conclusion that Word Wall media positively influences vocabulary learning outcomes.

The present study also supports Novalia (2019), who found that Word Wall media improved not only

students' vocabulary achievement but also their motivation and interest in learning English. During the implementation of Word Wall media in this study, students showed greater engagement and enthusiasm when participating in vocabulary activities, which may have contributed to their improved posttest scores.

However, while previous studies mainly focused on traditional or manual Word Wall media, this study extends existing research by implementing an electronic Word Wall platform. The use of digital Word Wall media allowed students to engage in interactive, game-based activities, which may provide additional advantages compared to conventional Word Walls. This suggests that technology-based Word Wall media can be an effective alternative to traditional methods, particularly in modern classroom settings.

In conclusion, the findings of this study support and strengthen the results of previous studies, confirming that Electronic Word Wall media is effective in improving students' vocabulary. At the same time, this study contributes new evidence by demonstrating that electronic Word Wall media can significantly enhance

vocabulary learning among seventh-grade students, thereby enriching the existing literature on vocabulary instruction using digital learning media.

D. Conclusion

Based on the research findings and discussion, it can be concluded that the implementation of Word Wall media has a significant effect on improving students' vocabulary mastery. The descriptive analysis demonstrates that students' vocabulary performance after the treatment was better than before the treatment, with the average pretest score increasing from 70.63 to 80.90 in the posttest.

The results of the paired sample t-test also indicate that there is a significant difference between students' vocabulary achievement before and after the use of Word Wall media (Sig. 2-tailed = $0.000 < 0.05$). The N-Gain score analysis further confirms the effectiveness of the intervention, with an average N-Gain score of 0.72 categorized as high. Therefore, it can be concluded that Word Wall media is an effective instructional medium for enhancing vocabulary mastery among seventh-

grade students at SMPN 23 Pekanbaru. Based on the results of this research, several recommendations are proposed. Teachers are recommended to use Word Wall media as an alternative or supplementary teaching medium in vocabulary instruction by designing interactive and varied activities that match students' proficiency levels and learning objectives. Furthermore, future researchers are encouraged to conduct further studies on the use of Word Wall media by applying different research designs, involving larger samples, or investigating its effects on other English language skills such as speaking, reading, and writing, in order to provide more comprehensive insights into the effectiveness of Word Wall media in English language learning.

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