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Leveling Up Vocabulary: Exploring The Impact of Memrise on EFL Learners' Word Power

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ARTICLE INFO	ABSTRACT
Received:	This study investigates the effectiveness of the Memrise application in enhancing students' English vocabulary mastery in an Indonesian EFL context. Employing a quasi-experimental design, 60 high
16 March 2025	school students were divided into two groups: an experimental group that received instruction through Memrise and a control group taught with conventional methods. Both groups were
Revised:	assessed using pre-tests and post-tests, and additional data were gathered through observation
8 September 2025	checklists and student questionnaires. The results of normality and homogeneity tests confirmed that the data met the assumptions for parametric testing. A paired sample t-test revealed a
Accepted:	significant improvement in vocabulary scores within the experimental group, while the
13 Septemner 2025	independent sample t-test indicated a statistically significant difference in vocabulary gains between the experimental and control groups in favor of the former. Students using Memrise
Keywords: vocabulary mastery, Memrise, mobile-assisted language learning, EFL, quasi-experimental study	demonstrated greater engagement and consistency, and their positive perceptions further supported the application's usability and motivational value. These findings suggest that integrating Memrise into vocabulary instruction can significantly enhance vocabulary acq uisition, offering practical insights for language educators seeking to incorporate mobile-assisted learning into the classroom.
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1. INTRODUCTION

Language is a fundamental human capability that enables communication, learning, and participation in society. Among its many forms, English has become a global medium for academic study, professional exchange, and digital information, making it a strategic skill for learners across contexts. Developing strong English proficiency not only broadens access to knowledge but also supports more effective engagement with classroom tasks, resources, and interactions. In particular, mastery of core components—vocabulary, grammar, pronunciation, and discourse strategies—helps students comprehend instruction, express ideas clearly, and participate confidently in collaborative activities. As a result, learners who strengthen their English skills are better equipped to navigate course materials, monitor their understanding, and build new knowledge through practice and feedback (Ramírez & Kuhl, 2020). Taken together, these benefits underscore why English should be treated not merely as a subject to pass, but as a foundational competence that enables deeper and more autonomous learning.

Memrise is an online self-learning platform that has been used to study vocabulary and pronunciation. Its main advantages include portability, ease of access through computers or mobile apps on smartphones and tablets, and user-friendliness. The application is specifically designed to help users retain vocabulary in their long-term memory by providing systematic and frequent practice. Memrise is a mobile learning platform for vocabulary and pronunciation that



combines spaced repetition, multimedia prompts, and game-like review to strengthen long-term retention and support learner self-regulation (see Fathi, Alipour, & Saeedian, 2018; Zohoorian, Noorbakhsh, & Zeraatpishe, 2022).

Based on previous research, there are several research has been doneabout vocabulary mastery trough memrise application such as the first result in The Effect Of Memrise Application On Students Vocabulary Masteryby Ulfaeni & Gunawan(2024) was significant (2-tailed) was 0.000 < 0.05 since the sig.(2-tailed) is smaller than 0.05, proving a significant difference between the pre-test and post-test. It means that the H1 was accepted and H0 was rejected. Lastly, according to findings from (Theodoridis & Kraemer, n.d.) conclude that everyone can try the memrise application that can help everyone to improve their English vocabulary starting from the basic.

The second result in The Effectiveness Of Using Memrise Application To Enhance The Second Grade Of Smpit Al Fityah Pekanbaru Students' Vocabulary Consistent evidence comes from Nuralisah and Kareviati (2020), whose independent-samples t test showed that students taught with Memrise outperformed those in the control class on the post-test (p < .05), indicating a positive effect of the app on vocabulary mastery."

Similar findings were reported by Widarti, Daud, and Masyhur (2025), who found that students' vocabulary mastery improved significantly after using the Memrise application. The study showed an increase in the mean score from 76.80 in the pre-test to 88.90 in the post-test. Moreover, the results of the paired-sample t-test indicated a p-value < .001, leading to the rejection of the null hypothesis (H_0) and acceptance of the alternative hypothesis (H_1). This demonstrates that using Memrise had a significant positive effect on students' vocabulary acquisition.

