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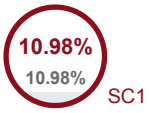

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Meningkatkan Kosakata Bahasa Inggris untuk Siswa Muda Melalui Media Wordwall

Improving English Vocabulary for Young Learners Through Wordwall Media

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Pendidikan Bahasa Inggris
Fakultas Psikologi dan Pendidikan
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Januari, 2025

Improving English Vocabulary for Young Learners through Wordwall media

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Abstract. This study aims to improve young students' English vocabulary through the use of Wordwall. The subjects of the study consisted of 20 fourth-grade students at MI Muhammadiyah 3 Penatarsewu, an elementary school located in Sidoarjo Regency, who were purposively selected based on their homogeneous English proficiency. The method used was a pre-experimental design with pre-test and post-test, where an instrument consisting of 20 multiple-choice questions was used to measure vocabulary skills before and after the use of Wordwall as an interactive learning medium. The validity of the instrument was verified by two experts, while reliability was tested to ensure measurement accuracy. The study was conducted over one month with two sessions per week in the classroom, using Wordwall to present enjoyable and engaging vocabulary learning activities. Data from the pre-test and post-test analysis showed a significant increase in student scores, with an average improvement of 25 points, indicating the success of this medium in enhancing vocabulary mastery. In addition to improving learning outcomes, the application of Wordwall also increased student motivation and engagement during the learning process. The results of this study reinforce the argument that interactive digital media can be an effective innovation in English language learning for young students. However, limitations such as a small sample size and limited duration are a concern, so further research involving more participants and a longer duration is recommended for more comprehensive and sustainable results.
Keywords - Media; Vocabulary; EYL(English for Young learners); Wordwall

Abstrak. Penelitian ini bertujuan untuk meningkatkan penguasaan kosakata bahasa Inggris pada siswa muda melalui penggunaan media Wordwall. Subjek penelitian terdiri dari 20 siswa kelas empat di MI Muhammadiyah 3 Penatarsewu, sebuah sekolah dasar yang terletak di Kabupaten Sidoarjo, dipilih secara purposif berdasarkan kriteria kemahiran bahasa Inggris yang homogen. Metode yang digunakan adalah desain pra-eksperimental dengan pre-test dan post-test, dimana instrumen berupa 20 soal pilihan ganda digunakan untuk mengukur kemampuan kosakata sebelum dan setelah penggunaan Wordwall sebagai media pembelajaran interaktif. Validitas instrumen diverifikasi oleh dua ahli, sedangkan reliabilitas diuji untuk memastikan ketepatan pengukuran. Penelitian dilaksanakan selama satu bulan dengan dua sesi per minggu di ruang kelas, menggunakan Wordwall untuk menyajikan kegiatan belajar kosakata yang menyenangkan dan menarik. Data dari pre-test dan post-test dianalisis menunjukkan peningkatan signifikan pada skor siswa, dengan rata-rata peningkatan sebesar 25 poin, menandakan keberhasilan penggunaan media ini dalam memperbaiki penguasaan kosakata. Selain peningkatan hasil belajar, penerapan Wordwall juga meningkatkan motivasi dan keterlibatan siswa selama proses pembelajaran. Hasil penelitian ini memperkuat argumen bahwa media digital interaktif dapat menjadi inovasi efektif dalam pembelajaran bahasa Inggris untuk siswa muda. Meski demikian, keterbatasan seperti sampel kecil dan durasi yang terbatas menjadi perhatian, sehingga disarankan penelitian lebih lanjut melibatkan peserta lebih banyak dan durasi lebih panjang untuk hasil yang lebih komprehensif dan berkelanjutan.
Kata kunci - Media; Kosakata; EYL (Bahasa Inggris untuk Siswa Muda); Wordwall

1. I. Introduction

In the current era of education, the way we interact with the world of education has been changed by technological advancements. Access to a wide range of learning resources is now easier and more diverse, which allows for more creative and engaging teaching methods. According to Shyamlee & Phil [1], that the use of digital media is very important because it provides various methods that support the learning process and are easily accessible. Moreover, digital media allows students and teachers to access content anytime and anywhere, which makes learning more flexible and

efficient. In addition, today's , which can be adapted to the needs and learning styles of students and this allows for better understanding and retention of material [2] . The use of digital media also teaches students 21st century skills, such as digital literacy, which are increasingly important in this all-digital world. The use of digital-based learning applications and platforms is one of the benefits of technology for education.

