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Technology-Enhanced Project-Based Learning: The Role of Wordwall in Reading Comprehension Classes

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A B S T R A C T

Reading comprehension is a basic skill plays an important role in students' academic success and overall language proficiency. This study aims to find out the effect of using technology Wordwall media on supported PjBL strategy on students' reading comprehension. This study is a quantitative research used a quasi-experimental design. The data obtained has been analyzed using SPSS version 25, including descriptive statistics, normality, homogeneity and an independent sample t-test. The results of this study showed that PjBL assisted by Wordwall significantly had a positive impact on students' reading comprehension skills. The sig (2-tailed) shows the result is 0.00 which is smaller than 0.05 ($\alpha < .05$). The results of the pre-test and post-test comparisons of the control group show that PjBL and Wordwall influence reading comprehension. The experimental group obtained an average pre-test score of 57.50 and a post-test score of 80.00, which means an increase of 22.50 points.

Keywords: *Technology, Project-Based Learning, Wordwall, Reading Comprehension, English*

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INTRODUCTION

Mastering reading comprehension is very important in learning English as it helps students understand a text, improve their vocabulary, and enhance their ability to think critically. Yengusie, et al., (2025) defined reading comprehension as the ability to comprehend, understand, and extract the information and meaning that is presented in written texts. Thus, learning reading comprehension requires students to interact with texts, which provides them with the opportunity to expand their vocabulary. In learning reading comprehension, students are presented with complex texts that train their critical thinking skills to understand texts by receiving, processing, making conclusions, and conveying the meaning and essence of the text.

According to William et al., (2025), in elementary education, reading comprehension is an important component that serves as the foundation for academic achievement in all subjects. However, reading comprehension is considered one of the most complex learning activities (Kendeou et al., 2016; Yengusie et al., 2025). According to Kendeou et al., (2016), complexity in reading comprehension requires theory to explain cognitive and linguistic processes, but this complexity hinders reader accuracy. Researchers thus proposed models and frameworks that focused on the components of reading comprehension. Kendeou et al., (2016) describe several skill components that predict reading comprehension, such as word decoding, vocabulary knowledge, reading fluency, prior knowledge, language comprehension, comprehension monitoring, and working memory. Meanwhile, William et al., (2025) explains that elementary school students face various challenges in reading comprehension, including limited vocabulary, difficulty in drawing conclusions, weak decoding skills, and a lack of interest in reading materials.

Considering the fact that reading comprehension is not easy and complex, special treatment is needed to help students hone their reading comprehension skills and overcome

the difficulties. Learning reading comprehension are requires students to focus and actively engage in learning process and requires them to think critically in understanding a text. The appropriate learning models that allows students more actively involved in the learning process is Project-Based Learning (PjBL) strategy. PjBL refers to a teaching strategy that uses projects by encouraging student autonomy, student-centered teaching, collaborative learning, and learning through activities or projects (Mali, 2016). In its implementation, PjBL views instructors as facilitators and emphasizes student-centered learning, while students work actively in groups that requires them to teach and help each other and also individually form and process their own knowledge (Lestari et al., 2023). In addition, the important role of implementing PjBL to overcome difficulties in reading comprehension is that students can be actively engage in learning process by work together in groups to share ideas, discuss and solve problems or understand a reading together.

Project-based learning (PjBL) allows students to directly encounter problems that encourage them to think critically, understand texts in depth, improve their vocabulary, share knowledge, and practice drawing conclusions from texts that they understand, both individually and in groups. PjBL is considered an innovative learning model for students' reading comprehension that requires detailed strategies for deep understanding. In line with Sudhata & Agung (2021) explanation that PjBL involves students in the creation of a product or presentation that exposes them to problem-solving, decision-making, and investigative activities over a long period of time on complex project.