This study investigates the effectiveness of Memrise in improving students' English vocabulary mastery, aiming to provide empirical evidence on its impact in EFL classrooms and contribute to the pedagogical discourse on digital language learning tools.

Despite the widespread availability of mobile learning applications, many educational institutions have yet to fully integrate such tools into formal vocabulary instruction. Previous studies have shown that digital platforms like Memrise can contribute to vocabulary development; however, there is still limited empirical evidence on how effectively Memrise enhances vocabulary mastery among specific learner groups, such as high school or university students in non-native English-speaking countries.

Moreover, while several studies have examined the effectiveness of mobile-assisted language learning (MALL), there remains a gap in understanding the long-term impact of such tools on vocabulary retention, student motivation, and independent learning practices. Therefore, it is necessary to further investigate the role of Memrise in real educational settings, especially within the Indonesian EFL (English as a Foreign Language) context.

This study explores how media can support students in learning a foreign language. In particular, we utilize Memrise, which focuses on enhancing vocabulary and pronunciation skills. While there are numerous applications offering various tools for foreign language learning, Memrise was chosen for its simplicity and ease of use, making it accessible for students. As a result, this application serves as an effective online-based tool that can aid the teaching and learning process both inside and outside the classroom.

This study offers contributions to both the theoretical and practical aspects of language learning. On a theoretical level, it enriches existing literature on mobile-assisted language learning and vocabulary acquisition strategies within EFL (English as a Foreign Language) settings. On a practical level, the results can provide valuable insights for language teachers, curriculum designers, and education policymakers regarding the benefits of incorporating applications like Memrise into formal vocabulary instruction. Additionally, this research may encourage the creation of more personalized, engaging, and technology-integrated learning environments that foster students' autonomous learning abilities and enhance their overall language proficiency.

1.1. Literature Review

Vocabulary mastery plays a crucial role in language learning, especially in English as a Foreign Language (EFL) context. It is considered a foundational element that supports learners in



developing listening, speaking, reading, and writing skills. According to Nation (2001), a strong vocabulary base is essential for understanding and producing language effectively. However, in non-native settings, vocabulary acquisition is often limited due to a lack of exposure and practice opportunities. Therefore, it is necessary to incorporate innovative approaches that can enhance vocabulary learning beyond the traditional classroom.

The rise of technology in education has introduced Mobile-Assisted Language Learning (MALL) as an alternative and effective way to support vocabulary acquisition. MALL enables learners to access language resources through mobile devices anytime and anywhere, making learning more flexible and accessible. MALL promotes learner autonomy and provides repetitive exposure that is beneficial for vocabulary retention. mobile applications improve learners' motivation and engagement, which are essential factors in vocabulary development.

One popular application in MALL is Memrise, a platform specifically designed to aid vocabulary learning using spaced repetition, gamification, and multimedia elements. Memrise encourages learners to engage with vocabulary items repeatedly over time, ensuring that words are stored in long-term memory. Memrise's algorithm-based review system helps learners revisit vocabulary at optimal intervals, which strengthens memory and recall. This makes Memrise a valuable tool in helping EFL learners improve their vocabulary mastery effectively.

Positive attitudes toward mobile learning tools contribute to better engagement and academic outcomes. In the current study context, students expressed favorable views of Memrise, noting its ease of use, interactivity, and motivational features such as reminders and progress tracking. These aspects fostered independent learning and contributed to more consistent vocabulary practice. The combination of interactive design and cognitive support provided by Memrise not only improves vocabulary knowledge but also encourages learner autonomy.

2. METHODS

This research used adopted a quasi-experimental design using a pre-test and post-test control group format. The primary aim was to examine the effectiveness of the Memrise application in improving students' vocabulary mastery. Two groups were involved an experimental group, which received vocabulary instruction through Memrise, and a control group, which was taught using conventional methods without digital tools. Both groups completed the same vocabulary test before and after the intervention to measure learning outcomes.

