THE EFFECT OF USING MEMRISE APPLICATION IN LEARNING ENGLISH VOCABULARY AT THE EIGHTH GRADE OF SMPN 4 BUKITTINGGI

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ABSTRACT

This research is driven by the crucial role of vocabulary mastery in English learning and the challenges encountered by junior high school students, including limited vocabulary knowledge, low learning motivation, and unvaried teaching techniques. These issues highlight the necessity for innovative learning media that can enhance students' engagement and effectiveness in vocabulary acquisition. One alternative solution is the Memrise application, which integrates spaced repetition, multimedia features, and gamification to support vocabulary learning The objective of this study is to examine whether the use of the Memrise application significantly affects eighth-grade students' English vocabulary learning at SMPN 4 Bukittinggi. This study applied a quantitative approach with a quasi-experimental research design. The population comprised all eighth-grade students of SMPN 4 Bukittinggi, from which two classes were selected as samples: an experimental group that received instruction using the Memrise application and a control group that was taught through conventional teaching methods. The data were gathered through vocabulary pre-tests and post-tests and analyzed using both descriptive and inferential statistics with the help of SPSS.

Keywords: Memrise application*,* vocabulary learning*,* EFL students, junior high school

A. INTRODUCTION

The importance of English has been increasingly evident in various fields, including education, technology, business, and international relations. From the grade school level through the university level, English instruction is mandatory in Indonesia. At this school level, vocabulary acquisition is among the most arduous tasks for English language learners. Students with a limited vocabulary encounter difficulties when attempting to comprehend texts, construct coherent sentences, and articulate their thoughts with clarity. According to Richards and Renandya (2002), vocabulary is a core component of language proficiency, and without sufficient vocabulary knowledge, learners will face difficulties in understanding and using the language effectively.

Vocabulary knowledge supports the development of the four

language skills, namely listening, speaking, reading, and writing. Therefore, mastering vocabulary is essential for students in order to comprehend texts, express ideas, and communicate effectively in English. However, vocabulary learning remains a significant challenge for many students, especially for learners of English as a foreign language. Students often encounter difficulties in remembering new words, understanding their meanings, and using them appropriately in communication. This situation may hinder students from achieving optimal learning outcomes in English. Without adequate vocabulary mastery, students may struggle to understand learning materials and participate actively in classroom activities.

Based on preliminary observations conducted at SMPN 4 Bukittinggi, several problems related to students' vocabulary learning were identified. Many eighth-grade students showed difficulties in understanding English texts and remembering new vocabulary items. This condition is also reflected in the students' previous vocabulary test results. Based on the documentation of students' mid-semester English scores in class VIII A and VIII E, the results show that students' achievement is still below the minimum mastery criterion (KKM) of 75. The average score of class VIII A was 67.69, while class VIII E obtained an average score of 70.21. Furthermore, 55% of students in class VIII A and 51.7% of students in class VIII E did not reach the KKM. These results indicate that many students still experience difficulties in mastering English vocabulary.

To support these findings, a preliminary interview was conducted with the English teacher of the eighth grade. The teacher explained that students often struggle to retain new vocabulary and tend to forget words quickly after learning them. In addition, students sometimes show low engagement and motivation during vocabulary learning activities. The teaching process is generally conducted using conventional methods such as explanation and memorization, which may not sufficiently stimulate students' interest in learning vocabulary. In the digital era, technology-based learning media

offer promising alternatives to traditional instruction.

One language learning application that has gained global popularity is Memrise. Memrise is a mobile and web-based application designed to support vocabulary acquisition through spaced repetition systems, multimedia input, mnemonic strategies, and gamification features. In this study, Memrise is positioned as a digital learning media used to support vocabulary instruction. It functions as a technology-based tool that facilitates vocabulary practice and reinforces students' retention. Therefore, it is not categorized as a teaching method, but as an instructional media integrated into classroom learning.

The spaced repetition system implemented in Memrise helps learners review vocabulary at optimal intervals, which strengthens memory retention. Furthermore, gamified elements such as points and progress levels can increase students' motivation and engagement. Compared to conventional vocabulary instruction, Memrise provides a more student-centered and interactive learning experience that may improve vocabulary achievement. Although several studies have explored mobile-assisted language learning, research specifically examining the effectiveness of Memrise in Indonesian junior high school contexts remains limited. Most previous studies focus on learners' perceptions rather than measuring vocabulary achievement through experimental design. Therefore, empirical evidence regarding the effect of Memrise on students' vocabulary mastery in classroom settings is still insufficient.

Based on the explanation above, three main problems can be identified in vocabulary learning at SMPN 4 Bukittinggi. First, students' vocabulary mastery is still relatively low, as indicated by their test scores which are below the minimum mastery criterion. Second, students experience difficulties in understanding English texts due to limited vocabulary knowledge. Third, the teaching strategies used in vocabulary instruction are still relatively conventional and less interactive, which may reduce students' motivation in learning

vocabulary. Given the existing gap and the promising potential of the Memrise application to enhance the educational process, implementing this approach in classroom instruction is deemed essential. Based on the explanation above, the researcher is interested in conducting a further study with the title "The effect of using Memrise application in learning English vocabulary at SMP 4 Bukittinggi."

B. METHOD

This study was employing a quantitative research method because it was focus on numerical data and statistical analysis to measure the effect of the Memrise application on students' vocabulary mastery. The specific design applied in this research it was a quasi-experimental design, which was involve two groups: an experimental group and a control group. According to Creswell (2014), quasi-experimental research allows the researcher to examine the causal effect of an independent variable on a dependent variable, even without random assignment of participants.

This design was considered appropriate for classroom-based studies where randomization was not possible. In this study, one class was assigned as the experimental group and was taught using the Memrise application, while another class was assigned as the control group and was taught using conventional teaching methods. Both groups were given a pre-test to measure their initial vocabulary knowledge and a post-test after the treatment to evaluate their improvement. This procedure enabled the researcher to determine whether the Memrise application significantly influenced students' vocabulary achievement compared to traditional teaching methods.

Instrument of the research

The instrument of this research was a vocabulary test consisting of 30 items. The test measured three aspects of vocabulary mastery: form, meaning, and use. The form aspect was measured through a matching test (items 1–10). The use aspect was measured through a fill-in-the-blank test based on a recount text (items 11–20).

The meaning aspect was measured through multiple-choice questions (items 21–30). Both pre-test and post-test had the same test specification and level of difficulty but used different vocabulary items to ensure equivalency. The instrument used in this study was a vocabulary test, which was administered in two stages:

1. Pre-test: The pre-test was administered to both the experimental and control groups prior to the treatment in order to assess the students' initial vocabulary mastery and to ensure the equivalence of the two groups.
2. Post-test: The post-test was administered to both the experimental and control groups after the implementation of the treatment in order to assess the improvement in students' vocabulary mastery and to examine the effect of the Memrise application compared to conventional teaching methods.

C. FINDING AND DISCUSSION

Description of Data

This research involved 58 students as the sample, consisting of 29 students from the experimental class (VIII A) and 29 students from the control class (VIII E) at SMPN 4 Bukittinggi. The main problem identified in this study was that students had low vocabulary mastery, which was reflected in their test scores that were still below the minimum mastery criterion (KKM).

In addition, students experienced difficulties in understanding English texts due to limited vocabulary knowledge. Another problem was related to the teaching strategy used in the classroom. The learning process tended to rely on conventional methods such as explanation and memorization, which were less interactive and did not fully engage students in the learning process. As a result, students showed low motivation and participation during vocabulary learning activities.

Through Memrise, students can practice vocabulary independently, repeatedly, and

receive immediate feedback on their performance. These features help students strengthen their memory retention and increase their motivation to learn. Thus, the use of Memrise was expected to improve students' vocabulary mastery and create a more interactive learning environment.

Table 1 Vocabulary Mastery Test Results from Both Classes

NO	Student Code VIII.A	The score before	The score after	Student Code VIII.E	The score before	The score after
1	ADD	63	87	RAS	67	83
2	APF	37	83	KCAP	60	40
3	OZ	37	67	MRP	67	50
4	FG	17	77	RA	70	87
5	SN	40	67	AA	53	70
6	MIA	30	80	MG	37	83
7	MF	43	77	RS	33	53
8	SA	50	87	MDR	80	50
9	KG	83	73	AD	50	93
10	RNS	40	83	KYA	60	47
11	SN	66	80	SA	40	43
12	DNH	53	40	AFF	60	50
13	SYP	73	97	AK	53	47
14	SR	73	90	ABB	50	50
15	SM	30	73	FF	37	97
16	MDAF	80	67	HK	47	67
17	IRP	73	67	RRA	43	67
18	RM	16	93	MAA	47	33
19	MR	83	77	VMQ	73	50
20	AA	40	63	EIS	70	83
21	RA	43	67	AA	67	40
22	RLA	47	97	FAMZ	37	33
23	MFA	50	63	MF	57	40
24	DAI	80	90	MY	60	67
25	SIY	80	73	NAM	67	53
26	N	33	67	KPA	40	50
27	RA	80	93	AE	47	60
28	KA	30	87	RA	33	33
29	COP	67	57	FAA	80	93

Normality Test

The normality test was conducted using Kolmogrov-Smirnov test to determine whether the pre-test and post-test scores were normally distributed.

The hypotheses for the normality test were: Ho: The data are normally distributed.H1: The data are not normally distributed.

Table 2 of Normality Test

Kolmogorov-Smirnov[a]		
Statistic	df	Sig.
.183	29	.014
.143	30	.119

The significance values (Sig.) of the Kolmogorov–Smirnov test for both the experimental and control groups were greater than 0.05. Therefore, H_0 was accepted, indicating that the data were normally distributed.

Homogeneity Test

The homogeneity test was conducted using Levene's Test to determine whether the variances of the two groups were equal.

The hypotheses for the homogeneity test were: Ho: The variances of the two groups are homogeneous. H1: The variances of the two groups are not homogeneous.

Table 3 of Homogeneity Test

Levene Statistic	df1	df2	Sig.
2.363	1	57	.130
1.980	1	57	.165
1.980	1	56.914	.165
2.322	1	57	.133

The significance value of Levene's Test was greater than 0.05. This result indicates that the variances of the experimental and control groups were homogeneous. Thus, the data met the assumptions required for conducting parametric tests.

Analysis of Data

To answer the research questions, the data obtained from the vocabulary pre-test and post-test were analyzed using IBM SPSS Statistics 27. Both descriptive and inferential statistical analyses were employed to provide a

comprehensive and accurate interpretation of the data:

Data analysis

To answer the first research question, a paired sample t-test was conducted to examine whether there was a significant improvement in students' vocabulary mastery after being taught using the Memrise application. The result showed that the significance value was 0.000 ($p < 0.05$), indicating a statistically significant difference between the pre-test and post-test scores of the experimental group. The mean difference was 23.62 points, which reflects a substantial improvement in students' vocabulary achievement.

Table 4 Paired Sample Test

t	df	Sig. (2-tailed)
-5.230	28	.000

Based on this result, it can be concluded that the use of the Memrise application had a significant positive effect on students' vocabulary learning. Therefore, the alternative hypothesis (Ha) was accepted, and the null hypothesis (H_0) was rejected.

To answer the second research question, an independent sample t-test was conducted to compare the vocabulary achievement of students taught using Memrise and those taught using conventional methods. The findings showed that the mean score of the experimental group was 76.62, while the control group obtained a mean score of 59.03. The mean difference between the two groups was 17.59 points.

Table 5 Independent sample t-test

Kelas	N	Mean
A	29	76.6207
E	29	59.0345

Furthermore, the significance value was 0.000 ($p < 0.05$), which indicates that the difference between the two groups was statistically significant. This means that students who were taught using the Memrise application achieved better results in vocabulary learning than those who were taught without Memrise. Thus, the alternative hypothesis (Ha) was

accepted, and the null hypothesis (H_0) was rejected.

To answer the third research question, the independent sample t-test results were further interpreted to determine whether there was a significant difference in vocabulary achievement between the experimental and control groups. The analysis showed that the t-value was 4.007 with a significance value of 0.000 ($p < 0.05$). This indicates that the difference in vocabulary scores between the two groups was statistically significant.

