

THE EFFECTS OF WORD WALL MEDIA FOR TEACHING READING COMPREHENSION

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Abstract: This research examines the effect of using Word Wall as a medium to teach reading comprehension. The study addresses the need for effective methods to improve students' reading comprehension. The objective is to determine whether Word Wall enhances comprehension based teaching. A quantitative approach with a quasi-experimental design was applied. The population consisted of 160 students, with 64 participants chosen through cluster sampling from class VIII.1 (experimental) and VIII.2 (control). The experimental group received four sessions using Word Wall, while the control group used textbooks. Pre-test and post-test data were collected. The experimental group's mean pre-test score was 65.15, while the control group's was 57.34. Post-test scores improved, with the experimental group scoring 75.47 and the control group 64.22. A t-test result of $p=0.01$ indicated a statistically significant positive effect of Word Wall on reading comprehension. Thus, Word Wall is effective in enhancing students' reading comprehension.

Keywords

word wall, reading comprehension

A. INTRODUCTION

In modern education, media has become a crucial tool for improving student engagement and learning outcomes. Word Wall, an online platform, allows educators to create interactive activities like word searches, matching games, and quizzes to enhance learning. Cronsberry and Dejager (2014) define a word wall as a visual collection of words displayed during instruction to reinforce vocabulary. These activities are customizable to specific learning objectives and student proficiency levels, making Word Wall a promising tool for improving reading comprehension.

Reading comprehension, according to Tarigan (1987), is a process through which readers grasp the author's message. Harmer (2007) also emphasizes its importance in language learning. However, many students face challenges, including difficulty understanding vocabulary, identifying main ideas, and sustaining interest in reading. These issues are especially prevalent in second-language contexts, where teachers struggle to create engaging reading environments.

Several studies have explored Word Wall as a tool for enhancing reading skills. Setiawan (2022) and Sofyan (2021) examined its effectiveness in improving reading comprehension and vocabulary. Kurnia (2020) focused on elementary students, while Wijaya (2020) studied junior high school students. Despite these findings, there is limited research on Word Wall's impact in diverse educational contexts.

This study aims to evaluate the effects of Word Wall in improving reading comprehension. Additionally, it seeks to examine how Word Wall can address issues like vocabulary understanding, main idea identification, and student engagement in reading activities across various text genres.

B. RESEARCH METHOD

This research employs an experimental method using a Quasi-Experimental Design. Unlike True Experimental Design, which is challenging to implement, Quasi-Experimental Design includes a control group but does not fully control external variables affecting the experiment (Sugiyono, 2013). Specifically, this study uses the Nonequivalent Control Group Design, a variation of the pretest-posttest control group design where the experimental and control groups are not randomly assigned (Sugiyono, 2013). The research involved two groups: an experimental group and a control group. Both groups received a pretest and a posttest.

The experimental group was given treatment using Word Wall as a teaching tool, while the control group received no such treatment. The study's population consisted of 160 eighth-grade students from SMPN 01 Batang Anai in 2024, distributed across five classes: VIII.1, VIII.2, VIII.3, VIII.4, and VIII.5. Using cluster random sampling, the sample comprised 64 students, divided into two classes: VIII.1 (32 students) and VIII.2 (32 students).

The research examines two variables (Sugiyono, 2013): the independent variable, which is the use of Word Wall as a tool for teaching reading comprehension, and the dependent variable, which is students' reading comprehension proficiency as measured by their exam scores. To ensure the research instrument's validity and reliability, it was pre-tested following Arikunto's (2002) guidelines. The instrument was assessed for validity, reliability, difficulty, and distinguishing power, with subpar questions being excluded. Data analysis involves categorizing data by variables and respondent types, tabulating results, presenting findings, and conducting calculations to answer research questions and test hypotheses (Sugiyono, 2013).

C. FINDING AND DISCUSSION

The purpose of data analysis is to process the collected data, including test scores and results obtained from the application of Word Wall. This analysis aims to determine whether the hypothesis proposed by the researcher is accepted or rejected, using the t-test as the method of verification.

