

Vocabulary improvement in students through the EMRED strategy's wordwall application

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Abstract

The ability of students to understand Indonesian vocabulary in class II SDN Majalaya is still quite low and can be seen from the results of the Indonesian vocabulary test of students in class II SDN Majalaya regarding clean and healthy living. In addition, students only know about Indonesian vocabulary but do not necessarily understand the meaning of the vocabulary itself. Therefore, the research aimed to use wordwall application media using the EMRED strategy to improve students' Indonesian vocabulary mastery. This study aimed to see the improvement of student learning outcomes regarding the mastery of Indonesian vocabulary after the implementation of wordwall learning media and the EMRED strategy in class II SDN Majalaya. The method used in this research is the experimental method with the type of true experimental research, pre-test and post-test types. From 50 students' samples, 30 students were taken to be used as research samples, that is, 15 students as the experimental group and 15 students as the control group. From the results of this study, it can be concluded that there is an increase in students' vocabulary mastery after the implementation of wordwall learning media using the EMRED strategy with the acquisition of Asymp scores.

Keywords: EMRED Strategy; learning outcomes; vocabulary; Wordwall App.

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1. INTRODUCTION

Language is a medium of communication used by humans in a society that is used when someone wants to convey ideas, thoughts, or feelings to others (Brooks et al., 2024). Indonesian is the national language used by Indonesian citizens when communicating with humans. Indonesian as the official language has been taught in schools to respect the philosophy of the country and its national literature. As stated in national education, for students to become human beings who have faith in the belief of philosophy and the basics of the nation and have pride in the national language, they are supposed to have Indonesian lessons in their school. Munirah and Hardian (2016) stated that the quality of students' abilities can be seen in the quality of vocabulary that they possess. Prabowo (2020) explained that to master the material from one to another it is necessary to have vocabulary as their material in Bahasa Indonesia lesson. This is to make students able to communicate to express their ideas or opinions in Indonesian well. Therefore, it is needed to have a lesson in Bahasa Indonesia in elementary school to enrich the students' mastery of vocabulary which is suitable for their level of cognitive development. Vocabulary mastery as a student supports the students in communication skills either spoken or written (Pan, 2023; Tong et al., 2023).

The influencing factor for the student's vocabulary mastery is that students tend to use their local language which is Sundanese compared with Bahasa Indonesia. As a result, the student's learning achievement gains less result dealing with vocabulary mastery at school. Besides that, the factor that influences vocabulary mastery toward students can be seen from the less media utilization in learning as well as the conventional learning strategy every day, which makes the students less motivated to study (Tavassoli & Beyranvand 2023; Song & Xiong 2023). The lecture method tends to make students get bored and there is no activity to elevate students' skill development and employ student thematic modules as learning media. To increase students' vocabulary mastery in language, it is necessary to have suitable media implementation and learning strategies in learning activities in the classroom (Ayana et al., 2024). One of the activities that can be done is utilizing the wordwall media and the EMRED strategy in the teaching and learning process in the classroom.

According to Sherianto, (2020), Wordwall is an application that can be beneficial for learning media as well as a learning source for the students' and teachers' assessment. Halik, (2020) stated that wordwall learning media is a web-based application that is used as a fun educational game to design and as an assessment tool in learning. However, to support the use of wordwall learning media, appropriate strategy is needed to help maximize the function of wordwall learning media itself. Asrori, (2013) conveyed that the strategy of art which is used to design the implementation activity plan is very important. This is to make students able to understand and learn science effectively and efficiently. Therefore, what teachers are supposed to do is to implement an appropriate learning strategy. To achieve this, the researcher tried to use the EMRED strategy to support the use of wordwall learning media to enhance students' vocabulary mastery in Bahasa Indonesia at grade II of SDN Majalaya. Salim (2022) stated that the EMRED strategy is a learning strategy to strengthen learning activity in the classroom whether it is a social science or logical science.

1.1. Purpose of study

The EMRED learning strategy can be used in the teaching and learning process for both social science and logical science. Implementing wordwall learning media along with the EMRED strategy, is expected to it can increase students' vocabulary mastery in Bahasa Indonesia lessons in grade II of SDN Majalaya because by employing wordwall learning media as well as the EMRED strategy, the students can be more active and can explore more about their ability to speak either spoken or written.

2. METHOD AND MATERIALS

This study employed an experimental method with a quantitative approach. The experimental method was used to find out the influence of certain treatments on other treatments with controlled conditions (Sugiyono, 2017). The type of study which was used is a *true experiment* with the type of pre-test pos-test. The research design was a true experimental design with a *pretest-posttest control group design* that was chosen randomly based on the determined criteria (Sugiyono, 2017).