Wordwall is one of the platforms that allows teachers and students to create various quizzes and educational games to make them more effective and efficient [3] . Apps like Wordwall make learning more interactive and fun. Wordwall is an interactive learning platform that allows teachers to create engaging and engaging activities for their students. Examples of activities made possible by Wordwall include crossword puzzles, wheel of fortune, quizzes, and other educational games, which support technology-based learning and increase students' interest in learning. This technology enhances the learning experience, especially in English language learning, and increases student engagement. Research has shown that the use of Wordwall significantly improves vocabulary acquisition and retention among young learners. For instance, Huda & Kusumawanti [4] found that students reported higher motivation and engagement levels when using Wordwall for vocabulary practice. In learning, Wordwall can be used for various purposes in learning, such as improving understanding of concepts, evaluating students' understanding, or increasing motivation before starting new material. Teachers only need to choose an available template, customize it with the material, and share it with students via a link or QR code and Wordwalls can also be used online or outdoors, allowing for flexibility in teaching. Similarly, He [5] demonstrated that implementing Wordwall techniques led to notable improvements in vocabulary mastery, indicating its effectiveness as a teaching tool. Rachmanita [6], also highlighted that the integration of Wordwall in vocabulary-building strategies not only enhanced retention but also made the learning process more enjoyable for students. Furthermore, Zaniyati & Rohmani [7] noted that technology-based instructional environments, including Wordwall, significantly facilitated vocabulary retention and recall, underscoring the platform's role in fostering effective language learning experiences. Collectively, these studies illustrate the positive impact of Wordwall on enhancing vocabulary learning and overall student engagement in English language education.

Wordwall is important in TEYL (Teaching English to Young Learners) because it creates a fun and interactive learning environment that suits children's characteristics. This platform presents educational content through engaging games, helping to increase students' motivation, focus, and vocabulary mastery effectively through learning by playing. One of the important components in learning English, especially for young learners, is vocabulary mastery. Young learners need to improve their vocabulary early on to improve their language skills because their broad vocabulary mastery allows them to communicate more effectively, both in speaking and writing [8]. Mastery of a broad vocabulary also affects their understanding of more complex English texts because with a richer vocabulary, they will also be more likely to interact with others in a wider context [9]. Moreover, a strong vocabulary foundation is crucial for academic success as it enables students to comprehend and engage with various subjects more effectively. As they encounter new concepts and ideas, a well-developed vocabulary allows them to make connections and express their thoughts clearly. According to Resorts [10], this is particularly important in collaborative learning environments where students are encouraged to share their ideas and participate in discussions. Additionally, vocabulary mastery contributes to students' confidence in using the language, which can lead to increased participation in classroom activities, because when learners feel equipped with the right words, they are more likely to take risks in their language use, fostering a more dynamic and interactive learning atmosphere [11]. Furthermore, integrating technology, such as digital platforms like Wordwall, can significantly enhance vocabulary acquisition by providing engaging and interactive methods for practice. These tools not only make learning enjoyable but also cater to diverse learning styles, ensuring that all students have the opportunity to succeed in their language learning journey.

Several studies show that the use of technology, especially games, can improve vocabulary learning. For example, research conducted by Li et al [12] found that by using digital games, students were able to retain vocabulary longer due to the fun and interactive learning atmosphere. In addition, game-based apps allow students to learn independently and iteratively, according to Patra et al [13] which accelerates vocabulary mastery. Wordwall has a feature that allows students to repeat vocabulary in a non-monotonous way, which helps improve their long-term memory. This study investigated how effective Wordwall was in improving the English vocabulary of young students. It is hoped that this application will help students learn English vocabulary in a more fun and less boring way. This research can provide new insights into more efficient technology-based learning techniques, especially in English learning. In addition, the **results of this study are expected to help** educators create more inventive methods for teaching vocabulary to their young students, which in turn can improve overall learning outcomes. This research further discusses the opportunities and challenges posed by the integration of technology into English learning in elementary schools. The focus is on how to effectively utilize digital media technology to improve the vocabulary of young learners. Especially by answering research questions "What is the effect of using Wordwall media on young learners' English vocabulary mastery?"