Both groups are given a pretest before the treatment to measure their initial vocabulary knowledge. After the treatment period, a posttest is administered to determine any significant difference in vocabulary acquisition between the two groups. This design allows the researcher to compare the learning outcomes and evaluate the impact of the Memrise application on vocabulary mastery.

2.1. Participant and sample

The population of this study comprises the students graders of SMA Negeri 11 Palembang. The participants are selected through purposive sampling, with the main consideration being that they possess similar levels of English proficiency, as determined by their previous English test scores.

A total of 60 students participate in this study, divided equally into two groups, 30 students in the experimental group and 30 in the control group. The selection of participants is based on specific criteria. First, the participants must have access to a smartphone or computer equipped with a stable internet connection, ensuring that they can consistently use the Memrise application throughout the study. Second, they must not have had any prior experience using Memrise as a vocabulary learning tool, so that the study accurately measures its impact on first-time users. Third, the participants must be willing to fully engage and participate for the entire duration of the research to maintain consistency and data reliability.

By applying these criteria, the researcher aims to minimize the influence of external variables and to ensure the internal validity of the experimental design.

2.2. Research instruments

To collect the data, the researcher employs three main instruments aligned with the three primary phases of the study: the pre-test phase, the eight-week treatment phase, and the post-test phase. In the pre-test phase, both the experimental and control groups are given a vocabulary test consisting of 50 multiple-choice questions. This test is designed to assess the students' baseline vocabulary knowledge before any instructional intervention is provided. The items in the test are developed based on vocabulary sets featured in the Memrise course and are validated by English language teachers to ensure content relevance and accuracy.

During theeight-week treatment phase, the experimental group engages in vocabulary learning using the Memrise application, while the control group receives traditional instruction through printed materials and classroom-based vocabulary activities. Throughout this phase, an observation checklist is employed to monitor student participation, application usage frequency, interaction levels with the Memrise app, and overall engagement in both groups. These observations help identify behavioral patterns and learning attitudes during the treatment. Additionally, a learning logis maintained by the experimental group to document their daily use of the app and the vocabulary items they focus on.

In the post-test phase, the same vocabulary test administered at the beginning is given again to both groups. The goal is to measure vocabulary gains after the eight-week period. Furthermore, a questionnaire is distributed to the experimental group to capture their perceptions of Memrise in terms of usability, learning motivation, and effectiveness.

Preliminary results show that the experimental group demonstrated a noticeable improvement vocabulary mastery, with a significant increase in post-test scores compared to the pre-test. In contrast, while the control group also showed improvement, the gain was relatively lower. Observation data indicated that students using Memrise were more consistent and engaged, and the questionnaire responses reflected a generally positive attitude toward using mobile-assisted learning. These findings suggest that integrating Memrise into vocabulary instruction can provide meaningful support for enhancing students' vocabulary acquisition over time.

2.3. Data collection procedure

The data collection process is carried out over a period of eight weeks and involves several sequential steps to ensure consistency and reliability. At the outset of the study, both the experimental and control groups are given an identical vocabulary pretest aimed at measuring their initial level of vocabulary mastery. This serves as a baseline for comparing their progress after the treatment. Following the pretest, the treatment phase begins and continues for eight consecutive weeks. During this period, the experimental group utilizes the Memrise application as a vocabulary learning tool. They are provided with specific word sets each week through the app and are instructed to engage with the material for at least 30 minutes per day. Their usage and learning progress are monitored weekly to ensure active participation and to track individual development.

In contrast, the control group receives vocabulary instruction through more traditional means, such as printed word lists, textbook-based exercises, and dictionary tasks, delivered through regular classroom instruction. Throughout the eight-week period, the researcher conducts ongoing classroom observations, particularly focusing on the experimental group, to evaluate the consistency of Memrise usage and students' engagement with the digital learning content. At the end of the eighth week, both groups are administered the same vocabulary posttest used in the pretest phase, enabling the researcher to measure and compare vocabulary improvement. Additionally, students in the experimental group are asked to complete a questionnaire designed to capture their perceptions of Memrise in terms of usability, motivation, and effectiveness in supporting their vocabulary learning. This structured data collection process is intended to provide a comprehensive understanding of how mobile-assisted learning through Memrise influences vocabulary acquisition over an extended period.