In the 21st century, technology is increasingly being used to support the learning process. According to (Swari, 2023), the use of technology can improve students' imaginative abilities, motivate them, and arouse their enthusiasm for learning. This is supported by the opinion of (Tinh et al., 2024) that technology creates an attractive and dynamic environment through the use of multimedia, gamification, and social learning platforms so that, as a result, children are encouraged to work together and learn independently. The use of technology to support learning strategies allows students to become more interested and actively involved in the learning process. Technology plays a role in overcoming difficulties in reading comprehension, one of which is through fun and interactive online learning media that attracts students and gets them actively involved in learning.

One of the interesting and fun online learning media is Wordwall that has many advantages, such as various templates, attractive displays, and enjoyable interactions, so that students are interested in actively participating in learning. Wordwall is proven as an effective learning media to improve students' reading skills. Research by Rahmawati & Wijayanti (2022) found that the implementation of fun learning strategies using Wordwall significantly improve students' reading comprehension skills. This media is designed with various features that support the learning process to be more interesting, fun and can build students learning motivation.

As a supporting media for Project-Based Learning (PjBL) strategy, Wordwall is an interactive learning media that can be used to interest students in leaarning reading comprehension through various educational games tailored to the project material. Wordwall can also help train social and cognitive ability such as cooperation, communication, and problem solving in accordance with the PjBL strategy using the variety of games available. Wordwall facilitates project-based learning by enhancing the effectiveness and engagement of the learning process when used with PjBL. Learning reading comprehension using the PjBL learning strategy and Wordwall can provide students with the opportunity to strengthen their understanding of concepts in texts through active, independent, and group involvement, as well as through an enjoyable process.

The implementation of Wordwall to support PjBL is expected to have an impact on students' reading comprehension skills. A number of previous studies provide a strong foundation for this research, by highlighting various relevant findings and approaches. Such as research conducted Jingga & Abdullah (2024) found the implementation of Project-Based Learning (PjBL) assisted by storyboard media significantly improve students' reading

comprehension. In this study researcher explained the data that shows the implementation of PjBL assisted by storyboard media was significantly improve students' reading comprehension ability. The results also highlight the potential of PjBL with storyboard media as an effective instructional approach to enhance students' reading comprehension ability.

In another study, (Rahayu et al., 2024) had similar findings. The use of PjBL assisted by visual media can improve students' reading comprehension ability and encourage students' active involvement in the learning process. In addition, the implementation of PjBL assisted by visual media has an impact on student activeness with pay more attention, listen carefully while teacher explanain, answering actively ask questions to the teacher or another students.

On the other hand, the use of Wordwall media also has significant impact on the learning process. Research conducted by (Rahayu et al., 2024), shows there is an effect on the use of Wordwall media on improving students' reading comprehension ability on narrative text. The researcher explained that Wordwall media with various creations in it can create learning that is not boring. Researcher also emphasized that Wordwall can provide a more active learning experience and is easy for students to follow.

Findings from research conducted by Susila et al., (2025) showed that Wordwall media significantly improved students' reading comprehension, especially in the ability to understand literal aspects of narrative text. The findings showed the average score on the experimental class had significantly increased from the pre-etst average score of 47.87 to 69.04 in the post-test. Researcher also explained that using Wordwall media motivated students to actively participate in reading activities. This research shows that Wordwall media is an effective media for reading comprehension skills.

The results of Qonita & Handayani's (2023) research showed that PjBL assisted by Wordwall significantly effect students' critical thinking ability. The findings are based on a comparison of students' scores who were treated with PjBL assisted by Wordwall, which increased with the highest score of 94 and the lowest score of 63, while students who were not treated got the highest score of 88 and the lowest score of 50. The researcher highlighted the application of PjBL assisted by Wordwall, students were considered more enthusiastic and confident in exploring information and better understanding learning. In addition, highlighting the results of improving critical thinking skills, students' communication skills have also improved. This is based on the role of PjBL, which requires students to work, interact, and discuss in groups.

