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Integrating Digital Wordwall Media In EFL Learning to Improve Student's Reading Comprehension

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ABSTRACT

This aim of this study is to find whether the use of digital wordwall media can improve reading comprehension of the grade eight students of SMPN 19 PALU. This study used a quantitative approach, using a quasi-experimental design, this type of research design consists of two group namely experimental group and control group. The population of this study consists of all eighth-grade students at SMPN 19 Palu, totaling 110 students. The researcher employed random sampling, with a total sample of 54 student, 24 students from class D as the experimental group and 30 students from class A as the control group. Data collection in this study used tests in the form of pre-tests and post-tests. After analyzing the data, it was found that the average score of students in the experimental class increased from 47.87 in the pre-test to 69.04 in the post-test. In addition, the control class showed an increase in the average score from 46.86 to 55.36 within the same time frame. The results indicated that the t-test value (2.655) exceeded the critical t-value (1.675). The findings support the acceptance of the alternative hypothesis, indicating that the integration of digital wordwall media has a significant positive impact on students' reading comprehension.

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1. Introduction

Reading is a complex and essential cognitive skill that plays a critical role in academic success and personal development. It involves more than just recognizing written symbols; it requires the ability to decode, comprehend, and interpret the meaning of texts. As stated by Richards and Schmidt (2010), reading is a multifaceted cognitive process that encompasses decoding written symbols and constructing meaning from them. Therefore, reading requires both recognition and comprehension abilities to enable effective understanding. Reading comprehension, specifically, is the ability to extract and construct meaning from written texts (Afriyeni & Zuriati, 2025; Ko et al., 2025; Mahdori et al., 2025). This skill not only supports students in understanding learning materials but also enhances their critical and creative thinking abilities. Strong reading comprehension is crucial for students, as it directly affects their academic performance and their ability to engage with information in daily life (Aswad et al., 2019; Rahman & Widyastuti, 2023; Suheri et al., 2025). However, based on preliminary study done by researcher, there are several problems faced by eight-grade students in reading comprehension. First, some students have a low level of learning motivation, which causes students' interest in reading to be very low. Second, teachers stated that most students only learn at school and rarely engage in literacy activity at home. In addition, students feel that learning in class is less interesting and less interactive so they are not enthusiastic about improving reading comprehension.

Based on *Kurikulum Merdeka*, which is a learning program in Indonesia that focuses on student needs and helps develop important skills like reading and thinking, eighth-grade students are expected to read narrative texts aloud and understand their meaning, purpose, and language features. However, several studies show that many students in this grade still have difficulty understanding different types of texts, such as narrative, descriptive, and recount texts. Despite its importance, many eighth-grade students still face difficulties in understanding texts due to low motivation, limited literacy exposure, and lack of engaging classroom strategies. Additionally, classroom learning was perceived as less interactive and engaging, which made students less enthusiastic about improving their reading comprehension. Saraswati et al., (2021) highlighted that these struggles include difficulties in grasping textual meaning, making inferences, recognizing vocabulary and sentence structure, and understanding context. Many students showed low motivation toward reading, which in turn reduced their interest in engaging with texts. Teachers also observed that most students only read during

school hours and rarely participated in literacy activities at home. Students' reading comprehension ability is a strong determinant of their academic achievement. As Mariskhana (2019) explained, students with poor reading comprehension often face challenges in understanding learning concepts and solving academic problems, which ultimately affects their performance. Therefore, an effective learning strategy or media is needed to improve students' reading abilities and academic success (Sachiya et al., 2025; Amalia et al., 2022; Yaumi et al., 2023).

One effective solution is the integration of digital learning tools, such as Wordwall, into the reading instruction process. Wordwall is a digital platform that allows teachers to create engaging, game-based learning activities tailored to students' needs. Swari (2023) noted that Wordwall helps create a fun and interactive environment, which improves students' reading engagement and comprehension. Furthermore, Rahmawati & Wijayanti (2022) emphasized that using such media can encourage students to become more active participants in the learning process. Previous research supports the effectiveness of technology-based learning media in improving students' motivation and comprehension skills. Jannah & Masnawati (2024) stated that digital tools in the classroom can boost students' interest in learning and enhance their creative thinking. In addition, Priscillia & Mufidah (2023) found that the use of Wordwall quizzes helped students recall vocabulary more easily and better understand text structure.

In developing material of narrative text using digital wordwall, the researcher use the steps conduct by (Aqliyah et al., 2024) In teaching narrative text, the teacher first explains its structure, social function, language features, and usefulness. Then, the teacher divides the students into groups and provides them with a narrative text to discuss. After that, the teacher shares a link to the Wordwall website and instructs the students to open the link, log in using their names, and complete a quiz game based on the text. Finally, the teacher monitors the students' results through the digital Wordwall platform.

Therefore, this study aims to examine the implementation of digital wordwall media as an interactive learning tool to improve reading comprehension among eighth-grade students at SMPN 19 Palu.

2. Methodology

This study adopted a quantitative approach using a quasi-experimental design to investigate the effect of digital *wordwall* media on the reading comprehension of grade eight students at SMP Negeri 19 Palu. This research design was proposed by Cohen, Manion and Marison (2007) as follows:

0_1	X	0_2
03		04

Where:

0_1	02	= Pre-test
02	04	= Post-test
X	= Treatment	

A random sampling method was utilized to select participants. The study involved two intact classes, each receiving different instructional treatments. The experimental group engaged in reading activities using digital *wordwall* media, whereas the control group received instruction through conventional teaching methods.

The study targeted all grade eight students at SMP Negeri 19 Palu during the 2024/2025 academic year, consisting of four classes with a total of 110 students. Using a random sampling technique, two classes were selected: Class VIII-D, which included 24 students, was assigned as the experimental group, while Class VIII-A, with 30 students, served as the control group. Consequently, the total sample size for this study was 54 students.

In this study, two versions of the test were administered: a pre-test, aimed at measuring students' reading comprehension before the treatment, and a post-test, designed to evaluate any improvement in reading after the treatment. A multiple-choice test and essay test was used as the assessment instrument.

3. Result and Discussion

3.1 Findings

Following the assessment of students' overall comprehension in both the control and experimental groups during the pre-test and post-test phases, the researcher proceeded with a more detailed data analysis by examining the deviation scores and their corresponding squared deviations for both groups. This analysis aimed to determine the extent of variation in student performance by comparing their scores from the pre-test to those obtained in the post-test. The deviation and square deviation are presented in the table below:

Table 1. The Students' Score and Deviation of Experimental Group

No	Initials	Pre-Test Score	Post-Test Score	Deviation	Square Deviation
1	A	36	63	27	729
2	AM	60	70	10	100
3	APA	53	66	13	169
4	AR	53	73	20	400
5	ARR	43	63	20	400
6	DS	66	86	20	400
7	F	53	76	23	529
8	H	40	60	20	400
9	HB	53	70	17	289
10	IL	63	76	13	169
11	IN	46	70	24	576
12	KP	46	63	17	289
13	KPA	70	86	16	256
14	MAAP	53	60	7	49
15	MABS	60	76	16	256
16	MAR	50	70	20	400
17	MI	36	60	24	576
18	MOPP	60	70	10	100
19	MRRD	53	73	20	400
20	OLS	43	70	27	729
21	R	50	70	20	400
22	S	26	60	34	1156
23	SN	56	63	7	49
24	TUM	46	63	17	289
	TOTAL	**1149**	**1657**	**422**	**9110**

The data shows an overall improvement in students' scores from the pre-test to the post-test, with a total deviation of 422 points across 24 participants. The total square deviation is 9,110, indicating a considerable variation in individual progress, with some students showing significant gains of up to 34 points.

Table 2. The Students' Score and Deviation of Control Group

No	Initials	Pre-Test Score	Post-Test Score	Deviation	Square Deviation
1	AAA	63	70	7	49
2	AAD	50	56	6	35
3	AAM	50	60	10	100
4	ABM	50	50	0	0
5	ACP	43	46	3	9
6	AGM	53	63	10	100
7	AI	30	36	6	36
8	AU	46	50	4	16
9	CR	70	73	3	9
10	FR	36	60	24	576
11	GR	30	36	6	36
12	I	70	70	0	0
13	IR	60	63	3	9
14	KA	56	63	7	49
15	MAA	43	43	0	0
16	MFK	30	36	6	36
17	MI	60	63	3	9
18	MRAR	30	43	13	169
19	MRAR	50	56	6	36
20	MSR	63	70	7	49
21	NAY	53	60	13	49
22	NRF	50	53	3	9
23	PR	56	70	14	16
24	R	36	53	17	289
25	RS	46	53	7	49
26	S	43	50	7	49
27	SDA	63	86	23	529
28	SS	53	63	10	100
29	SS	63	70	7	49
30	Z	40	46	6	36
	TOTAL	**1406**	**1661**	**231**	**2498**

Based on the table above, the experimental group achieved a pre-test mean score 47.87 and the control group's mean score was 46.86. After the treatment, the experimental group attained a post-test mean score of 69.04, whereas the control group recorded a lower mean of 55.36. The difference between the two groups is also reflected in the total deviation scores, where the experimental group achieved a score of 422, which is notably higher than the figure obtained by the

control group, which was 231. Furthermore, the sum of squared deviations for the experimental group amounted to 9110, exceeding the amount observed in the control group, which was 2498. These findings suggest that the use of *wordwall* media had a substantial impact on the distribution of students' scores, particularly in enhancing reading comprehension performance. Moreover, the statistical test conducted at a 0.05 level of significance with 52 degrees of freedom revealed that the obtained t-value (2.655) exceeded the critical t-table value (1.675). This result confirms the acceptance of the alternative hypothesis (Ha), indicating that the use of *wordwall* in teaching students' reading comprehension. Accordingly, the null hypothesis (H_0) was rejected.

In light of the findings derived from data analysis, it can be inferred that the use of the digital *wordwall* strategy significantly enhanced the reading comprehension skills of eighth-grade students at SMP Negeri 19 Palu, particularly in literal level comprehension of the reading. The results indicated a marked improvement in the students' reading comprehension scores when using digital *wordwall* in teaching compared to conventional instructional methods.

3.2 Discussion

This study aimed to examine the effectiveness of digital *wordwall* media in enhancing the reading comprehension of eighth-grade students at SMPN 19 Palu. Utilizing a quasi-experimental method, the research involved an experimental group, which engaged in reading activities using *Wordwall*, and a control group, which received conventional instruction. A pre-test was conducted to assess the students' initial reading comprehension levels, followed by four treatment sessions. The treatment demonstrated how digital wordwall media could be integrated into classroom activities to support students' learning experiences.

The findings revealed that digital *wordwall* media significantly improved students' reading comprehension, particularly in understanding the literal aspects of narrative texts. The interactive templates enabled greater classroom engagement and helped students retain vocabulary more effectively. By combining visual appeal and game-based elements, the platform not only enhanced literal comprehension but also fostered deeper cognitive involvement with reading materials.

Through its variety of educational games such as matching, quizzes, and word searches, *Wordwall* motivated students and encouraged active participation in reading activities. These interactive and visually engaging features facilitated students' understanding of texts, enriched their vocabulary, and improved their ability to comprehend literal information. Consequently, *Wordwall* proved to be not only an engaging tool but also an effective medium for supporting overall reading proficiency.

Moreover, this study's results align with previous research that highlights the pedagogical benefits of *wordwall*. Studies by Priscillia & Mufidah (2023) emphasize that *Wordwall's* templates, such as online quizzes, promote active engagement by increasing students' focus and enthusiasm during reading tasks. This interactive approach supports learners in processing reading content more attentively and meaningfully. Similarly, Dila et al., (2024) demonstrated that *wordwall* helps students recall word meanings more quickly, which plays a crucial role in vocabulary development and improving comprehension of narrative texts.

In addition, Widhiatama & Brameswari (2020) showed that the use of digital *Wordwall* facilitates formative assessment, as its built-in features allow teachers to instantly access students' performance data and evaluate their abilities more effectively. These findings reinforce the conclusion that *Wordwall* is a practical, interactive, and pedagogically beneficial tool for teaching reading comprehension.

Despite these encouraging outcomes, the study encountered some limitations. The limited time frame allowed for only four meetings instead of the intended six, which may have restricted the full application of the media. Additionally, the researcher was unable to access premium *Wordwall* templates, relying only on the free versions, which constrained the variety of activities. Lastly, the research focused solely on students' literal comprehension, suggesting the need for future studies to explore higher levels of reading comprehension and the broader impact of digital *Wordwall* media on academic achievement.

4. Conclusion

Based on the results of data presented in the previous chapter, it can be concluded that the implementation of digital *wordwall* media significantly enhanced the reading comprehension of grade eight students at SMPN 19 Palu. This finding is supported by the comparison between pre-test and post-test scores, where the calculated t-counted (2.665) is higher from the t-table (1.675). Therefore, the hypothesis proposed in this study is accepted. In addition, the findings

indicate that digital *wordwall* serves as a beneficial tool in assisting students to comprehend narrative texts. In conclusion, the integration of digital *wordwall* media in the learning process can be considered an effective alternative to improve the reading abilities of grade eight students at SMP Negeri 19 Palu.

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