2.4. Data analysis techniques

The data collected in this study are analyzed through a series of statistical procedures to determine the effectiveness of the Memrise application in enhancing students' vocabulary mastery. Prior to conducting the main statistical tests, the researcher first performs a normality test to ensure that the data distribution meets the assumptions required for parametric analysis. This test, commonly using the Kolmogorov-Smirnov or Shapiro-Wilk method, is applied to the pretest and posttest scores of both the experimental and control groups. If the data are normally distributed, the analysis proceeds with a homogeneity test(Levene's Test) to check whether the variances of the two groups are equal, which is another prerequisite for valid t-test application.

Once the assumptions of normality and homogeneity are confirmed, a paired sample t-test is used to compare the pretest and posttest scores within each group (experimental and control). This test aims to determine whether there is a statistically significant improvement in students' vocabulary knowledge after the treatment period. Additionally, an independent sample t-test is conducted to compare the posttest scores between the experimental and control groups. This analysis is crucial for identifying whether the observed improvement in vocabulary mastery is significantly greater in the group that used Memrise compared to the group that received traditional instruction. All statistical tests are conducted using SPSS (Statistical Package for the Social Sciences) software, and the level of significance is set at p < 0.05. Through these analytical procedures, the study aims to provide reliable evidence regarding the impact of mobile-assisted language learning on vocabulary acquisition in an EFL context.

3. RESULTS

3.1. Finding 1 [sub-section can be added if needed]

This section presents an overview of the preliminary statistical analyses conducted to ensure that the data met the assumptions required for parametric testing. Specifically, it focuses on the assessment of normality and homogeneity of variance in relation to the improvement of vocabulary acquisition through the use of the Memrise application.

To examine whether the distribution of the data confirmed to the assumption of normality, the One-Sample Kolmogorov-Smirnov test was employed. This test was applied to the pre-test and post-test scores of both the experimental group, which used the Memrise application, and the control group, which did not. The results indicated that the significance values (p-values) for all data sets were above the 0.05 threshold, suggesting that the data were normally distributed. The detailed results of the normality and homogeneity tests are presented in the following tables

Table 1. Pretest and Post-test Experiment

One-Sample Kolmogorov-Smir	nov Test	Pretest_Experiment	Posttest_Experiment
N		30	30
Normal Parameters ^{a,b}	Mean	62.50	83.63
	Std. Deviation	8.955	8.632
Most Extreme Differences	Absolute	.152	.152
	Positive	.081	.104
	Negative	152	152
Test Statistic		.152	.152
Asymp. Sig. (2-tailed)		.075c	.076c

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.



The normality of the data in the experimental group (N = 30) was assessed through the application of the One-Sample Kolmogorov-Smirnov Test for both pre-test and post-test scores.

Pre-Test Experiment Class:

In the pre-test phase, the analysis produced a mean score of 62.50 and a standard deviation of 8.955. The maximum divergence between the empirical and theoretical cumulative distribution functions was 0.152, with a positive deviation of 0.081 and a negative deviation of -0.152. The calculated test statistic was 0.152, and the associated asymptotic significance (two-tailed) was 0.075. Given that this value exceeds the conventional alpha level of 0.05, the pre-test scores are deemed to follow a normal distribution.

Post-Test Experiment Class:

Similarly, the post-test results yielded a mean of 83.63 with a standard deviation of 8.632. The deviations from the normal distribution were consistent with the pre-test, with an absolute value of 0.152, a positive value of 0.104, and a negative value of -0.152, resulting in the same test statistic of 0.152. The p-value of 0.076 also surpasses the 0.05 threshold, indicating significant departure from normality in the post-test scores.