Based on previous research, there is still a significant gap in the use of Wordwall media technology in supporting project-based learning strategies for elementary school students' reading comprehension skills. Research by Jingga & Abdullah (2024) , which examines the implementation of PjBL assisted with storyboard on students' reading comprehension and research by Rahayu et al., (2024) that applied PjBL assisted by visual media on students' reading comprehension, while researchers are interested in exploring the effect of PjBL implementation assisted by Wordwall media. On the other hand, research by Rahayu et al., (2024) and research by Susila et al., (2025) only discusses the effect of Wordwall media on students' reading comprehension. Research by Qonita & Handayani (2023) examined how PjBL assisted by Wordwall can improve students' critical thinking, while researchers are interested in examining the effect of PjBL assisted by Wordwall on students' reading comprehension. To fills the gaps, this study focuses on the effect of using PjBL assisted by Wordwall media on reading comprehension skills for elementary school students.

This study's objective is to examine the effect of project-based learning (PjBL) assisted by Wordwall on students' reading comprehension ability. The fact that technology is starting to be widely used in education makes it important to explore how a digital web such as Wordwall in collaboration with a pedagogical approach such as PjBL can have an impact on students' reading comprehension. Therefore, this study aims to find out if there is an effect on reading comprehension between students who use project-based learning assisted by Wordwall media and students who do not. The research question of this study is "is there any

significant effect on students' reading comprehension skills between students who use technology Wordwall media to support PjBL and who do not?"

METHOD

This study use a quasi-experimental design and a quantitative methodology to examine the effect of Wordwall media on supporting Project-Based Learning (PjBL) on students' reading comprehension skills. According to Sugiyono (2016, p.72), experimental research is a research method used to find the effect of a specific treatment on others under controlled conditions. The selection of subjects is not randomized, although there is a control group in quasi-experimental research, it cannot fully function to control external factors that affect the implementation of the experiment (Sugiyono, 2016, p. 77).

This study was conducted at MIS Al Hayatul Islamiyah, an Islamic elementary school located in a subdistrict of Malang City. The population consisted of fifth-grade elementary school students, with a total of 40 students divided into class 5-A with 20 students (as the experimental class) and class 5-B with 20 students (as the control class). Two students in the control class and one student in the experimental class were not included as samples in this study because they were not actively involved in the study due to certain obstacles. The sampling technique in this study used purposive sampling, where sampling of population members was carried out by considering the needs and objectives of the study (Sugiyono, 2016: 85).

This research uses tests as an instrument to measure the extent of students' reading comprehension skills. A test is a measuring instrument that has objective standards so that it can be used to measure and compare the state of psychological or individual behavior (Wulan & Rusdiana, 2015). The type of test used in this study was a reading test with descriptive texts discussing animals, places, hobbies, activities, and historical days. The questions used were multiple choice questions, with 20 questions for the pre-test and 20 questions for the post-test. The pre-test and post-test sheets used different topics to avoid invalidating the students' achievements due to their familiarity with the reading material. A pre-test is used to measure the extent of students' reading comprehension skills before treatment, and a post-test is used to measure the extent of students' reading comprehension skills after treatment. The specification of the test were described in Table 1 for the pre-test and Table 2 for the post-test.

Table 1. Table of Specification of Pre-test

Content/Topic	Cognitive Level	Number of Questions	Test Placement
A. Classify and explain main idea / facts, identify general information and details in the text	Understand	10	1, 2, 3, 5, 6, 7, 9, 10, 11, 12
B. Classify, identify, define, duplicate, memorize the detail comprehension / specific information on the text	Understand, Remember	6	4, 8, 17, 18, 19, 20
C. Use, execute and interpret vocabulary and contextual meaning	Apply	4	13, 14, 15, 16

Table 2. Table of Specification on Post-test

Content/Topic	Cognitive Level	Number of Questions	Test Placement
A. Classify and explain main idea / facts, identify general information and details in the text	Remembering	10	1, 2, 4, 5, 7, 9, 11, 12, 13, 14
B. Classify, identify, define, duplicate, memorize the detail comprehension / specific information on the text	Remembering and Understanding	6	3, 6, 8, 10, 19, 20
C. Use, execute and interpret vocabulary and contextual meaning	Understanding and Application	4	15, 16, 17, 18

Before being used as instruments in the research, the questions were tested for validity and reliability. In measuring the validity of the reading comprehension test questions, content

validity was used so that the test was adjusted with the syllabus and lesson plan for relevance and clarity of content. Then, in measuring the reliability of the reading comprehension test questions, the test questions are tested on another student who is not participating in the research. From 60 questions that were tested for validity and reliability, 40 questions were valid and reliable.

