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Using Digital Game Wordwall in Supporting English Vocabulary Mastery

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Abstract

English, a global language, weaves through education, business, relationships, technology, and science. Mastering vocabulary is pivotal for English proficiency. Utilizing media for vocabulary learning engages and challenges students, rendering the process more enjoyable and effective. This study looks into the effectiveness of using the digital game Wordwall to assist English Vocabulary Mastery at SMP Negeri 8 Samarinda. This study is being undertaken with the eighth graders of SMP Negeri 8 Samarinda. In this study, the researcher uses a mixed method with quasi-experimental design to compare two classes. The focus of this research is eighth grade, namely VIII C and VIII D. VIII D is the experimental class with 21 students and VIII C is the control class with 27 students. The quantitative data is acquired using multiple choice and fill-in-the-blank tests. Qualitative data is gathered through interviews. The results suggest that Wordwall media is effective in improving the vocabulary. Furthermore, Wordwall is a game/application that adds excitement, enthusiasm, and enjoyment to the learning environment. Wordwall entices students to use the application because to its appealing interface, simple gameplay, and broad selection of games.

Keywords: Vocabulary; Vocabulary Mastery; Digital game; Wordwall

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1. Introduction

English, as an international language, is a widely spoken language around the world. It is crucial in communication since it connects numerous aspects of life, including education, business, relationships, technology, science, and many more (Nofita T, 2022). This is the foundation for English education, particularly in Indonesia, from elementary school to university level. To learn English, four abilities must be mastered: speaking, writing, reading, and listening (Robinson & Croft, 2023). Those abilities are critical to develop because they are interconnected and complement one another. However, there is another vital part to learning English: vocabulary mastery.

Vocabulary is the primary component of language proficiency and serves as a tool for mastering English abilities (reading, listening, writing, and speaking) (I Gede Heri Sanjaya,

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2022). Students gain a better understanding of English by vocabulary. It would be difficult for a student who lacks vocabulary mastery to grasp spoken or written English. That is why vocabulary mastery is so important when learning English. According to Hartaningsih (2022), the most common vocabulary challenges experienced when learning English are spelling, pronunciation, and picking the proper words to write and speak. According to an observation at SMP Negeri 8 Samarinda, the low achievement in vocabulary mastery observed in the 8th-grade class stems from their limited engagement with technology within the realm of education, as they have not been exposed to or incorporated technological tools and platforms during the learning process.

Games and other forms of media can encourage students and make learning more enjoyable for them (Aini, 2020). Using media in learning makes students feel more engaged and challenged, making the learning process more effective. Wordwall is an educational and engaging game designed to help students enhance their vocabulary. Wordwall is a website-based game program that allows you to create learning media such as quizzes, matchmaking, matching, anagrams, word randomization, word search, grouping, and so on (Ariwibowo, 2020). Another definition, Wordwall, an educational website, offers interactive vocabulary development activities such as information and picture matching, a wheel of fortune, quizzes, and riddles (Çil, 2021).

Syamsidar (2023) has already done relevant studies on using Wordwall to increase junior high school students' vocabulary proficiency. They investigated the impact of Wordwall on vocabulary mastering when learning English. The object was eighth grade level. The study found that Wordwall improves vocabulary mastering by 73.5% or is helpful in learning English. Furthermore, Fatimah (2020) conducted research on the application of Wordwall to increase junior high school students' vocabulary mastery. The study's findings revealed an increase in students' vocabulary competence, as seen by the test scores. In conclusion, both studies that have been coducted by Syamsidar and Fatimah revealed that Wordwall as a learning media could improve students vocabulary mastery. It shows that by the features of Wordwall media could help students during learning process.

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Another earlier investigation was undertaken by Darma, Dewi & Safitri (2023). This study was done to increase vocabulary mastery among students in the seventh grade at SMPN 3 Kecamatan Pangkalan Koto Baru. According to the research, teaching vocabulary mastery using word wall media had a more substantial effect on increasing students' vocabulary mastery. Furthermore, Zen, Miftakh, Purnamasari (2022) conducted a study on using Wordwall to increase the quantity of junior high school vocabulary in EFL classes. The findings of this study demonstrated that Wordwall is an effective medium for increasing students' vocabulary, assisting students in learning the names of items in class based on their vocabulary, and making it easier for students to recall vocabulary.

In contrast to the previous studies, the researcher fills the gap in this study by involving diverse people. The researcher investigates the impact of adopting Wordwall at SMP Negeri 8 Samarinda. This study is critical since Wordwall media has never been used in school before, and it will help students enhance their vocabulary when learning English.

2. Method
2.1. Research Design

The researcher will conduct this research using a mixed-method methodology. The mix technique is a method that aims to build synergy and strength between quantitative and qualitative ways to comprehend a phenomenon more fully than utilizing simply one method, either quantitative or qualitative (Geoffrey & Gay, 2019).

2.1.1 Participants

The research population consists of all eighth-grade students of SMP Negeri 8 Samarinda. Populations are 352 students divided into VIII A to VIII K classes. The reason why is the eight-grade students are chosen as the participants is because they are in the middle grade, a stable level of adaptation. The seventh-grade students are still at the stage of adjustment, a transition period to the environment and learning process. Meanwhile, the ninth-grade students are preparing for their final exams, and there are concerns that this will disrupt their learning activities.

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The research sample comprises two classes: Class C serves as the control group, chosen for its higher average grades, providing a strong benchmark for evaluation and ensuring consistent performance. Class D, with lower average performance, is the experimental group, facilitating assessment of intervention efficacy aimed at improving academic achievement. This choice allows for a thorough evaluation of methods to enhance learning outcomes for students with initially lower performance levels.

For qualitative data, one teacher and five students participate in semi-structured interviews. Selecting a teacher provides valuable insights due to their experience and understanding of education, offering perspectives on teaching methods and challenges. Engaging with teachers allows for a comprehensive exploration of research inquiries. Five students were chosen to represent diverse class demographics, ensuring varied viewpoints on the topic.

2.1.2 Data Collection and Instrument

The research instruments are drawn from the book "English for Nusantara" by Pusat Kurikulum dan Perbukuan Kemendikbudristek. The researcher uses this book because the research population, the students are using it in their learning process.

The researcher will administer multiple-choice and fill-in-the-blank tests for both pretests and posttests. There will be a total of 5 meetings. In the first meeting, the pretest will be conducted. From the second to the fourth meeting, treatments will be provided using Wordwall media, covering topics from the book "English for Nusantara," specifically Chapter 4: No Littering and Chapter 5: Embrace Yourself. Before commencing treatments, the researcher will explain the media used in the learning process. Treatments will involve presenting relevant vocabularies through Wordwall, repeatedly practiced in listening, writing, speaking, and reading activities. The final meeting will include the posttest assessment.

Qualitative data will be collected through semi-structured interviews with 5 students and the teacher. Each participant will have 2-3 minutes to respond to questions, recorded using a phone's voice recorder. The interviews aim to explore student responses regarding the usage and effectiveness of Wordwall.

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3. Findings and Discussion

The study was conducted from March 25th – April 3rd 2024 by starting with the pre-test, treatment, and post-test. During the pre-test, the researcher gave the students 10 questions on the printed paper. This test aimed to determine the prior knowledge of the students. The test material given was about 'Love the World!' that the researcher took from the book "English for Nusantara".

After the pre-test, the researcher taught the students about the meaning, function, and usage of the related vocabularies. For the control group, the researcher taught as usual and gave the exercise by giving them group work tasks. Whereas, for the experimental group, the researcher used Wordwall media for the students practice. The researcher gave the link of the game after the student school hours by WhatsApp group. After giving the treatment for 3 meetings, the students did the post-test.

As the results, the table 1 showed the standard deviation and the average of the 2 groups.

Table 1 Standard Deviation Average of Two Group

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre Test Experiment	21	10	100	47,14	23,694
Post Test Experiment	21	20	90	47,62	17,862
Pre Test Control	27	20	90	57,78	20,064
Post Test Control	27	20	100	66,30	24,675
Valid N (listwise)	21				

The data showed that the mean score of the experimental group for the pre-test was 47,14 and for the post test was 47,62. Whereas, the mean score of the control group for the pre-test was 57,78 and for the post test was 66,30.

Based on the observation in the classroom, factors contributing to the lack of improvement in student performance include inadequate classroom conditions. The hot temperature inside the classroom makes it difficult for students to stay focused during

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lessons. Additionally, the observations were conducted during the month of Ramadan, causing students to lack enthusiasm due to thirst and hunger during the learning process.

It can be concluded that the average of the experimental group post test score was higher than the pre-test. It means that the application Wordwall contributed in teaching English vocabularies to the 8th grade students of SMP Negeri 8 Samarinda academic year 2023/2024.