1. Initial data (pre-test)

Table 4.1 Descriptive Statistic

		Statistic	Std. Error
Learning outcomes Textbook	Mean	57.3438	2.38637
	Median	60.0000	
	Variance	182.233	
	Std. Deviation	13.49937	
	Minimum	35.00	
	Maximum	85.00	
	Range	50.00	
Learning outcomes Wordwall	Mean	65.1563	2.25050
	Median	65.0000	
	Variance	162.072	
	Std. Deviation	12.73073	
	Minimum	40.00	
	Maximum	90.00	
	Range	50.00	

Based on the research results for class VIII.2, before learning with textbooks, the initial data showed a low score of 35 and a high score of 85, with a range (R) of

50. For class VIII.1, before learning with Word Wall, the initial data indicated a low score of 40 and a high score of 90, with a range (R) of 50.

a) Normality Test

The objective of testing data normality is to determine whether the data follows a normal distribution.

Table 4.2 Test of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Learning outcomes Textbook	.144	32	.088	.964	32	.358
Learning outcomes Wordwall	.126	32	.200*	.954	32	.192

*. This is a lower bound of the true significance.

Lilliefors Significance Correction

Based on the table above, the Lilliefors test was used to evaluate the normality of the data regarding the reading comprehension abilities of class VIII students at SMPN 01 Batang Anai. The results for the significance of the control and experimental classes showed that the pre-test scores for both the control and experimental classes had a p-value of 0.088 and 0.200. Since 0.088 and 0.200 are greater than 0.05, it can be concluded that the data for both the control and experimental classes follows a normal distribution.

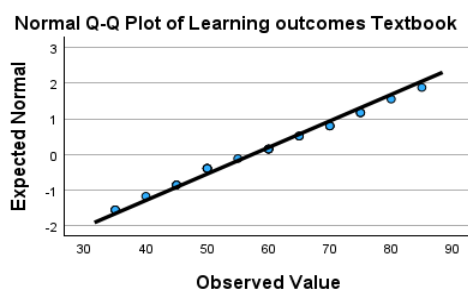


Figure 1

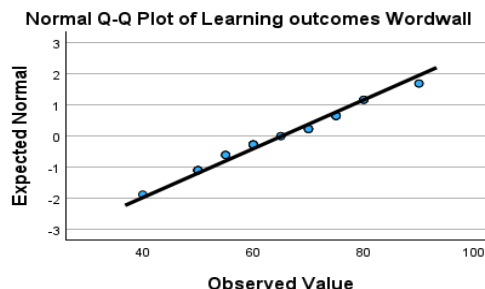


Figure 2

According to the Q-Q plot of textbook and Word Wall learning outcomes, the points closely align with the diagonal line, indicating that the regression model satisfies the normality assumption.

b) Homogeneity Test

This test aims to determine whether the two populations have the same variance. The Levene test was employed to assess the homogeneity of variances between the pre-test scores of the control group and the experimental group, using SPSS 29 software. The results are shown in the table below.

Table 4.3 Homogeneity of Variances

		Levene Statistic	df2	Sig.
Learning outcomes reading comprehension	Based on Mean	.075	62	.785
	Based on Median	.030	62	.863
	Based on Median and with adjusted df	.030	59.736	.863
	Based on trimmed mean	.082	62	.776

The data shows that the significance values are as follows: 0.785 based on the mean, 0.863 based on the median, 0.863 based on the median with adjusted degrees of freedom, and 0.776 based on the trimmed mean. Since all these significance values are greater than 0.05, it can be concluded that the populations have the same variance. Therefore, these significance values indicate that the variances of the populations in both the experimental and control classes are equal or homogeneous.

c) Hypothesis Testing

Hypothesis testing was conducted using the independent sample t-test, also known as the average difference test, as the data were homogeneous, normally distributed, and independent. The t coefficient for the independent sample t-test was calculated using SPSS 29 software.

Table 4.4 Independent Samples Test

		F	Sig.	Significance		Mean Difference	Std. Error Difference	Lower	Upper
Value	Equal variances assumed	.075	.785	One- Sided p	Two- Sided p	-7.813	3.280	-14.369	-1.256
	Equal variances not assumed			.010	.020	-7.813	3.280	-14.370	-1.255

According to the table, the mean pre-test score in the control class was 57.34, with a standard deviation of 13.49 and a standard error of 2.38. In contrast, the experimental class, which used online gamification through Word Wall, had a mean pre-test score of 65.16, a standard deviation of 12.73, and a standard error of 2.25. The significance value (two-sided) is used to determine whether to accept the alternative hypothesis (Ha) or the null hypothesis (Ho). If the significance value is less than 0.05, Ha is accepted; if it is greater than 0.05, Ho is accepted. The significance value from the paired sample test was $p = 0.02$, which is less than 0.05. This result indicates that Ho is rejected and Ha is accepted.