Research Procedures

In data collection techniques, researchers focus on several data related to this study. The data were the results of student learning taken from pre-test and post-test processes, it measures students achievement before and after the application of the Wordwall-assisted PjBL strategy. The process of collecting the data in this study and for the research procedure is presented in Figure 1.

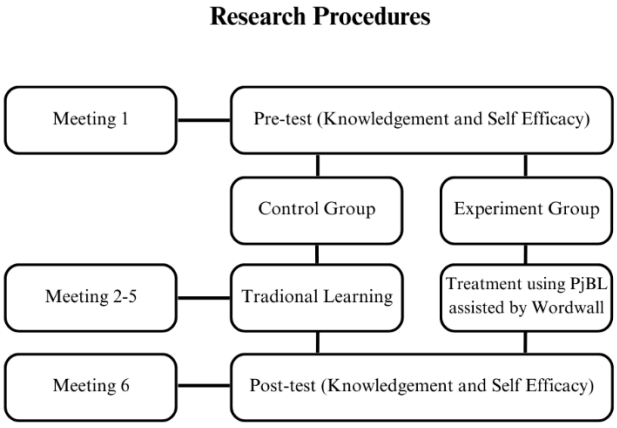

Figure 1. Research Procedures

As shown in Figure 1, at the first meeting a pre-test was conducted. The pre-test was given to examine students' initial ability in reading comprehension before the treatment. After conducted the pre-test, the researcher gave the treatment to the experimental group with the application of project-based learning assisted by Wordwall media. Treatment was carried out during the learning period in four meetings. The duration of each meeting is seventy minutes.

Students will be assigned to work on projects in groups. The project used in this study is a project created to help students practice their reading comprehension. This project has been adjusted to the research objectives. The form of the project used is a customized reading presentation and there are two types of tasks that must be completed by the group. Each group will get a different text to read and understand. The first task to be completed by each group is to answer each question displayed on the Wordwall. The first task here aims to train students' reading skills before moving on to the second project as an exercise in deepening their reading comprehension. In the second project, students are assigned to read, understand and explore ideas in the text and then express ideas, discuss and determine steps to work on the assigned tasks and compile project results in groups. After the sequence of assigned projects was completed, the groups presented the project results in front of the class. This treatment was repeated for four meetings with the same type of text for consistency, namely descriptive text with the same topic but used different text content to train students' reading comprehension.

On the last meeting, the post-test was conducted to measure students' abilities after receiving treatment. The difference in post-test scores between the control group and the experimental group is the result of the data collection process and then proceed to be tested and analyzed.

Data Analysis

The data obtained from the research results were analyzed using descriptive statistics. The data obtained are the pre-test and post-test scores of the control and experimental groups. The data obtained will be tested for normality and homogeneity as prerequisites for parametric testing. Next, the post-test scores of both groups will be compared using an

independent sample t-test to determine whether there is a difference between students who received treatment, i.e., experimental class, and students who did not received treatment, i.e., control class. The data analysis in this research was conducted using descriptive statistical techniques through the Statistical Package for Social Sciences (SPSS version 25). To calculate descriptive statistics (mean, standard deviation), evaluate baseline performance, and measure post-intervention progress, pre-test and post-test scores were entered into SPSS and analyzed.

