



The Effectiveness of Memrise Application to Teach English Vocabulary at Tenth Grade Students of SMK Sore Tulungagung

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Abstract. Vocabulary is an important element in language acquisition. However, currently many students lack vocabulary knowledge and many teachers still have not implemented technology in learning. This research aims to determine the effectiveness of the Memrise application in teaching English vocabulary and the differences in students' vocabulary mastery before and after treatment. The method used is quantitative with a pre-experimental design. Data were collected through pre-test and post-test on 35 students of class X-TSM 2 SMK Sore Tulungagung in the 2024/2025 academic year. The results showed that the average score increased from 66.14 to 86.71 after using the application. The paired t-test showed a t value of -11.031 with a significance of <0.001, which means there is a significant difference. Cohen's d effect size value of -1.865 and Hedges -1.844 showed a large effect. These results prove that the Memrise application is effective in improving students' vocabulary mastery. The implication is that application-based learning such as Memrise can be an interesting and useful alternative in the English learning process at the vocational school level.

Keywords: Effectiveness, English, Memrise, Vocabulary

Abstrak. Kosakata merupakan elemen penting dalam pemerolehan bahasa. Namun, saat ini masih banyak siswa yang kurang memiliki pengetahuan kosakata, dan banyak guru yang belum menerapkan teknologi dalam pembelajaran. Penelitian ini bertujuan untuk mengetahui efektivitas aplikasi Memrise dalam pengajaran kosakata bahasa Inggris serta perbedaan penguasaan kosakata siswa sebelum dan sesudah perlakuan. Metode yang digunakan adalah kuantitatif dengan desain pre-eksperimen. Data dikumpulkan melalui pre-test dan post-test pada 35 siswa kelas X-TSM 2 SMK Sore Tulungagung tahun ajaran 2024/2025. Hasil penelitian menunjukkan bahwa nilai rata-rata meningkat dari 66,14 menjadi 86,71 setelah menggunakan aplikasi. Uji t berpasangan menunjukkan nilai t sebesar -11,031 dengan signifikansi <0,001, yang berarti terdapat perbedaan yang signifikan. Nilai effect size Cohen's d sebesar -1,865 dan Hedges sebesar -1,844 menunjukkan efek yang besar. Hasil ini membuktikan bahwa aplikasi Memrise efektif dalam meningkatkan penguasaan kosakata siswa. Implikasinya, pembelajaran berbasis aplikasi seperti Memrise dapat menjadi alternatif yang menarik dan bermanfaat dalam proses pembelajaran bahasa Inggris di tingkat sekolah kejuruan.

Kata kunci: Efektivitas, Bahasa Inggris, Memrise, Kosakata

1. INTRODUCTION

One of the vital aspects of communication is language. It serves as a medium of communication worldwide. English is one of the most widely used languages in many countries, including Indonesia. Mastering English has become an essential part of Indonesia's education system across all levels (Boy Jon et al., 2021). Permendikbudristek No. 12 of 2024 supports this, which regulates that English is a compulsory subject from the 3rd elementary school or equivalent education institutions

In learning a language, the first step people must learn is vocabulary. Vocabulary mastery is important because people cannot communicate effectively with others if they lack vocabulary mastery. Despite the critical role of vocabulary in language acquisition, many

Indonesian students face challenges in mastering English, including limited knowledge of vocabulary (Komari et al., 2022). Student learning outcomes are influenced by two types of factors: internal and external. Internal factors include students' motivation, self-confidence, and ability to process teaching materials, while external factors consist of teaching variety, learning medium, and facilities.

One challenge students' encounter in mastering English is the absence of learning media vocabulary. Therefore, teachers should be able to find and use innovative media to enhance students' vocabulary skills and students' interest in learning vocabulary. In this digital era, educational media need to adapt to modern technology, one of which is applications for learning languages. Lubis et al. (2023) stated that media and technology influence education. Nowadays, many applications are being developed for teaching and learning languages such as Memrise, Duolingo, and many more. Among the various applications available, the Memrise application is one of the media for teaching vocabulary.

Memrise is an online platform designed to enhance vocabulary acquisition through interactive and gamified learning experiences. One of its key features is the use of spaced repetition and mnemonic techniques that are expected to enhance students' interest and vocabulary retention (Taebenu & Katemba, 2021). This research focuses on vocational high school because, as a group in transition into the work environment, and require a strong foundation of English to enhance their competitiveness in the job market. However, based on the observations at SMK Sore Tulungagung, many students got difficulties in understanding and remembering English vocabulary. Students were lack of interactive teaching methods and engaging learning materials. Based on the information above, the researcher aims to investigate the effectiveness of the Memrise application in teaching and learning English, as well as to identify any significant changes in students' vocabulary mastery before and after using the Memrise application. Therefore, the researchers conducted research entitled "THE EFFECTIVENESS OF MEMRISE APPLICATION TO TEACH ENGLISH VOCABULARY AT TENTH GRADE STUDENTS OF SMK SORE TULUNGAGUNG".

2. LITERATURE REVIEW

Vocabulary is a fundamental component of language, which is also fundamental for mastering English. According to Sari et al. (2021) vocabulary is crucial in language since it serves as a tool of communication. Thus, vocabulary mastery is important because people cannot communicate effectively with others if they lack vocabulary mastery. Teaching vocabulary can be defined as a process that aims to help students understand and use words in

a language more effectively (Sirait et al., 2022). Teaching vocabulary refers to improving students' vocabulary skills by using appropriate strategies (Duha, 2024). Therefore, vocabulary teaching should be done using various strategies that engage students and enhance learning more effectively. As noted by Rofiqoh & Kartikawati (2024), in teaching and learning vocabulary, teachers need media. There are various types of media that teachers can utilise to teach vocabulary. One of the media that can be used is multimedia, which combines text, sound, images, animations, and videos to introduce vocabulary (Nisa' et al., 2023). The Memrise application serves as an educational platform, enabling students to acquire vocabulary and learn about various topics online via a mobile application or website.

Teaching vocabulary using Memrise application aligns well with Richard Mayer's Cognitive Theory of Multimedia Learning (CTML). Mayer (2024) explains that effective learning occurs through the combination of words and graphics. Memrise applies this theory by utilizing multimedia elements, including pictures, sounds, animations, and videos, to aid students in learning vocabulary. Several previous studies also supported this research. Nuralisah & Kareviati (2020) found that students were more motivated and had better vocabulary comprehension after using the Memrise application. Baniara et al. (2024) also noted students' positive perceptions of using this application due to its interactive features. Wang et al. (2023) noted that Memrise can increase students' motivation in learning Mandarin vocabulary. Then, Quyen (2022) argued that Memrise application is effective. Meanwhile, Wardana & Jamilah (2024) proved that Memrise is also effective in improving speaking skills. The research hypothesis in this research is formulated as follows:

1. Null Hypothesis (H_0): Using the Memrise application is not effective for teaching English vocabulary to tenth-grade students at SMK Sore Tulungagung.
2. Alternative Hypothesis (H_a): Using the Memrise application is effective for teaching English vocabulary to tenth-grade students at SMK Sore Tulungagung.

3. RESEARCH METHODOLOGY

This research uses quantitative with pre-experimental design. The population of this study were 10th grade students of SMK Sore Tulungagung and the sample was 35 students from class X TSM 2. Data collection was carried out through a pre-test before treatment and a post-test after treatment. After the data was obtained, data analysis was carried out using SPSS version 27 to test normality, homogeneity, and lastly hypothesis testing.

4. FINDING AND DISCUSSION

This research employed a pre-experimental one-group pre-test and post-test design. The total participants in this research were 35 students from X-TSM 2 of SMK Sore Tulungagung. The research was conducted for two months in March-April. As for the research findings, they are explained as follows:

Pre-Test and Post-Test

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Pretest	35	50.00	80.00	2315.00	66.1429	9.08179
Valid N (listwise)	35					

In **Table 4.1** above, out of 35 students, the minimum score obtained in the pre-test was 50, while the maximum score was 80. The total of all pre-test scores was 2315. In addition, the average pre-test score was calculated to be around 66,14 with a standard deviation of 9,08.

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Posttest	35	75.00	100.00	3035.00	86.7143	6.74568
Valid N (listwise)	35					

In **Table 4.2** above, it can be observed that the minimum score achieved in the post-test was 75, while the maximum score reached 100. The total of all pre-test scores was 3035, indicating the combined performance of all students after the treatment. The average pre-test score was calculated to be approximately 86,71 with a standard deviation of 6,75.

Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.122	35	.200*	.942	35	.062
Posttest	.144	35	.064	.943	35	.069
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Based on the normality test results in **Table 4.3**, the significance value of the pre-test and post-test data based on Shapiro-Wilk is 0.062 and 0.069, while based on Kolmogorov-Smirnov is 0.200 and 0.064. Both significance values are greater than 0.05, indicating that the data is normally distributed. Thus, it can be concluded that the pre-test and post-test data meet this normality assumption.

Homogeneity Test

		Levene Statistic	df1	df2	Sig.
Score	Based on Mean	3.537	1	68	.064
	Based on Median	3.097	1	68	.083
	Based on Median and with adjusted df	3.097	1	65.505	.083
	Based on trimmed mean	3.609	1	68	.062

As shown in **Table 4.4**, the significance value based on the mean was 0.064, while the value based on the median and median with adjusted degrees of freedom were both 0.083. In addition, the value based on the trimmed mean was 0.062. All these significance values were higher than 0.05. Therefore, the data were homogeneous.

Hypothesis Testing

After the data is known to be normal and homogeneous, the next step is the paired sample t-test. The results are described below:

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
P a i r l	Pretest - Posttest	-	11.0328	1.864	-	-	-	34	<.001
		20.57143	0	.88	24.36133	16.78153	11.031		

Based on the analysis results in the Paired Samples Test in **Table 4.5**, the average (mean) difference between the pre-test and post-test scores was -20.57143 with a standard deviation of 11.03 and a standard error of the mean of 1.86. This negative value indicates that the average post-test score is higher than the average pre-test score, suggesting an improvement in students' vocabulary mastery. The calculated t-value obtained was -11.031, with a degree of freedom (df) of 34, and a significance value (Sig. 2-tailed) of <0.001. It can be seen that the p-value was less than 0.05. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Thus, the results of this analysis indicate a significant improvement in students' scores after the treatment, suggesting that using the Memrise application was effective in teaching vocabulary to tenth-grade students at SMK Sore Tulungagung.

5. CONCLUSION AND SUGGESTIONS

Based on the findings and discussions, it is evident that students' English vocabulary mastery increased after receiving treatment using the Memrise application. Therefore, it can be concluded that Memrise application is effective for teaching English vocabulary to tenth grade students of SMK Sore Tulungagung in the 2024/2025 academic year. Based on the research results, several recommendations are provided for several parties. It is recommended for English teachers, especially in vocational high schools, to use the Memrise application in English learning. For students, it is recommended to use the Memrise application to make learn vocabulary. Lastly, for further researcher, it is recommended to consider using the Memrise application to apply research using the Memrise application with different methods

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