Overall, these findings confirm that both pre-test and post-test datasets in the experimental group adhered to the assumption of normal distribution. The analysis was further validated using the Lilliefors significance correction, reinforcing the conclusion that the dataset is appropriate for subsequent parametric statistical procedures. Table 2 below shows the results of the control class pre-test and post-test normality test as follows:

Table 2. Pretest and Post-test control

One-Sample Kolmogorov-Smirnov	Pretest_Control	Posttest_Control	
N		30	30
Normal Parameters ^{a,b}	Mean	45.57	71.37
	Std. Deviation	9.231	5.176
Most Extreme Differences	.095	.117	
	Positive	.095	.117
	Negative	080	095
Test Statistic		.095	.117
Asymp. Sig. (2-tailed)		.200c,d	.200c,d

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

The normality of the data in the experimental group (N = 30) was assessed through the application of the One-Sample Kolmogorov-Smirnov Test for both pre-test and post-test scores.

Pre-Test Control Class:

In the pre-test phase, the analysis produced a mean score of 45.57 and a standard deviation of 9.231. The maximum divergence between the empirical and theoretical cumulative distribution functions was 0.095, with a positive deviation of 0.095 and a negative deviation of -0.080. The calculated test statistic was 0.095, and the associated asymptotic significance (two-tailed) was 0.200. Given that this value exceeds the conventional alpha level of 0.05, the pre-test scores are deemed to follow a normal distribution.

Post-Test Control Class:

Similarly, the post-test results yielded a mean of 71.37 with a standard deviation of 5.172. The deviations from the normal distribution were consistent with the pre-test, with an absolute value of 0.117, a positive value of 0.117, and a negative value of -0.095, resulting in the same test statistic of 0.117. The p-value of 0.200 also surpasses the 0.05 threshold, indicating significant departure from normality in the post-test scores.

3.2. Result of Homegeneity Test

The vocabulary achievement of students who learned through the Memrise application demonstrated homogeneity in the post-test phases. This was evidenced by the significance values obtained, which exceeded the 0.05 threshold, indicating no significant differences in variance between the groups.

Table 3. Homogeneity of Variance

Test of Homogeneity o	Levene Statistic	df1	df2	Sig.	
Post_Ex_and_Control	Based on Mean	10.994	1	58	.002
	Based on Median	9.467	1	58	.003
	Based on Median and with adjusted df	9.467	1	48.132	.003
	Based on trimmed mean	10.974	1	58	.002

The homogeneity of variances was tested using Levene's Test for post-test data.

The analysis revealed that the Levene statistic based on the mean was 10.994, with df1 = 1 and df2 = 58, and a significance value of 0.002. When the test was conducted based on the median, the Levene statistic was 9.467, yielding a p-value of 0.003, both with the original and adjusted degrees of freedom. Similarly, the result based on the trimmed mean showed a Levene statistic of 10.974 and a significance value of 0.002.

All significance values are above the 0.05 threshold, indicating an improvement on the assumption of homogeneity of variance for the post-test scores. These results indicate that there was a statistically significant difference in variance between the experimental and control groups after the treatment.

3.2. Result of Paired sample t-Test

An explanation for the paired sample t-test results can be seen in Table 4 below:

Table 4. Paired samples T-Test

lab	ie 4. Paireu samp	nes i-res	ι						
				Paired	95% Cor	ıfidence			
		Differences			Interva	l of the			
					Differ	ence			
			Std.	Std. Error	Lower	Upper	•		Sig.
		Mean I	Deviation	Mean			t	df	(2tailed)
Pair	Pretest_Ex -	-	13.148	2.401	-26.043	-16.224	-	29	.300
1	Posttest_Ex	21.133					8.804		

A paired samples t-test was performed to evaluate the difference between the pretest and post-test scores of the experimental group, aiming to assess the impact of the Memrise application on students' vocabulary acquisition.

The analysis showed a mean difference of -21.133, with a standard deviation of 13.148 and a standard error of the mean of 2.401. The 95% confidence interval for the difference ranged from -26.043 to -16.224. The computed t-value was -8.804, with 29 degrees of freedom, and the associated two-tailed significance (p-value) was 0.300.

In relation to the problem formulation in this study, where we want to know whether there is a significant difference in vocabulary improvement between students who use the memrise application and those who do not. The result of the analysis shows that the significance which is far above the significance level of 0.05. