

# An Experimental Study on Memrise Application in Students' Vocabulary Mastery

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# Introduction

Technology is now indispensable in our daily lives, particularly the internet for rapid information access and communication. With globalization, learning English early is crucial to keep pace with global advancements. In Indonesia, English is taught from elementary to graduate levels. Technology, such as Google Classroom and Kahoot, enhances learning experiences, especially for Generation Z and millennial students. Building a strong vocabulary is key to effective English communication, as noted by Fadhilawati and Penny. Despite its importance, many students struggle with vocabulary. Integrating technology, like mobile apps such as Memrise, can aid vocabulary acquisition, as suggested by various studies. Memrise offers user-friendly courses and has shown positive impacts on language learning, particularly in improving listening proficiency, pronunciation skills, and mastering phrasal verbs. Studies have found that using Memrise enhances students' motivation and eagerness to learn. This research aims to assess the effectiveness of Memrise in improving students' vocabulary competency levels.

# Research Question

Does the Memrise app have an impact on improving students' vocabulary skills?

# Method

## RESEARCH PURPOSES

This study aims to determine any significant differences between the students' competency levels before and after using the Memrise application.

## RESEARCH PLACE

This research was conducted at SMP Muhammadiyah 4 Porong

## RESEARCH TIME

The research was undertaken over four days, spanning from January 9th to January 17th 2024 during two weeks.

## RESEARCH VARIABLES

In this study there are two variables, namely the dependent variable (Students vocabulary mastery), and the independent variable (Using the Memrise application).

## RESEARCH DESIGN

The study used a pre-experimental design with a pre-and post-test for a single group and no control group for comparison.

# Method

## POPULATION

The population in this study were 15 9th grade students of SMP Muhammadiyah 4 Porong.

## SAMPLE

The researchers selected class nine as the sample group.

## SAMPLING TECHNIQUE

The researchers employed a method called simple random sampling to obtain the research sample.

## INSTRUMENT RESEARCH

Twenty multiple choice questions are used in the tests used by researchers to measure and retrieve data on student vocabulary mastery.

## DATA ANALYSIS TECHNIQUE

The collected data was analyzed using the SPSS 26 programs. To perform this analysis, the researchers conducted a t-test.

## STATISTICAL HYPOTHESIS

This research hypothesis uses the paired sample t-test test.

# Finding and Discussion

## RESEARCH DATA

The research comprised three phases: pre-test, treatment, and post-test, to assess students' vocabulary proficiency before and after using the Memrise application-based teaching method. Initially, students took a pre-test with 20 multiple-choice questions. Subsequently, they received instruction via the Memrise app three times. Finally, a post-test was administered to evaluate their vocabulary proficiency. Data analysis was conducted using SPSS 26 by comparing pre-test and post-test results. Before using the Memrise app, students achieved a total pre-test score of 1050, with a minimum score of 30 and maximum 90 with an average of 70, indicating satisfactory English vocabulary mastery. Post-treatment, the post-test revealed a total score of 960, with 90 as the highest and 35 as the lowest score. Despite a slight decrease in scores, the average score remained at 64.00, suggesting maintained vocabulary mastery post-treatment.

And the results obtained:

Descriptive statistics	PRE-TEST	POST-TEST	Paired Samples Statistics					
				Mean	N	Std. Deviation	Std. Error Mean	
Highest score	90	90						
Lowest score	30	35						
Average	70,00	64,00	Pair 1	Pretest Vocabulary	70,00	15	18,613	4,806
Standard deviation	18,61	17,54		Postest Vocabulary	64,00	15	17,546	4,530

# Finding and Discussion

## T-test Results

Decision making using the Significance value	
The sig. (2-tailed) value	The significance limit
0.089	0.05

Decision making by comparing the t value with the t table	
The t-test value	Table t value
1.829	2.145

Based on our calculations, the Sig. (2-tailed) is 0.089, which is higher than the significance limit of 0.05. This indicates a significant difference between the pre-test and post-test scores. It should be noted that the t-test value, which is 1.829, is lower than the t-table value of 2.145. Therefore, in this scenario, we will reject the alternative hypothesis ( $H_a$ ) and accept the null hypothesis ( $H_0$ ). Our research has shown that there has been no notable effect in students' vocabulary skills after using the Memrise app.

# Key Research Findings

## Paired Samples Test

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pretest Vocabulary - Posttest Vocabulary	6,000	12,705	3,281	-1,036	13,036	1,829	14	,089



# Research Benefits

While the study did not find a significant impact of the Memrise app on vocabulary acquisition in this particular sample, it still provides valuable insights for educators and researchers.

- It highlights the importance of careful evaluation and comprehensive assessment of educational technologies before their implementation in classrooms.
- This research can serve as a basis for further investigations into the effectiveness of different methods and tools for enhancing students' vocabulary development.

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