2. Final Data (Post-test)

Table 4.6 Descriptive Statistic

		Statistic	Std. Error
Textbook learning outcomes	Mean	64.2188	2.29073
	Median	65.0000	
	Variance	167.918	
	Std. Deviation	12.95833	
	Minimum	40.00	
	Maximum	85.00	
	Range	45.00	
Wordwall learning outcomes	Mean	75.4688	1.98735
	Median	75.0000	
	Variance	126.386	
	Std. Deviation	11.24216	
	Minimum	55.00	
	Maximum	100.00	
	Range	45.00	

Based on the research results, class VIII.2, which used textbooks, had initial data showing a low score of 40 and a high score of 85, with a range (R) of 45. In contrast, class VIII.1, which used Word Wall, had initial data indicating a low score of 55 and a high score of 100, also with a range (R) of 45.

a) Normality Test

The objective of testing data normality is to determine whether the data follows a normal distribution. Researchers use this test to assess whether the data or variables exhibit a pattern of normal distribution.

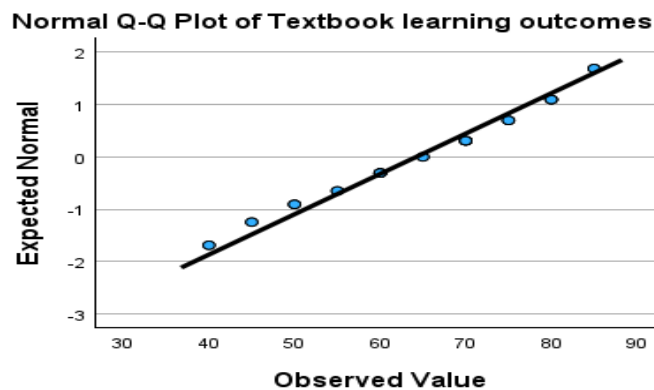
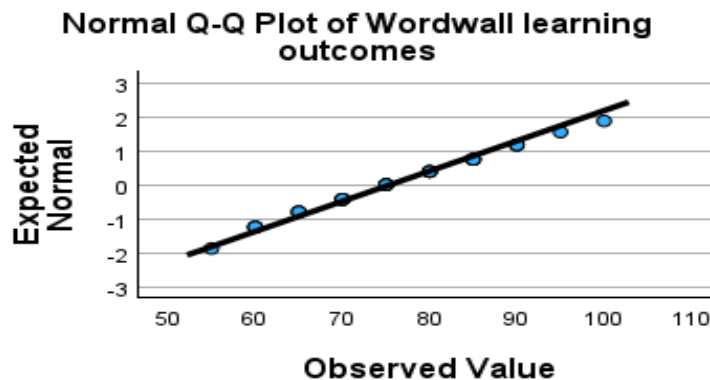
Table 4.7 Test of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Textbook learning outcomes	.141	32	.106	.955	32	.201
Wordwall learning outcomes	.110	32	.200*	.972	32	.558

*. This is a lower bound of the true significance.

Lilliefors Significance Correction

Based on the table above, the Lilliefors test was used to evaluate the normality of the data regarding the reading comprehension abilities of class VIII students at SMPN 01 Batang Anai. The significance values for the post-test scores were 0.106 for the control class and 0.200 for the experimental class, both of which are greater than 0.05. Therefore, it can be concluded that the data for both the control and experimental classes follow a normal distribution.

**Figure 3****Figure 4**

According to the Q-Q plot of the textbook and Word Wall learning outcomes, the points closely align with the diagonal line, indicating that the regression model meets the normality assumption.

b) Homogeneity Test

This test aims to determine whether the two populations have the same variance. The Levene test was employed to assess the homogeneity of variances in the post-test scores between the control group and the experimental group, using SPSS 29 software. The results are shown in the table below.

Table 4. 8 Test of Homogeneity of Variances

		Levene Statistic	df2	Sig.
Learning outcomes reading comprehension	Based on Mean	1.202	62	.277
	Based on Median	1.206	62	.276
	Based on Median and with adjusted df	1.206	61.896	.276
	Based on trimmed mean	1.227	62	.272

The data show that the significance values are as follows: 0.277 based on the mean, 0.276 based on the median, 0.276 based on the median with adjusted degrees of freedom, and 0.272 based on the trimmed mean. Since all these significance values are greater than 0.05, it can be concluded that the populations have the same variance. Therefore, these significance values indicate that the variances of the populations in both the experimental and control classes are equal or homogeneous.

c) Hypothesis Testing

Hypothesis testing was conducted using the independent sample t-test, also known as the average difference test, because the data were homogeneous, normally distributed, and independent. The calculation of the t coefficient for the independent sample t-test was performed using SPSS 29 software.

In this study, the independent sample t-test was used to address the research question: "Is online gamification through Word Wall effective in teaching reading comprehension to eighth-grade students at SMPN 01 Batang Anai?" To answer this question, the t-test compared the pre-test scores of the experimental group (taught with online gamification through Word Wall) with those of the control group. The results of the data comparison will be presented in the following table.

Table 4.9**Independent Samples Test**

		F	Sig.	Significance One- Sided p	Two- Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Value	Equal variances assumed	1.202	.277	<.001	<.001	-11.250	3.033	-17.312	-5.188
	Equal variances not assumed			<.001	<.001	-11.250	3.033	-17.315	-5.185

Table 4.10 Group Statistics

		N	Mean	Std. Deviation	Std. Error Mean
Value	posttest-control	32	64.22	12.958	2.291
	posttest-experiment	32	75.47	11.242	1.987

Based on the analysis, there is a significant difference in average learning outcomes between students taught using Word Wall and those taught using traditional textbooks. The control group, which did not use word wall, had a mean post-test score of 64.22, with a standard deviation of 12.95 and a standard error of 2.29. In contrast, the experimental group, which used Word Wall, had a mean post-test score of 75.47, a standard deviation of 11.24, and a standard error of 1.98. To determine whether to accept the alternative hypothesis (H_1) or the null hypothesis (H_0), we used the significance value (2-tailed). A significance value less than 0.05 leads to the acceptance of H_1 ; if it is greater than 0.05, H_0 is accepted. The significance value from the paired sample test was $p = 0.01$, which is less than 0.05, leading to the rejection of H_0 and acceptance of H_1 . This indicates a significant difference in reading comprehension between students taught with Word Wall and those taught with textbooks. Specifically, students taught with word wall demonstrated higher reading comprehension abilities, highlighting the positive impact of this method.

The primary objective of this research was to assess the impact of using Word Wall to enhance reading comprehension among eighth-grade students. This chapter presents the results of the study in relation to existing literature and analyzes their implications. Word Wall helped students recall word meanings more quickly, improving reading fluency and comprehension by reducing focus on unfamiliar vocabulary.

The study's findings align with existing research and the theoretical framework surrounding Word Wall usage. Baseline data were collected from two classes, which showed comparable abilities. The initial assessment revealed a slight difference in average scores between the two groups. Class VIII.1, with an average score of 57.34 (SD = 13.49), became the experimental group, while Class VIII.2, with an average score of 65.15 (SD = 12.73), served as the control group. Despite this difference, the data were normally distributed and homogeneous, and the p-value of 0.020 (less than 0.05) indicated a significant difference between the groups' initial abilities.

During the intervention, the experimental group used Word Wall, while the control group relied on traditional textbook instruction. Post-intervention results showed significant improvements in the experimental group's scores (average 75.47, SD = 11.24) compared to the control group (average 64.22, SD = 12.95). The p-value of 0.01 (less than 0.05) confirmed a significant positive effect of the intervention.

The research demonstrates that using Word Wall as a medium significantly improves students' ability to comprehend main ideas, identify details, and infer meaning from the text. These results are consistent with established theories, providing strong evidence for the effectiveness of Word Wall in enhancing reading comprehension.

D. CONCLUSION

The study results clearly show that Word Wall is highly significant effect in improving students' reading comprehension. The experimental group, which used Word Wall, demonstrated a significant increase in post-test scores compared to the control group, which followed traditional textbook instruction. This highlights the effectiveness of gamified learning tools in creating a more interactive and engaging classroom environment.

The data revealed that the experimental group's pre-test score was 65.16, while the control group scored 57.34. After the intervention, the experimental group's post-test score improved to 75.47, compared to 64.22 in the control group. With a p-value of 0.01 (less than 0.05), the null hypothesis was rejected, confirming Word Wall's significant positive impact on reading comprehension.

F. REFERENCES

Ainy, F. (2015). The effectiveness of word wall strategy on students' vocabulary mastery (A Quasi Experimental Study in the Seventh Grade of Mts Manaratul Islam Jakarta in the Academic Year 2014/2015) (Bachelor's thesis, Fakultas Ilmu Tarbiyah dan Keguruan (FITK) UIN Syarif Hidayatullah Jakarta).