2.1. Data collection tools

There were two variables in this study such as wordwall learning media and EMRED strategy as the independent variable or influencing variable, while the dependent variable or affected variable is by giving the task of Bahasa Indonesia vocabulary. The instrument that was used in this study was a test instrument with provided answer of multiple choices in a total of 12 questions. In the data collection technique, it used an assessment test which was gained from the result of the pretest and posttest in the experiment, and the control class which aims to know the increase in students' learning results. According to Sugiyono (2017), if the instrument can be used to measure what is intended to be measured, then, the instrument is valid. Before collecting the data, the questions to use for the pretest and posttest questions in the experimental class as well as the control class are supposed to get tested out beforehand.

2.2. Participants

This research was conducted in SDN Majalaya which is located in Desa Sukasari, Kecamatan Tunjung Teja, Kabupaten Serang-Banten. This study was held from May, 30th 2022 to June, 9th 2022. The total population in this study was 50 students, the researcher chose only 30 students to be involved in this study by doing the technique of *simple random sampling*, with a total of 15 students in the experimental group and 15 students in the control group.

The trial of the instrument was applied to 50 randomly chosen students from Uji from the population that exists. After the questions were finished from the trial, the next step was the validation test, reliability test, difficulty level, and discrimination. From the trial which has been done it was found that there were 12 questions were valid and 8 questions were invalid, so the 8 invalid questions were not used for the research test. Whereas the 12 valid questions can be used for the experimental group, as well as a control group.

2.3. Analysis

After the result of the research gained from the experiment and control group, the next step was to do a normality test, homogeneity test, and hypothesis test.

3. RESULTS

Based on the calculation by using SPSS version 25, the descriptive data of the study is as follows:

1. Descriptive Analysis

Based on the calculation by utilizing the SPSS 25 version, it obtained the descriptive analysis data as follows:

a. The Pretest and Posttest of the Experimental Group

Based on the results of calculations using SPSS Version 25, the results obtained from the pretest scores carried out in the experimental group before being given treatment or treatment using the application of wordwall media and the EMRED strategy obtained the results of mastering Indonesian vocabulary with the smallest value of 25, the largest value of 75, and with an average the pretest value is 53,320.

The results of the posttest that was carried out in the experimental class after the treatment using the application of wordwall media and the EMRED strategy, obtained the results of the mastery of Indonesian vocabulary with the smallest value of 75, the largest value of 100 and the average pretest value of 88.860.

b. Pretest and Posttest scores of the control group

Based on the results of calculations using SPSS Version 25, the results of the pretest carried out in the control group before the implementation of learning using conventional methods or the lecture method, it was obtained the results of the ability to master Indonesian vocabulary with the smallest value of 33.3, the largest value of 83.3 and the average pretest value of 57.740.

While the results of the post-test were carried out in the control class without any treatment and using only conventional learning models, the results of the ability to master Indonesian vocabulary were obtained with the smallest value of 66.6, the largest value of 91.6 and the average post-test value of 74,973.

2. Data Analysis

a. Normality Test

Based on the summary of the normality test data, the results of the normality test for the experimental group's pretest and posttest data showed that the Sig value was > 0.05 , which means the data was normally distributed. Meanwhile, the pretest data for the control group was also normally distributed with a Sig value > 0.05 . However, in the posttest, the control group showed a Sig value < 0.05 , which means the data was not normally distributed. If one of the group's data is not normally distributed, it is necessary to do a different power test using a non-parametric test with the Wilcoxon test using SPSS version 25.

b. Homogeneity Test

This homogeneity test aims to determine whether the sample used in the study comes from a homogeneous population or not for that homogeneity test was conducted using the help of SPSS version 25. Based on the homogeneity test table, the Sig Based on Mean value is $0.104 > 0.05$ so that it can be concluded that the experimental class and control class data are the same or homogeneous.

c. Hypothesis Test

Based on the hypothesis test using the Man-Whitney test, it was found that the difference between the average pretest value of the experimental group and the posttest average value of the experimental group was 35.54, which means that students' Indonesian vocabulary mastery increased after the implementation of wordwall learning media using the EMRED strategy. As for the difference between the average pretest score of the control group and the average posttest of the control group, which was 17.23, it can be said that students' vocabulary mastery increased in the control group even though there was no treatment (treatment) and only using conventional learning. Therefore, it can be concluded that the experimental group and the control group both experienced an increase in learning outcomes, this can be seen from the results of the pretest and posttest in the experimental group and the control group.

After conducting the research, the researcher obtained data from the pretest and posttest results from the experimental group and the control group. Then the data is tested for normality, homogeneity test, and hypothesis testing. The implementation of learning in the experimental group and the control group was carried out differently. The experimental group was given treatment by applying wordwall learning media and the EMRED strategy in learning Indonesian vocabulary, while the control group used conventional learning and the lecture method.

In the implementation of learning, the researcher divided the students into two groups. The implementation of learning in the experimental group and the control group was carried out differently.

The experimental group was given treatment by applying wordwall learning media and the EMRED strategy in learning Indonesian vocabulary, while the control group used conventional learning or the lecture method. In the learning activity, the researcher gave treatment to the experimental group by applying wordwall learning media as a learning support tool regarding Indonesian vocabulary for clean and healthy living using the EMRED strategy.

Sherianto, (2020) claimed that wordwall is an application that is used as a learning tool and learning resource that can be used as an assessment tool for students and teachers. This wordwall learning media is an interactive website-based media and can be applied through the official website. This website-based interactive media has a variety of templates that can be used, one of which is a match-up type wordwall application, which is an activity to match images with a predetermined vocabulary meaning, besides that there is a crossword type wordwall application, which is a puzzle arranged in such a way with a predefined clue. Based on the determined according to the learning material. From what has been mentioned earlier, there are still many types of games from the wordwall application that can be used according to learning needs. In addition, this wordwall application also has a variety of templates to use for free and users can use and change templates according to their needs and as desired. Here are the steps for using the wordwall application media:

1. Create and register an account on the official wordwall website and fill in according to the conditions contained in it.
2. Choose a template according to the desired needs, because various kinds of free templates can be used according to what we need and want.
3. After choosing the template that we need, we need to give the title and content of the material that we will write on the template based on the conditions.
4. Write the desired content according to the pre-selected game template.
5. Click the done sign after we finish making it.

The following is an image of the wordwall learning media used in the experimental group:

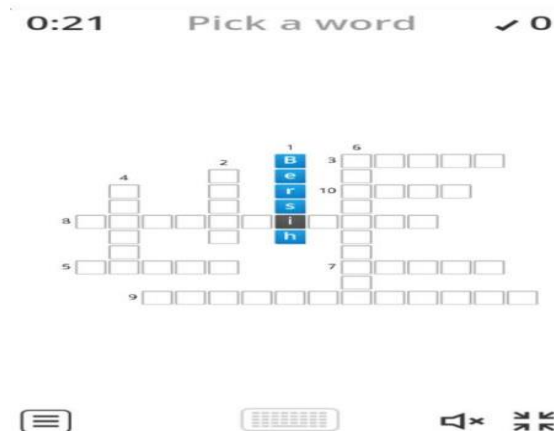
Figure 1
Games of Wordwall application with Match Up type



The first wordwall games that have been applied are games that match pictures with the meaning of a predetermined vocabulary. Each student was instructed to try to match the picture with the meaning of the vocabulary correctly regarding the material of clean and healthy living (figure 2).

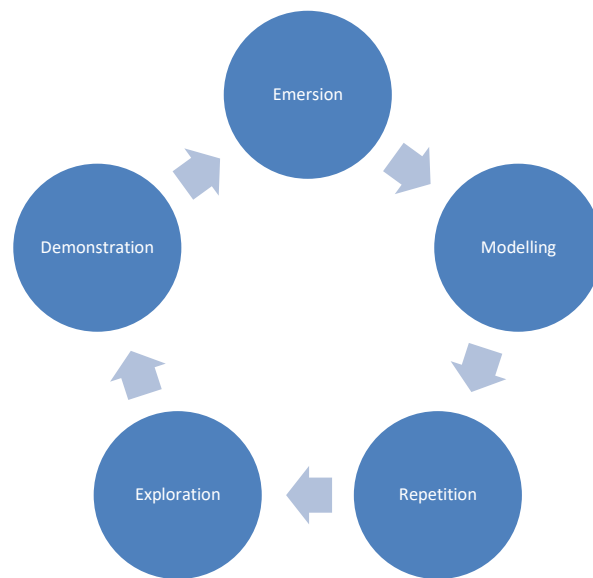
Figure 2

Games of Wordwall application with Crossword type



The second wordwall game is a word puzzle game. Where students are instructed to fill in the word puzzle column with the correct answers according to the instructions or clues given.