Students' perception towards the use of Wordwall on learning English vocabulary mastery in this study was obtained also from semi-structured interview. This investigation encompasses an examination of the advantages, difficulties, and display associated with the implementation of Wordwall, as reported by the students based on their own experiences. This interview also includes the teacher' reason regarding the digital learning application that she hasn't implemented in class yet.
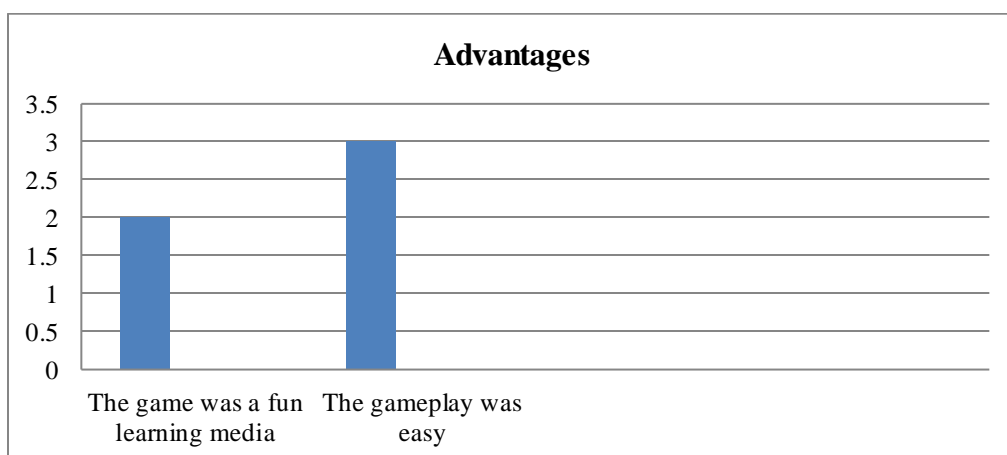

Chart 1 Students revealed that Wordwall game was a fun learning media.

Excerpt 1:

"In my opinion, this game is really exciting! The interface is also simple and clear. So, playing it is addictive. I can't wait to play the next game." (ST 2)

The interview excerpt indicates students enjoy using the WordWall game for learning. They praise its simplicity and addictive nature, showing high engagement. Their excitement for the next game reflects eagerness to continue learning interactively. Overall, they see the game positively as both enjoyable and effective for learning.

Excerpt 2:

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"Wow, this game is truly engaging and enjoyable! From start to finish, it never gets boring. Each question in the game presents its own unique challenge that makes us want to keep playing." (ST 3)

The interview shows that students see the Wordwall game as a great learning tool. They were captivated and stayed interested because of the unique questions, which kept them challenged and motivated. Overall, the game created an interactive and rewarding learning environment that made studying enjoyable for the students.

From the interview results, students reported that the gameplay was easy.

Excerpt 1:

"For me, this game is easy to play! The tutorial is clear. Even though it's my first time playing this game, we could immediately understand how to play and enjoy the gaming experience without the difficulty." (ST 2)

In this interview excerpt, a student shares their positive experience with the Wordwall game. They find it easy to play and understand, even as a newcomer, thanks to clear instructions and tutorials. This indicates that the game's design successfully makes it accessible and enjoyable for players, enhancing their overall experience.
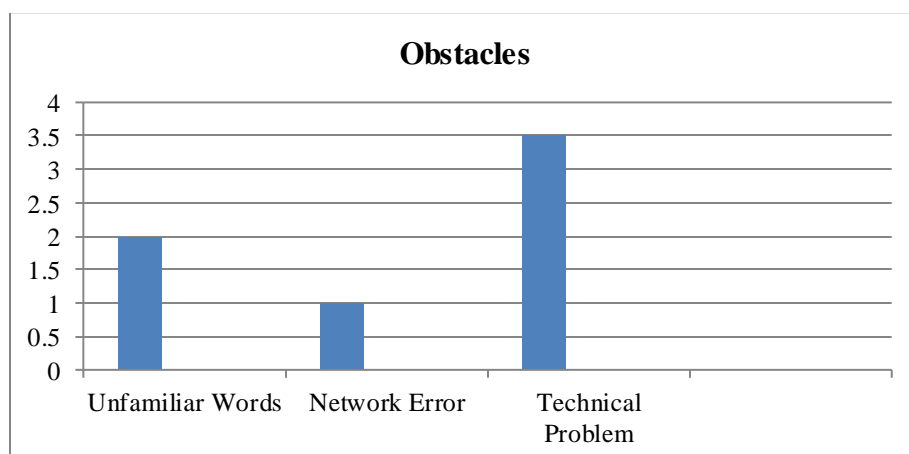

Chart 2 Students stated that there were some obstacles when they were playing Wordwall.