2. II. Method

This study employed a **pre-experimental design** with a one-group **pre-test and post-test** model. This design was chosen **to determine the effectiveness of** using Wordwall media in improving the English vocabulary **of** young learners **by comparing** students' performance before **and after the intervention. The** absence of a control group was deemed acceptable due to the limited sample size and the exploratory nature of the study. This design allowed the researchers to examine the impact of the treatment within a classroom context.

The research took place at MI Muhammadiyah 3 Penatarsewu, located in Penatarsewu Village, Tanggulangin - Sidoarjo district, over a duration of one month, with sessions scheduled twice a week, in January 2025. The participants consisted of 20 fourth-grade students, aged 9 to 10 years, who were selected through purposive sampling based on uniform basic English proficiency criteria derived from initial observations. This setting was chosen because the participants were in the developmental stage of basic vocabulary, which aligns with the focus of early childhood English learning. This study was conducted at MI Muhammadiyah 3 Penatarsewu, located in Penatarsewu Village, Tanggulangin District, Sidoarjo Regency, for one month, with sessions scheduled twice a week in January 2025. The study participants consisted of 20 fourth-grade students aged 9 to 10 years, selected through purposive sampling based on consistent basic English proficiency criteria from 40 students, obtained from initial observations. This school was chosen because it actively integrates digital learning tools into classroom activities and demonstrates an interest in implementing technology-based English language instruction. Additionally, students at this school have relatively similar vocabulary proficiency levels, which is ideal for measuring learning progress after a specific intervention. This setting was chosen because the participants are at the stage of basic vocabulary development, which aligns with the focus of early childhood English language learning.

The **instrument used in this study** was a vocabulary test consisting of 20 multiple-choice questions focusing on the theme Daily Activities, based on the fourth-grade English curriculum. The test was designed to assess students' **vocabulary mastery before and after** the intervention. The

instrument underwent expert validation by two assessors one English language lecturer and one elementary English teacher who evaluated aspects such as content relevance, clarity, sentence construction, language accuracy, and appropriateness for young learners. All assessed aspects received scores above 4.0 on a 5-point Likert scale, indicating strong content validity. In addition, a try-out was conducted with a different group of students to test item validity statistically. The majority of items in both the pre-test and post-test showed significance values below 0.05, confirming their validity. Items that did not meet the threshold were revised or removed. The reliability of the test was also measured using Cronbach's Alpha, with results showing a coefficient of 0.780 for the pre-test and 0.827 for the post-test, indicating that both instruments had high internal consistency. Detailed validity from experts,validation of try out questions to other students, validity test results, and reability test tables are available in the (Appendix 1).

Data collection was conducted through pre-tests and post-tests administered before and after the Wordwall intervention. Prior to the first learning session, the students completed the pre-test to determine their initial vocabulary knowledge. During the intervention, Wordwall activities were implemented in each session through interactive games such as Whack-a-Mole and Match-up. These games were designed using the Wordwall platform (www.wordwall.net), customized with vocabulary relevant to the students' level, and shared in class either via projector or accessed on individual digital devices. After the final session, students were given a post-test using an equivalent set of questions to assess vocabulary improvement. The same rubric and scoring guidelines were used for both pre- and post-tests.

The data collected from the pre- and post-tests were analyzed using the Paired Sample t-Test in SPSS version 21 to examine the statistical significance of score differences. The test yielded a p-value of 0.000 (p < 0.05), indicating a significant improvement in students' vocabulary after using Wordwall. The average score increased from 70.50 (pre-test) to 93.75 (post-test), showing an average gain of 23.25 points. These findings suggest that the Wordwall-based intervention had a substantial positive effect on vocabulary acquisition. All statistical analysis results, including mean scores, are presented in detail in the (Appendixes 2).

1. III. Results And Discussion
2. Results

This research aims to determine the effect of Wordwall. net as learning media on improving students' English learning outcomes. For data analysis, the results of the pre-test and post-test were analyzed using the paired sample t-test in SPSS to determine the significance of changes in student scores before and after the treatment. The formula for the paired sample t-test was applied to ascertain the pre-test and post-test values. This study was carried out throughout the 2025-2026 academic year. The pre-experimental approach, which involves pre- and post-tests used to gather data during this period. The students is a set of inquiries made to people in order to gather statistically sound data on a specific subject. This approach is designed to get responses from students regarding Wordwall.net's ability to improve their English. Before analyzing scored the data obtained from the participants, and the results obtained in this study are the grand total of the pre-test and post-test of 20 students with 20 multiple choice questions.

Test Paired Sample T Test Data Pre Test and Post Test

A statistical method for comparing two means of the same group examined under two distinct conditions before pre-test and after post-test treatment is the Paired Sample T-Test primary goal is to ascertain whether the two conditions differ in a way that is statistically significant [18]. This test is frequently used in educational research to assess the efficacy of a technique, piece of media, or learning intervention. Based on Rutten et al. [19] , significant difference between the pre-test and post-test scores indicates that the treatment had a genuine impact if the resulting significance value p-value is less than 0.05.

In this study, the Paired Sample T-Test test was used to analyze the difference in students' pre-test and post-test scores after the use of Wordwall media. The result of the analysis showed a significance value of 0.000 < 0.05, which indicated a significant difference between before and after the intervention. This shows that the use of Wordwall is effective in improving students' English vocabulary acquisition. Thus, this test provides a strong statistical basis to conclude that the learning media used contributed positively to the improvement of students' learning outcomes. This shows that the use of Wordwall is effective in improving students' English vocabulary acquisition. Thus, this test provides a strong statistical basis to conclude that the learning media used contributed positively to the improvement of students' learning outcomes.

Table 5. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE-TEST	70.50	20	5.596	1.251
	POST TEST	93.75	20	6.664	1.490

Based on the results of the paired sample t-test between the pre-test and post-test data, it is known that the significance value (p- value) is 0.000 < 0.05, which means that there is a significant influence between before and after the intervention is carried out. The average post-test score (93.75) increased significantly compared to the pre-test (70.50), with an average difference of 23.25. These results show that the intervention given is effective in improving test results, because the difference in values that occurs is not caused by chance, but as a result of the treatment given during the intervention process.

Discussion

The results showed that the use of Wordwall media effective to improved the English vocabulary acquisition of early childhood students, as evidenced by the observed increase in pre-test and post-test scores. This finding supports the idea that technological innovation in learning can create a more interesting and interactive learning atmosphere, so that students' learning motivation increases and the learning process becomes more effective [16]. The importance of this finding lies in its contribution to digital-based learning strategies that can improve student learning outcomes at the primary level, in line with the curriculum vision that emphasizes fun and meaningful learning.

In this study the result are consistent with previous studies confirming that digital media such as Wordwall can strengthen students' memory and learning motivation [17]. They found that the use of Wordwall improved vocabulary retention and learning interest of elementary school students. This research extends previous knowledge by confirming that interactive game-based media not only improves vocabulary mastery but is also able to significantly

increase early childhood engagement, in line with constructivism theory which emphasizes children's activities in the learning process [18]. However, according to Hepp k [23] Some other findings indicate challenges, such as the need for adequate teacher training and technological infrastructure as determinants of successful technology implementation in education.

Theoretically, the findings strengthen the argument that digital media can be an effective tool in vocabulary learning from an early age [20]. Practically, these results can be used as a basis for educators and curriculum developers to integrate media such as Wordwall into the English learning process in primary schools, in order to improve student motivation and learning outcomes. Education policy is also advised to provide training for teachers as well as infrastructure that supports the use of digital media for maximum implementation [21]. In addition, at the policy level, it is important to integrate technology in the national curriculum as part of efforts to improve the quality of basic education. The limitations of this study include the small sample size of only one school with 20 students, so the results cannot be widely generalized. The relatively short implementation time also limits the observation of the sustainability of the effects of using Wordwall. In addition, the school's technical readiness and teachers' ability to manage digital media also affected its effectiveness. Therefore, these results are preliminary and need to be reviewed through research involving a variety of locations, a larger number of participants, and a longitudinal design to see long-term impacts.

Further research is recommended to involve a larger and more diverse sample, including different levels of education, so that the results obtained are more representative of the wider population. In addition, it is necessary to investigate the effect of teacher training and infrastructure readiness on the success of digital media implementation [22]. Research could also examine the effectiveness of other digital media that are more interactive and adaptive, to find the most effective approach in improving early childhood English vocabulary and skills. The most significant finding of this study is that the use of Wordwall was able to significantly increase vocabulary acquisition scores with an average increase of 25 points. This is quite striking and unexpected given the simplicity and fun of the method, and shows that game-based media can be a key facilitator in the early childhood learning process. This success confirms that game-based technological innovations such as Wordwall are worth considering as part of an innovative and adaptive curriculum.