Figure 3
Structure of EMRED strategy



Salim (2022) stated that the EMRED strategy (figure 3) is a learning strategy to strengthen learning activities in the classroom, both social and logical sciences. EMRED stands for 1) Immersion which means an atmosphere where the learner is motivated mentally or physically. This can be seen from the frequent times the person concerned encounters the context of the situation in the form of a situation, event, or phenomenon. Immersion is what allows a person to learn more, 2) Modeling is a model for example that exists in adult learners. If in language lessons there must be an adult model who can pronounce a language sound or be a guide or scaffolding of a language which will be seen and imitated by the learner as well, 3) Repetition, which is where the novice learner must repeatedly see an event or situation or phenomenon where the learner doing a learning process, 4) Exploration is looking at the situation of activities or things learned from the environment in which he lives, while 5) Demonstration is an act done by the learner he

can read and can also implement an experimental process that can be in the real form of the person who masters the skill. So, he/she shows both conceptual and psychomotor work on the concepts he/she learns.

To support the application of wordwall learning media, the right strategy is needed, namely applying the EMRED strategy, which is expected to help maximize the use of the wordwall media so that it can increase the mastery of Indonesian vocabulary in grade II of SDN Majalaya. The learning steps using the EMRED strategy carried out in Bahasa Indonesian, learning regarding clean and healthy living vocabulary are as follows:

1) *Immersion*

In this immersion stage, the teacher motivates students to be more enthusiastic in learning by inviting students to sing together about the song "Clean and Healthy" so that students learn Indonesian vocabulary about a clean and healthy environment through songs.

2) *Modelling*

In learning activities, the teacher acts as an example or model by guiding and giving direction to students during learning activities and the teacher gives examples of vocabulary pronunciation with its meaning regarding clean and healthy living vocabulary material, by using wordwall learning media as a tool in learning activities.

3) *Repetition*

After students know and learn Indonesian vocabulary about clean and healthy living using wordwall learning media, students can review what they have learned before by playing vocabulary games from the wordwall application at home. Because this wordwall application is a web-based application using the internet network it can be used anywhere and anytime via a smartphone or computer.

4) *Exploration*

In learning activities, each student is assigned to fill out tasks that have been ordered by the teacher, namely by looking for vocabulary related to the material "Clean and healthy living" and pairing or searching for the meaning of the vocabulary using wordwall learning media.

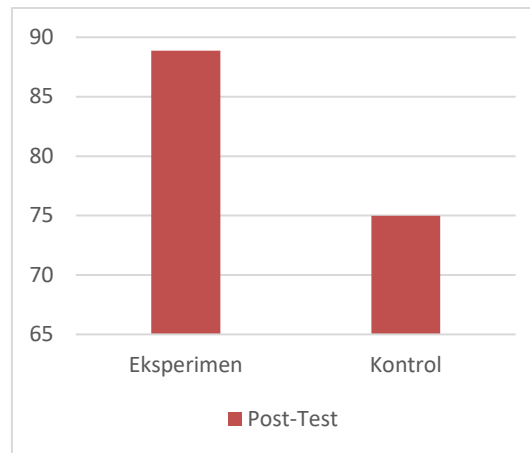
5) *Demonstration*

After each student completed the task given by the teacher, each student would be asked to present the task he/she has made, namely by matching or pairing each vocabulary with its meaning using wordwall learning media that was shown or guided by the teacher.

As for knowing the increase in student learning outcomes regarding Indonesian vocabulary skills in class II SDN Majalaya before and after the implementation of wordwall learning media and the EMRED strategy in learning Indonesian in the experimental group and the control group by using a non-parametric test in the form of the Man Whitney test with the help of software of SPSS version 25. This was done when the normality test was implemented. It turned out that the data was not normally distributed, so it was necessary to carry out the Man Whitney test to see the increase in students' vocabulary skills using SPSS version 25. The Man Whitney test aims to see if there is an increase in ability Mastery of Indonesian vocabulary for second-grade students of SDN Majalaya after the implementation of wordwall learning media and EMRED strategy in the experimental group increased students' vocabulary mastery skills in the control group using conventional learning. From the results of the non-parametric test using the Man Whitney test with the Asymp value. Sig (2-tailed) of 0.000 <0.05 indicates an increase in mastery of Indonesian vocabulary. The following is an increase in student learning outcomes from the experimental group and the control group which will be described using figure 4:

Figure 4

Comparison of the post-test mean scores of the experimental group and the control group



Based on the graph above, it can be seen that student learning outcomes in the experimental group are different from student learning outcomes in the control group.

4. DISCUSSION

Based on the results of the Man Whitney test calculation, the average posttest value of the experimental group by applying wordwall learning media and the EMRED strategy was 88.86 or rounded up to 89, but the average posttest value of the control group that applied conventional learning or the lecture method was 74, 97 or rounded up to 75. So the difference in the average posttest score between the experimental group and the control group posttest is 13.89.