FINDINGS AND DISCUSSION

Findings

The research data obtained from the data collection process using pre-tests and post-tests shows the initial abilities of students before and after the treatment. The results of both tests illustrate the development of students' reading comprehension abilities. In the pre-test, both groups showed low initial abilities. After the treatment process, the results of the post-test showed improvement in both groups. The pre-test and post-test results for both groups are described as follows:

Pre-test Score

Control Group Pre-Test Score

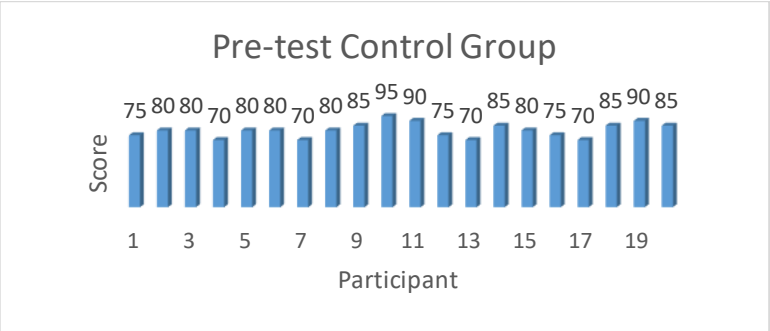

Figure 2. Control group pre-test score

Figure 2 shows the pre-test score data for the control class, indicating that the lowest score was 40 and the highest score was 80.

Experimental Group Pre-Test Score

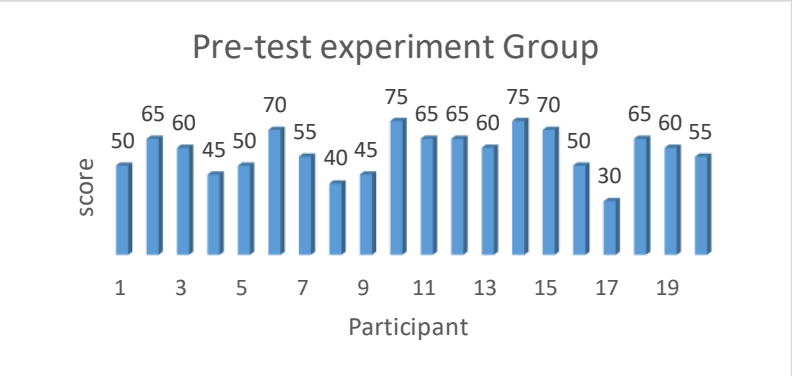

Figure 3. Experiment group pre-test score

Figure 3 shows the pre-test score data for the experimental class, indicating that the lowest score was 30 and the highest score was 75.

Based on the pre-test scores above, the data from both groups showed differences in the lowest and highest scores. The control group obtained higher pre-test scores than the experimental group. These scores were obtained before the treatment was administered, so the results of this study are not entirely determined by the pre-test scores. This study was conducted to determine the effect of using PjBL assisted by Wordwall on students' reading comprehension, so it requires a comparison between the post-test scores of both groups after the treatment was conducted.

Post-test scores

Control Group Post-Test Score

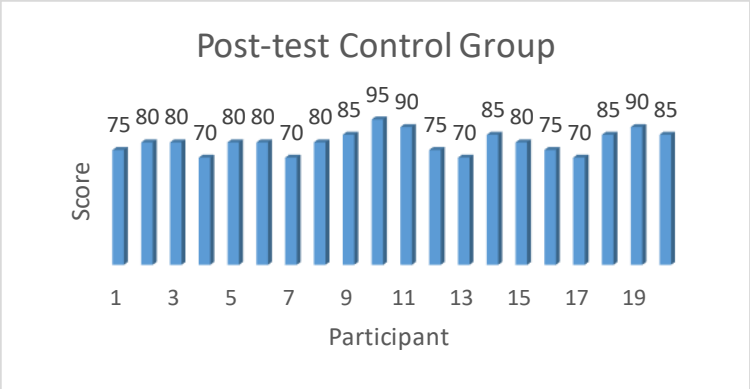

Figure 4. Control Group Post-test

Figure 4 shows the post-test scores of control class, indicating that the lowest score was 55 and the highest score was 85.