Table 6 Independent sample t-test

F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
7.034	.010	4.007	56	.000	17.58621
		4.007	48.919	.000	17.58621

In addition, the mean difference of 17.59 points demonstrates that the effect of the Memrise application was not only statistically significant but also educationally meaningful. Therefore, it can be concluded that there was a significant difference in vocabulary achievement between students taught using the Memrise application and those taught using conventional teaching methods.

Discussion

Based on the data analysis results from the preceding section, this section presents the research findings. Interpreting the statistical findings in light of the study questions, pertinent theories, and earlier studies is the main topic of debate.

The results of this study demonstrate that students' vocabulary acquisition is significantly impacted by using the Memrise app. This outcome is in line with the findings of Fitri et al. (2023), who found that junior high school pupils' vocabulary proficiency was greatly enhanced by using the Duolingo app. According to both research, vocabulary acquisition can be efficiently supported by mobile-assisted language learning programs that offer dynamic and captivating learning environments. Furthermore, this result is consistent with a study by Parni et al. (2022) that found that using game-based learning resources, such the Fly Swatter game, significantly improved students' vocabulary understanding.

These parallels imply that improving students' vocabulary learning outcomes requires the usage of interactive digital applications and learning materials.

The findings of this study also align with earlier research, including Ananda et al. (2024), which discovered that the use of innovative learning media greatly enhanced students' vocabulary achievement in junior high school settings. This suggests that engaging instructional tools can have a positive impact on vocabulary mastery and retention. Furthermore, prior research backs up the significance of efficient vocabulary learning techniques in EFL settings. The use of vocabulary self-collection techniques, for instance, greatly increased students' vocabulary mastery, according to Hutauruk et al. (2023), underscoring the importance of structured learning interventions in vocabulary acquisition. Finally, prior research has demonstrated that students' vocabulary mastery is much enhanced when media is used in vocabulary training. As an illustration of the significance of well-structured instructional media in vocabulary learning, Darma et al. (2023) discovered that the use of Word Wall media greatly improved students' vocabulary attainment.

D. CONCLUSIONS

Based on the results and discussion presented, several conclusions can be drawn from this study entitled “The Effect of Using the Memrise Application in Learning English Vocabulary at the Eighth Grade of SMPN 4 Bukittinggi.”

First, the implementation of the Memrise application was found to have a significant impact on students’ vocabulary learning. The paired sample t-test results indicated a meaningful difference between the pre-test and post-test scores of students in the experimental group, showing an improvement in students’ vocabulary mastery after the application was applied.

Second, students who learned vocabulary through the Memrise application demonstrated better learning outcomes compared to those who were taught using conventional teaching methods. The independent sample t-test conducted on the post-

test scores revealed a significant difference between the experimental and control groups, with higher scores achieved by the experimental group.

Third, a significant difference in vocabulary achievement was identified between students taught using the Memrise application and those taught without it. These findings confirm that Memrise serves as an effective learning medium for enhancing students' vocabulary mastery, particularly among eighth-grade students at SMPN 4 Bukittinggi. Overall, the results support the alternative hypothesis (Ha) and reject the null hypothesis (Ho), leading to the conclusion that the Memrise application is effective in improving students' English vocabulary learning.

Based on the conclusion above, several suggestions are proposed as follows:

1. Suggestions for teachers

English teachers are advised to apply the Memrise application as an alternative or supplementary learning media in teaching vocabulary. Teachers should guide students in using the application effectively and align the vocabulary materials with curriculum and learning objectives.

2. Suggestions for students

Students are encouraged to actively use the Memrise application not only during classroom activities but also outside the classroom. Regular practice using the application can help students improve their vocabulary mastery and increase their confidence in using English.

3. Suggestions for future researchers

Future researchers are suggested to conduct further studies on the use of Memrise with longer treatment durations and larger samples. They may also explore the effect of Memrise on other language skill such as speaking, reading, or writing. In addition, future studies may consider using premium features of the application to examine their impact on pronunciation and listening skills. By considering these suggestions, it is expected that further research and teaching practice can continue to improve the quality of English vocabulary learning through the effective use of technology.

DAFTAR PUSTAKA

Daftar Pustaka ditulis mengacu kepada standar APA 6th dengan panduan sebagai berikut :

Buku :

Aiken, L. R. (1985). Three coefficients for analyzing the reliability and validity of ratings. Educational and Psychological Measurement, 45(1), 131–142.

Creswell, J. W. (2014). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (4th ed.). Pearson Higher Education.

Schmitt, N. (2008). Review article: Instructed second language vocabulary learning. Language Teaching Research, 12(3), 329–363. https://doi.org/10.1177/1362168808089921

Stockwell, G. (2012). Mobile-assisted language learning. In C. A. Chapelle (Ed.), The encyclopedia of applied linguistics. Wiley-Blackwell. https://doi.org/10.1002/9781405198431.wbeal0766.

Sugiyono. (2020). Metode penelitian kuantitatif, kualitatif, dan R&D. Alfabeta.

Thornbury, S. (2002). How to teach vocabulary. Pearson Education.

Williamson, G. (2014). Definition of vocabulary. In Language.

Artikel in Press :

Hamer, W. (2021). Memrise application is an educational program that helps students master language by combining flashcard with the mnemonics technique to teach foreign language and memorize knowledge. In *Students' Perception Toward Memrise Application as Media in Learning* (p. 99).

Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. ReCALL, 20(3), 271–289. https://doi.org/10.1017/S0958344008000335

Jurnal :

Ananda, A., Putri, H. P., Sakti, G., & Safitri, L. (2024). The effect of using Guessing Game on students' vocabulary achievement at grade VIII of MTSN 6 Agam. Education Achievement: Journal of Science and Research, 5(2), 243–251. https://doi.org/10.51178/jsr.v5i2

Deputri, A. B., Hamidiyah, A., & Baihaqi, A. (2023). the Use of Memrise Application on Students' Motivation in Learning English Vocabulary. GENTA BAHTERA: Jurnal Ilmiah Kebahasaan Dan Kesastraan, 9(1), 1–10.

https://doi.org/10.47269/gb.v9i1.243

Darma, H. O., Dewi, M. P., Safitri, L., & Safitri, W. (2023). The Effect Of Word Wall Media On Students' Vocabulary Mastery At The 7th Grade Of SMPN 3 Kec. Pangkalan Koto Baru. Atmosfer: Jurnal Pendidikan, Bahasa, Sastra, Seni, Budaya, Dan Sosial Humaniora, 1(2), 124-136.

Elatri Parni, Meri and Hilma Pami, Putri and Loli, Safitri and Reflinda, Reflinda (2022) The Effect of Fly Swatter Game on Students Vocabulary Mastery At First Grade Students of SMPN 1 Inuman-Kuantan Singingi. Journal of Educational Management and Strategy (JEMAST), 1 (1). pp. 46-56. ISSN 2964-4283.

Fitri, Y., Melani, M., Roza, V., & Reflinda, R. (2023). The Effect Of Using Duolingo Application Toward Students' Vocabulary Mastery At The Second Grade Of SMPN 1 Koto Besar. Innovative: Journal Of Social Science Research, 3(2), 8265–8279.

Hutauruk, D. R., Sakti, G., Syahrul, S., & Syafitri, W. (2023). The effect of using vocabulary self-collection strategy (VSS) on student's vocabulary mastery. ELP (Journal of English Language Pedagogy), 8(1), 77–87. https://doi.org/10.36665/elp.v8i1.718

Karjo, C. H., & Andreani, W. (2018). Learning Foreign Languages With Duolingo and Memrise. Proceedings of the 2018 International Conference on Distance Education and Learning, 109–112. https://doi.org/10.1145/3231848.3231871

Marzuki, M., & Rusdin, D. (2020). Increasing Vocabulary Mastery of Viii Grade Students At Mts. Haji Hayyun Salumpaga Through Vocabulary Card. Jurnal Madako Education, 6(1), 10–16.

Scholz, K. (2018). Memrise. Die Unterrichtspraxis / Teaching German, 51(1), 100–103. https://doi.org/10.1111/tger.12046.

Yang, X., Qiu, Q., Yu, S., & Tahir, H. (2014). Designing a trust evaluation model for open-knowledge communities. British Journal of Educational Technology, 45(5), 880–901. https://doi.org/10.1111/bjet.12083.

Zhang, X. (2019). Learning Technology Review: Memrise. CALICO Journal, 36(2), 152–161. https://doi.org/10.1558/cj.37857.