Excerpt 1:

"The difficulty I encountered while playing Wordwall is that there are some vocabulary words in the questions that are still unfamiliar to me, so sometimes I don't understand them. However, with more practice and time, I believe I will understand them better". (ST 1)

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The interview excerpt suggests that students faced challenges in Wordwall due to unfamiliar vocabulary, impacting their understanding and enjoyment of the game. However, they are optimistic, believing that practice and exposure will enhance their comprehension and performance. This highlights the importance of persistence in overcoming learning obstacles and the potential for improvement through repeated engagement.

Excerpt 2:

"When I play Wordwall, I am hindered by network issues on my phone. It's quite bothersome as it causes lag and interruptions during the game. Thus, I have to wait for a while until my network improves again." (ST 4)

In the interview excerpt, the student expresses frustration over encountering network issues on their phone while playing Wordwall. Lag and interruptions disrupt their gameplay, requiring pauses until the network stabilizes. This emphasizes the importance of reliable internet connectivity for seamless engagement with educational platforms like Wordwall, underscoring the impact of technological challenges on learning experiences and the need for accessible and stable digital infrastructure to support effective educational tools and activities.

Excerpt 3:

"I encountered a setback while enjoying the game; suddenly, my phone died because the battery ran out. It was quite frustrating because I had to start the game all over again. So, for the next gaming session, I always make sure my phone is charged to start the next game." (ST 5)

This excerpt from the interview outlines a common obstacle faced by students during Wordwall gameplay: sudden phone battery depletion disrupting their experience. Frustration arises from the inconvenience of restarting the game due to this interruption. In response, the interviewee learned to address the issue by ensuring their phone is adequately charged before each gaming session, preemptively managing potential obstacles. This underscores the significance of device readiness and proactive measures to optimize gaming experiences.
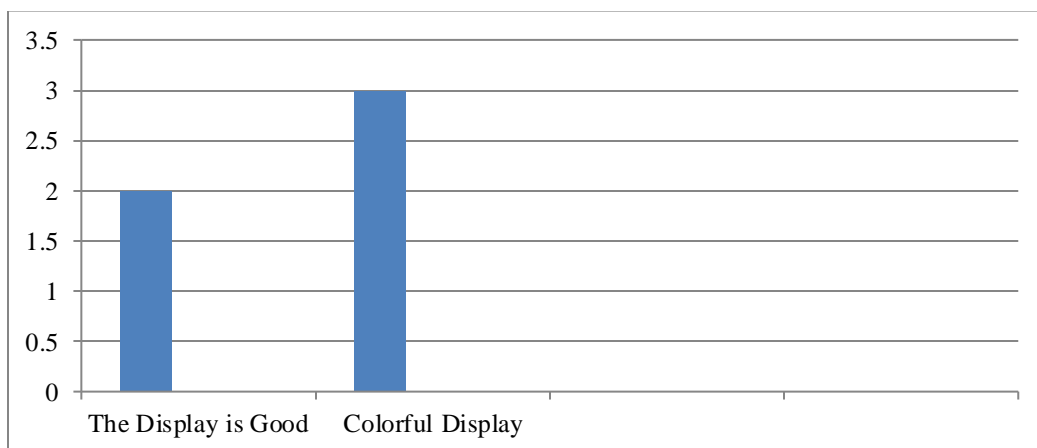
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chart 3 The Wordwall Display.

Excerpt 1:

"In my opinion, the game's interface is good and detailed. The animated graphics are also attractive and make the gameplay more enjoyable. I like every detail of its graphics." (ST 3)

The interviewee praises the game's interface and detailed graphics, particularly highlighting the appeal of animated graphics that enhance gameplay enjoyment. Their admiration extends to the meticulous attention to detail in the visual design, indicating a high level of appreciation for the game's aesthetics. Overall, their positive assessment suggests that the visually engaging presentation successfully captivates players, contributing to an enjoyable gaming experience.