V. Conclusion

Based on the results of the study, **it can be concluded that** **there is a** significant increase in students' pre-test **and post-test scores** after using Wordwall media. Wordwall is an effective learning medium in **improving English vocabulary mastery** in early childhood students. **This** effectiveness can be seen from increasing student motivation, engagement, and learning outcomes in line with previous research findings and expanding evidence on the benefits of interactive digital media at the elementary school level. Although there are limitations in the sample size and duration of the study, these results provide important implications for educators and policymakers to consider the integration of play-based digital media in English learning curricula to create a more engaging, meaningful, and positive learning experience on student learning outcomes.

The suggestion for further research is to conduct studies involving larger sample counts and variations of different education levels to test the consistency of the results. The research can also examine supporting factors such as teacher training and the existence of technological infrastructure, to ensure the effectiveness of the continuous use of Wordwall. It is important that this medium is not only used as a temporary tool but becomes an integral part of the English learning strategy in primary schools. In addition, exploring the use of other digital media that are more interactive and adaptive can be the next step to improve the success of vocabulary learning in early childhood.

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3.

4. Reference

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5. Appendixe

Appendixe 1

Table 1. Question validation from experts

Yes	Aspects Assessed	Assessment Criteria	Validator 1	Validator 2	Average	Information
1	Suitability of the material with the curriculum	The questions cover the topic of "Daily Activity" according to the 4th grade elementary level	4,5	4,7	4,6	Valid (≥4.0)
2	Clarity of question indicators	Each question has clear and measurable indicators	4,3	4,4	4,4	Valid (≥4.0)
3	Construction of the problem	The questions are in the form of good and logical sentences	4,4	4,2	4,3	Valid (≥4.0)
4	Clarity of the question order	Commands are easy for students to understand	4,4	4,5	4,5	Valid (≥4.0)
5	Difficulty level of the question	Questions according to the abilities of grade 4 elementary school students	4,7	4,8	4,8	Valid (≥4.0)
6	Variety of questions	Questions vary in the context of everyday situations	4,5	4,5	4,5	Valid (≥4.0)
7	Accuracy in the use of English	Grammar and vocabulary are correct	4,2	4,7	4,5	Valid (≥4.0)
8	Indonesian (if applicable)	Additional explanations are clear (if used)	4,1	4,1	4,1	Valid (≥4.0)
9	Appropriateness of the choice of answer	There is only one correct answer, unambiguous	4,8	4,9	4,9	Valid (≥4.0)
10	Relevance of pre and post-test	Construction of equivalent and parallel questions for evaluation	4,7	4,7	4,7	Valid (≥4.0)

(Remarks: Scale 1-5, 1=Invalid, 5=Very Valid)

Table 2. validation of try out questions to other students

Variable	Items	Significance	Standard Error	Information
Pre-Test	Question.1	0,013	0.05	Valid
	Question.2	0,007	0.05	Valid
	Question.3	0,065	0.05	Invalid
	Question.4	0,010	0.05	Valid
	Question.5	0.021	0.05	Valid
	Question.6	0,070	0.05	Invalid
	Question.7	0,005	0.05	Valid
	Question.8	0,016	0.05	Valid
	Question.9	0,015	0.05	Valid
	Question.10	0,013	0.05	Valid
	Question.11	0,011	0.05	Valid
	Question.12	0,031	0.05	Valid
	Question.13	0,019	0.05	Valid
	Question.14	0,035	0.05	Valid
	Question.15	0,036	0.05	Valid
	Question.16	0,034	0.05	Valid
	Question.17	0,000	0.05	Valid
	Question.18	0,019	0.05	Valid
	Question.19	0,012	0.05	Valid
	Question.20	0,028	0.05	Valid
Post-Test	Question.1	0,022	0.05	Valid