Experiment Group Post-Test Score

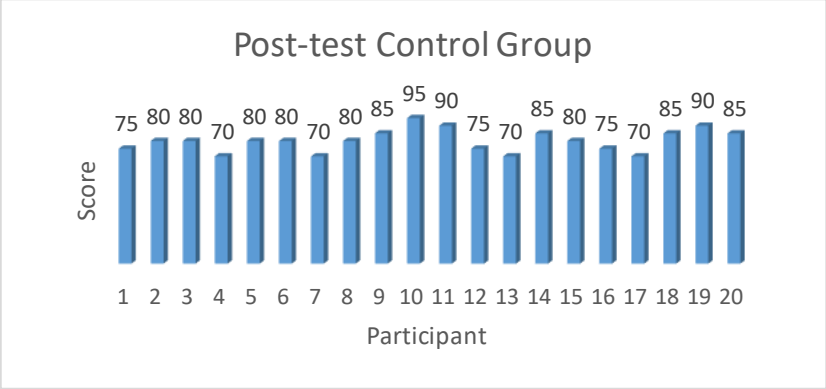

Figure 5. Experiment Group Post-test

Figure 5 shows the data of post-test scores from the experimental class, indicating that the lowest score was 70 and the highest score was 95.

Based on the description of the post-test scores above, it shows that both groups showed an increase from the pre-test scores. After being given treatment, the experimental class showed a significant increase in scores. Unlike the pre-test results, the post-test results showed that the experimental class obtained higher scores than the control class, as indicated by the highest and lowest scores exceeding those of the control class. The results of the pre-test and post-test are data obtained from the data collection process in this study

Descriptive Analysis

After collecting data through the pre-test and post-test process, the data were investigated through descriptive statistics. The results of the data analysis from the pre-test and post-test are organized in table 3.

Table 3. Descriptive Statistics

Dependen Variable		N	Minimum	Maximum	Mean	St. Deviation
Pre-test	Control	20	40	80	63.25	9.904
	Experiment	20	30	75	57.50	11.976
Post-Test	Control	20	55	85	69.00	7.539
	Experiment	20	70	95	80.00	7.255

Table 3 is the result of the statistical calculation of the data which shows the lowest score of the control group pre-test is 40 and the highest score is 80 with an average of 63.25 while the lowest score of the experiment group pre-test is 30 and the highest score is 75 with an average of 57.50. The lowest score of the control group post-test is 55 and the higher score is 85 with an average of 69.00 while the lowest score of the experiment group post-test is 70 and the higher score is 95 with an average of 80.00.

Normality

The data collected was analyzed to ensure the normality of the data as a requirement before analyzing the Independent Sample t-test. The result of normality test are presented in Table 4.

Table 4. Normality of All Scores

	Shapiro-Wilk		
	Statistic	**Df**	**Sig.**
Pretest A (Control)	.949	20	.356
Postest A (Control)	.926	20	.132
Pretest B (Experiment)	.960	20	.540
Postest B (Experiment)	.933	20	.176

Table 4 shows the results of the Sig. value in the pre-test of the control class was 0.356 and the experimental group was 0.540, while in the post-test of the control group was 0.132 and the experimental class was 0.176. The results of the Sig. value that has been explained show the pre-test and post-test values exceed the alpha value of 0.05 (α=0.05) which indicates that the data is normally distributed.

Homogeneity

After the data was normal, Homogeneity test was conducted as the second requirement that must be completed before analyzing the Independent Sample t-test. The test of homogeneity used is the Levene Statistic as shown in Table 5.

Table 5. Homogeneity of Variance

Levene Statistic	**Df1**	**Df2**	**Sig.**
2.497	3	76	.066

Table 5 represent the results of the homogeneity test with a significance value of 0.066. The data analysis results of the homogeneity test are said to be homogeneous if they are higher than 0.05. Based on this explanation, then it can be concluded that the results of the variant analysis of the data are homogeneous.

Independent Sample T-Test

To evaluate whether there is a significant effect on students' reading comprehension ability between students who use Wordwall media with project-based learning and students who do not, an Independent Sample t-test analysis was conducted.

Table 6. Independent-Sample Test

Groups	**Mean**	**Std. Deviation**	**Sig. (2-tailed)**	**α**	**N**
Control	69.00	7.539	.000	.05	20
Experiment	80.00	7.255			20

Table 6 shows the results of the Independent sample t-test calculation. The sig (2-tailed) shows the result is 0.00 which is smaller than 0.05 ($\alpha < .05$) so H_0 is rejected and H_1 is accepted. The findings of the post-test scores of the two groups have significant differences. As shown in the table, The control group mean score was 69.00, meanwhile the experimental group mean score was 80.00. The mean score of the experimental group was higher than the control group, which indicated that the treatment given to the experiment group using technology Wordwall to support project-based learning had an influence on students' reading comprehension.

Discussion

The results of this study prove that the implementation of Project-Based Learning supported by Wordwall has an impact on students' reading comprehension. This conclusion is based on the results of the mean score of post-test on the experimental group (M = 69.00), which were higher than those of the control group (M = 80.00). The results of the descriptive statistical analysis indicate that the experimental group experienced a significant increase in the mean score from 57.50 on the pre-test to 80.00 on the post-test, with an increase of 22.50 points. Meanwhile, in the control group, the mean score on the pre-test was 63.25, and on the post-test it was 69.00, with an increase of only 5.75 points The results of the independent sample t-test analysis showed that the two groups had a significant difference with p = 0.000

($p < 0.05$). The independent sample t-test analysis revealed a significant difference between the two groups, with $p = 0.000$ ($p < 0.05$).

In the pre-test, which assessed initial abilities, the control class demonstrated superior abilities compared to the experimental class. The control class obtained an average score of 63.25, with the lowest score being 40 and the highest score being 80. Meanwhile, the experimental group obtained an average score of 57.50, with the lowest score being 30 and the highest score being 75. After receiving the treatment, the experimental group showed a significant improvement in post-test scores. The experimental group achieved an average post-test score of 80.00, with the highest score being 95 and the lowest score being 70, while the control group only achieved a lowest score of 55 and a highest score of 85.

An independent sample t-test reinforced the findings and confirmed the highly significant difference of the two groups. With these results, this study is indicated to contribute in expanding the existing literature by emphasizing the effect of using Project-based Learning and Wordwall media on students' reading comprehension ability. The results of the assessment based on content/topic and cognitive level described in Table 1 Table of Specifications in the pre-test and post-test are as follows.

Table 7. Percentage of Correct Answer based on ToS

Content/ Topic			A	B	C
	Number of Students	Number of Questions	Percentage of Correct Answer		
Pre-test	20	20	60.5%	55.83%	52.5%
Post-test	20	20	78.5%	85.83%	75%
Total increase			18%	30%	22.5%

Table 7 describe the calculation of correct answers in the pre-test and post-test results of the experimental class. The researcher concluded that the students' reading comprehension improved significantly in the three aspects listed in the Table of Specifications. A total of 20 students in the experimental class answered 20 pre-test questions and 20 post-test questions, resulting in 400 pre-test answers and 400 post-test answers. In content A, out of 10 questions, there were 120 correct answers on the pre-test, which then increased to 157 correct answers on the post-test. In content B, out of 6 questions, there were 67 correct answers, which increased to 103 correct answers in the post-test. Finally, in content C, out of 4 questions, there were 42 correct answers in the pre-test and 60 correct answers in the post-test. The results of calculating the percentage increase in reading comprehension showed that content B had the most significant increase, with the percentage of correct answers in the pre-test at only 55.83%, then increasing by 30% to 85.83%. In second place, content C experienced an increase of 22.5% from the pre-test with 52.5% correct answers, then to 75% correct answers on the post-test. In last place and with the lowest number of questions was content A, which only showed an increase of 18%, with a correct answer percentage on the pre-test of 60.5% and on the post-test of 78.5%. Although there was an increase, the reading comprehension aspect in content A, namely Classify and explain main ideas/facts, identify general information and details in the text, needs to be further refined and paid attention to when studying reading comprehension.