Therefore, it can be concluded that based on the average post-test scores the experimental group and the control group both had an increase in the mastery of Indonesian vocabulary, but compared to the control group, the post-test average score for the experimental group was greater than the posttest's mean of the control group. In short, this shows that the application of wordwall learning media using the EMRED strategy is better than using conventional learning in learning activities at school.

5. CONCLUSION

From the results of the study, it can be concluded that there is an increase in student learning outcomes regarding Indonesian vocabulary material by applying wordwall learning media and EMRED strategies in the experimental group and applying conventional learning to the control group. Asymp value. Sig (2-tailed) of $0.000 < 0.05$ indicates an increase in students' vocabulary mastery. With the average comparison value of the posttest experimental group and posttest control group, the difference between the two is 13.89 97.

Based on the average posttest score, the experimental group and the control group both had an increase in Indonesian vocabulary mastery, but the posttest average score for the experimental group was greater than the posttest average score for the control group. Therefore, it can be concluded that the application of wordwall learning media using the EMRED strategy is better than using conventional learning so that it can improve the mastery of Indonesian vocabulary in grade II of SDN Majalaya.

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Conflict of Interest: The authors declare no conflict of interest.

Ethical Approval: The study adheres to the ethical guidelines for conducting research.

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REFERENCES

- Asrori, M. (2013). Pengertian, tujuan dan ruang lingkup strategi pembelajaran. *Madrasah: Jurnal Pendidikan dan Pembelajaran Dasar*, 5(2), 26. <http://ejournal.uin-malang.ac.id/index.php/madrasah/article/viewFile/3301/5117>
- Ayana, H., Mereba, T., & Alemu, A. (2024). Effect of vocabulary learning strategies on students' vocabulary knowledge achievement and motivation: the case of grade 11 high school students. In *Frontiers in Education*, 9, 1399350. <https://www.frontiersin.org/journals/education/articles/10.3389/feduc.2024.1399350/full>
- Brooks, R., Warmington, M., & Thomson, J. (2024). Evaluating the impact of vocabulary instruction on oral vocabulary, phonemic awareness, and nonword reading. *Reading and Writing*, 1-27. <https://link.springer.com/article/10.1007/s11145-024-10564-1>
- Halik, I. (2020). Membuat Game Edukasi Dengan Wordwall.
- Munirah, M., & Hardian, H. (2016). Pengaruh kemampuan kosakata dan struktur kalimat terhadap kemampuan menulis paragraf deskripsi siswa SMA. *Jurnal Pendidikan Bahasa dan Sastra*, 16(1), 78-87. https://ejournal.upi.edu/index.php/BS_JPBSP/article/view/3064
- Pan, R. (2023). The Role of Receptive/Orthographic Vocabulary, Productive/Orthographic Vocabulary, Productive/Phonological Vocabulary, and Depth of Vocabulary in Predicting Reading-to-Write Performance. *Journal of Psycholinguistic Research*, 52(6), 3039-3062. <https://link.springer.com/article/10.1007/s10936-023-10027-8>
- Prabowo, S. R. (2020). *Analisis Kosakata Siswa Kelas V di Salah Satu SD Swasta*. Universitas Sanata Dharma Yogyakarta.
- Salim, H. (2022). Penerapan Shared Book Reading dengan Penggunaan EMRED. *Serang: Suhud Media Promo*.
- Sherianto, S. (2020). Wordwall Aplikasi Bermain Sambil Belajar. www.Cocokpedia.Net.
- Song, B., & Xiong, D. (2023). A comparative study of the effects of social media and language learning apps on learners' vocabulary performance. *Asia Pacific Education Review*, 1-12. <https://link.springer.com/article/10.1007/s12564-023-09871-z>
- Sugiyono. (2017). *Statistika Untuk Penelitian*. Bandung: Alfabeta cv.
- Tavassoli, K., & Beyranvand, S. (2023). How Instagram as a MALL tool impacts EAP learners' technical vocabulary learning and perceptions in an electronic context. *SN Social Sciences*, 3(4), 70. <https://link.springer.com/article/10.1007/s43545-023-00657-z>
- Tong, Y., Hasim, Z., & Abdul Halim, H. (2023). The relationship between L2 vocabulary knowledge and reading proficiency: The moderating effects of vocabulary fluency. *Humanities and Social Sciences Communications*, 10(1), 1-14. <https://www.nature.com/articles/s41599-023-02058-2>