- Amelia, Y., Martina, F., & Afriani, Z. L. (2022). The effect of word walls media on students' vocabulary mastery. *JPT: Jurnal Pendidikan Tematik*, 3(2), 129-137.
- Anwar, K. (2023). The Effect Using Wordwall Game Applications To Improve Student's Vocabulary In Chumchon Ban Phanokkhao School. *DIDAKTIKA: Jurnal Pemikiran Pendidikan*, 29(1), 18-28.
- Asifayanti, Weda, S., & Abduh, A. (2021). Exploring teachers' perception on gamification in online grammar teaching. *Journal of Art, Humanity & Social Studies*, 1(4), 1-11.
- Basuki, Y. &. (2019). Kahoot! or Quizizz: The Students' Perspectives.
- Chee, J. D. (2015). Pearson's Product-Moment Correlation: Sample Analysis. doi:10.13140/RG.2.1.1856.2726.
- Creswell, J. W. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (Fifth Edition)*. SAGE Publications, Inc.
- Gonzalez, G. (2020). Enhancing vocabulary acquisition through digital word walls. *Journal of Educational Technology Development and Exchange*, 13(2), 67-80.
- Hung, C. M., Yang, J. C., Hwang, G. J., Chu, H. C., & Wang, C. C. (2018). A scoping review of research on digital game-based language learning. *Educational Technology & Society*, 21(1), 317-327.
- Ilahi, L. W. (2022). EFL Students' Perception of Word Wall. Net used UHAMKA International Conference on ELT and CALL (UICELL) (pp. 313-322). Jakarta: University of Muhammadiyah Prof. Dr. Hamka, Indonesia.
- Jati, R. U. (2023). The Effectiveness of using Wordwall Net to Increase Students' Vocabulary Mastery. (Doctoral dissertation, Universitas Pancasakti Tegal).
- Monita, D., & Sihombing, L. (2015). Improving Junior High School Students' Vocabulary Achievement In Reading By Applying Word Wall. *Transform Journal of English Language Teaching and Learning*, 2(4), 221813.
- Nenohai, J. A. (2022). Development of Gamification-Based Word Wall Game. *The Electronic Journal of Chemistry*, 116-122.
- Nikolopoulou, K. A. (2019). Early reading Skills in English as a Foreign Language Via Ict in Greece: Early childhood Student Teachers' Perceptions. *Early Childhood Education Journal*, 47(5), 597-606.
- Pradini, P. C. (2022). Teaching English Vocabulary to Young Learners with Word Wall Application: An Experimental Study. *Journal of Educational Study*, 2(2), 187-196.

- Purwitasari, P. (2022). The Effectiveness of Wordwall Application in Improving Students' Vocabulary Mastery (Doctoral dissertation, IAIN Ponorogo).
- Rahmawati and Wijayanti, A. p. (2022). Implementing a Joyful learning strategy using Word Wall to Improve Reading Comprehension Skills. *Proceedings of Digital Literacy in Education and Science* 3, (March 2022): 33-35.
- Rosydiyah, A. A. (2022). The Effectiveness of Word Wall Online Games as Technology Based Learning on Grammar Quality among Junior High Students. *Budapest International Research and Critics Institute Journal*.
- Sugiyono, P. D. (2017). Metode penelitian bisnis: pendekatan kuantitatif, kualitatif, kombinasi, dan R&D. Penerbit CV. Alfabeta: Bandung, 225(87), 48-61.
- Sugiyono, P. D. (2019). Metode penelitian pendidikan (kuantitatif, kualitatif, kombinasi, R&D dan penelitian pendidikan). *Metode Penelitian Pendidikan*, 67.
- Swara, N. (2023). Word Wall as Learning Media to Increase Students' Reading Interest. *Journal of English Language Education*.
- Syam, R. (2015). The Effectiveness of Using Word Wall in Teaching Simple Present Tense at The First Year Students of Junior High School 1 Parigi. *ETERNAL (English, Teaching, Learning, and Research Journal)*, 1(2), 285-298.
- Triariani, R. (2020). 'The Effectiveness of Word Wall Media to Improve Students' Vocabulary Mastery in Learning English at The Seventh Grade of SMPN 1 Siman Ponorogo' (Doctoral dissertation, IAIN Ponorogo).