The fact that a significant increase occurred in reading comprehension skills in the experimental group which given treatment using PjBL as a strategy and Wordwall as media. The improvement was considered very high than the improvement of the control class. The results obtained are in line with previous research by Jingga & Abdullah (2024) and Rahayu et al., (2024) that showed the implementation of PjBL had a significant effect on improving students' reading comprehension skills.

Some students may experienced difficulties during the first meeting when working in groups. These problems can be overcome by getting them used to adapting to the tasks they have to complete. In line with the PjBL function, which is considered effective in develop students' collaboration skills (Saputri & Maura., 2024). The researchers observed each process and development of the students until they began to get used to collaborating and working actively in groups.

On the other hand, the implementation of Wordwall as supporting media creates an interesting and fun classroom atmosphere that makes students are more active in participating in the learning process. In accordance with the study conducted by Rahayu et al., (2024) and Susila et al., (2025) which both show that Wordwall as a fun game-based learning media can have an impact on students' reading comprehension skills. Both two studies also explain that Wordwall can increase student activeness in the learning process.

Student interest in working on projects was also the main focus of the researchers. Wordwall contributed to the implementation of PjBL as a tool to attract students' interest, encourage them to actively participate in learning, and train their reading skills before working on projects. In this study, Wordwall also supported the training of teamwork skills through fun activities before they embarked on the project.

Researchers identified the short-term benefits of combining PjBL and digital media such as Wordwall, with students becoming actively engaged in learning. Student interest and the learning situation in learning a second language are important things to consider, especially since elementary school is the right time to provide second language learning. Therefore, the implementation of PjBL is beneficial in order for students to be actively involved and avoid a monotonous learning process, while customized learning media such as Wordwall can help attract students' interest to be actively involved in learning with fun media.

These findings are in line with John Dewey's theory of constructivism, which states that knowledge is constructed through experience and active interaction. John Dewey emphasizes experience-based learning students-centered and real-world problems, thereby encouraging critical thinking, social collaboration, and problem solving to build understanding.

In implementing Wordwall with PjBL in reading comprehension, researchers encountered difficulties related to the time required to complete the project. Further research is recommended to allow more time or adjust the project so that learning outcomes and project completion can be maximized.

Not only was successful in improving learning outcomes, the combination of PjBL strategy that trains students to think critically, socialize, be responsible with Wordwall that attracts students' interest in learning so that they can be actively engage in the learning process is a good alternative. In addition, getting a good learning experience is also the main point for teachers to not only pay attention to the materials and questions used, but how students learn, what they get and what they feel during learning process. Not every student's ability can emerge because of just learning, but exploring students' abilities by providing fun learning using adapted strategies and media can be a better teaching and learning experience.

CONCLUSIONS

Based on the results of the findings and discussion, the conclusion in this research is the use of technology Wordwall on supporting project-based learning strategy has a significant positive effect on reading comprehension skills of fifth grade students of MIS Al Hayatul Islamiyah. This is shown based on the results of an independent sample t-test sig (2-tailed) analysis, which is 0.00, smaller than 0.05 ($\alpha < .05$), indicating that there is an effect from the treatment given to the experimental group. Based on these findings, teachers should provide students with a good learning experience by engaging them in interesting and enjoyable learning activities. Helping students to actively participate in learning is a key point that must be considered, especially in reading comprehension learning, which is considered complex and difficult to learn. Future researchers are encouraged to expand their studies with larger samples and explore new aspects not covered in this research. Additionally, future researchers should consider the time allocated for implementing PjBL with Wordwall in reading comprehension. Allowing for a longer timeframe could enable each stage of the project process to be more optimized. Finally, the researcher hopes this study can assist readers, students, teachers, educational institutions, and future researchers.

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