	Question.2	0,000	0.05	Valid
	Question.3	0,019	0.05	Valid
	Question.4	0,008	0.05	Valid
	Question.5	0,000	0.05	Valid
	Question.6	0,002	0.05	Valid
	Question.7	0,048	0.05	Valid
	Question.8	0,000	0.05	Valid
	Question.9	0,034	0.05	Valid
	Question.10	0,075	0.05	Invalid
	Question.11	0,004	0.05	Valid
	Question.12	0,032	0.05	Valid
	Question.13	0,009	0.05	Valid
	Question.14	0,005	0.05	Valid
	Question.15	0,007	0.05	Valid
	Question.16	0,045	0.05	Valid
	Question.17	0,082	0.05	Invalid
	Question.18	0,023	0.05	Valid
	Question.19	0,041	0.05	Valid
	Question.20	0,000	0.05	Valid

Source: SPSS 21 Validity Test Results, data processed 2025

Table 3. Validity Test Results

Variable	Items	Significance	Standard Error	Information
Pre-Test	Question.1	0,024	0.05	Valid
	Question.2	0,017	0.05	Valid
	Question.3	0,004	0.05	Valid
	Question.4	0,018	0.05	Valid
	Question.5	0.000	0.05	Valid
	Question.6	0,007	0.05	Valid
	Question.7	0,002	0.05	Valid
	Question.8	0,015	0.05	Valid
	Question.9	0,005	0.05	Valid
	Question.10	0,013	0.05	Valid
	Question.11	0,011	0.05	Valid
	Question.12	0,001	0.05	Valid
	Question.13	0,029	0.05	Valid
	Question.14	0,006	0.05	Valid
	Question.15	0,036	0.05	Valid
	Question.16	0,034	0.05	Valid
	Question.17	0,000	0.05	Valid
	Question.18	0,009	0.05	Valid
	Question.19	0,012	0.05	Valid
	Question.20	0,028	0.05	Valid
Post-Test	Question.1	0,048	0.05	Valid
	Question.2	0,000	0.05	Valid
	Question.3	0,009	0.05	Valid
	Question.4	0,008	0.05	Valid
	Question.5	0,000	0.05	Valid
	Question.6	0,002	0.05	Valid
	Question.7	0,048	0.05	Valid
	Question.8	0,000	0.05	Valid
	Question.9	0,034	0.05	Valid
	Question.10	0,005	0.05	Valid
	Question.11	0,004	0.05	Valid
	Question.12	0,032	0.05	Valid
	Question.13	0,009	0.05	Valid
	Question.14	0,005	0.05	Valid
	Question.15	0,007	0.05	Valid
	Question.16	0,045	0.05	Valid
	Question.17	0,035	0.05	Valid
	Question.18	0,023	0.05	Valid
	Question.19	0,041	0.05	Valid
	Question.20	0,000	0.05	Valid

Source: SPSS 21 Validity Test Results, data processed 2025

Table 4. Reliability Test Results

Variable	N	Cronbach Alpha Value	Value	Information
Pre-Test	20	0,780	0,60	Reliable
Post Test	20	0,827	0,60	Reliable

Source: SPSS 21 Validity Test Results, data processed 2025

Appendixe 2

- Table 1. Question validation from experts. Based on expert validation by a lecturer and an English teacher, all aspects of the pre-test and post-test instruments scored above 4.0, indicating that the items were valid and appropriate for use. The instruments met criteria in terms of content suitability, clarity, construction, and relevance. Minor revisions suggested by the validators were also incorporated to improve the quality of the test.

- Table 2. validation of try out questions to other students. The results of the try-out showed that most of the pre-test and post-test items were valid, with significance values below 0.05. However, a few items specifically items 3 and 6 on the pre-test, and 10 and 17 on the post-test were found to be invalid and required revision or removal. Overall, the instrument was considered suitable for measuring students' vocabulary acquisition.

- Table 3. Validity Test Results. A validity test was carried out in the table above to measure the validity of a questionnaire. From the test test, the total validity of the items showed that the post test and pre test questions were asked to 20 students. Each question item has a significance value below 0.005. Then each statement item can be said to be valid.

- Table 4. Reliability Test Results. Reliable data if the value of the variable has Cronbach's Alpha > 0.70. The value of the reliability coefficient from the results of the table above shows that the pre test has a cronbach alpha value of 0.780 and the post test has a cronbach alpha value of 0.827. So it can be concluded from the test that it is said to be reliable because Cronbach's Alpha value is > 0.70.