Excerpt 2:

"The game's display is great. The vibrant colors used make it even more appealing and the text within the game is very clear, making it easy to read. This makes the gaming experience much more enjoyable!" (ST 5)

The interview praises the "wordwall display" for its excellent visual presentation and readability in gaming contexts. Vibrant colors enhance its appeal, while clear text makes it effortless for players to engage with the content. These factors significantly contribute to a more enjoyable gaming experience, underscoring the importance of well-designed and visually appealing displays in enhancing gameplay satisfaction.

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The reason why the teacher hasn't been using digital media in teaching.

Excerpt 1:

"The reason I have never used digital media in teaching in the classroom is because, up to now, there have been limitations in media and facilities at school, such as LCDs, speakers, and incomplete networks, which have been obstacles for me in implementing games in learning." (TC)

The excerpt indicates that the teacher's lack of integration of digital media in teaching is attributed to hindrances within the school environment, such as inadequate resources like LCDs, speakers, and incomplete networks essential for effective integration. Without these components, implementing educational games and digital learning methods becomes impractical or ineffective. Consequently, the absence of sufficient technological infrastructure within the school setting has deterred the teacher from incorporating digital media into their teaching practices.

Excerpt 2:

"Another reason is that I haven't mastered the existing educational applications yet, so I need time to delve deeper into learning the game applications before implementing them in the classroom. This is an important step to ensure their effective use in teaching." (TC)

The excerpt indicates the teacher's reluctance to use digital media in teaching stems from a lack of proficiency with educational applications. They prioritize mastering these tools before integrating them into the classroom, emphasizing the importance of thorough understanding. This cautious approach underscores a commitment to prioritize teaching effectiveness over quick adoption of digital tools. The teacher's commitment to learning and mastering these applications demonstrates readiness to evolve teaching methods, ensuring effective use of technology to enhance student learning.

The quantitative research findings reveal that the experimental class at SMPN 8 Samarinda showed improvement in vocabulary mastery, with pre-test and post-test scores of 47.14 and 47.62, respectively. These results align with a prior study by Sakkir, Azis, & Jabu (2023), indicating Wordwall's effectiveness in enhancing vocabulary. The interactive learning

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and structured repetition offered by Wordwall, supported by empirical data, contribute to significant comprehension improvement among students.

Interviews with students reveal that Wordwall enhances the learning atmosphere, making it exciting and enjoyable. Its appealing interface, easy gameplay, and variety of games attract student engagement. Previous research by Ilahiyati, Rohmah, and Hamamah (2023) supports this, showing that Wordwall improves students' motivation and self-confidence in vocabulary mastery. This underscores the impact of technology-based media, particularly games, on enhancing memorization, translation, and sentence construction skills.

Based on the interview with the teacher at the school, the implementation of game applications in the classroom is being carried out for the first time in this research, due to several factors such as the incomplete facilities in the classroom and the teacher' limited familiarity with existing game applications. Consequently, there are certainly several challenges experienced by the students, such as encountering words that are still very unfamiliar to them during gameplay, poor network connectivity while playing, and encountering other technical difficulties.

This discussion examines Wordwall's effectiveness in enhancing vocabulary mastery and its impact on student motivation. Research findings reveal that Wordwall improves vocabulary and boosts student enthusiasm while reducing boredom. Challenges include encountering unfamiliar vocabulary and technical difficulties during gameplay.

4. Conclusion

Based on the results of the data analysis presented, it can be concluded that the use of Wordwall media is effective in improving the vocabulary of 8th-grade students at SMPN 8 Samarinda. This can be seen from the students' average scores, which increased from the pre-test to the post-test. The average pre-test score for the experimental class was 47.14, while for the post-test it was 47.62. In short, the implementation of Wordwall is effective in improving students' vocabulary.

The interview results indicate that students genuinely enjoy playing games in the Wordwall application. They find joy in completing levels, thanks to appealing graphics and

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challenging gameplay suitable for all skill levels. This engagement replaces boredom with enthusiasm for learning, particularly in vocabulary.

Future research should explore Wordwall's long-term effectiveness in enhancing students' vocabulary as a digital learning tool. Investigating its impact on quality, satisfaction, and factors influencing implementation, such as teacher attitudes and institutional support, is crucial for successful integration in educational settings. Detailed integration strategies and professional development programs for teachers are necessary to facilitate effective classroom use. Additionally, comprehensive evaluations are essential to assess the long-term educational impact of digital game implementation, considering various influencing factors.

Overall, by following up on these findings, researchers can play a role in advancing digital learning technology, which has the potential to shift educational paradigms, enhance academic achievement, and broaden educational opportunities for all students.

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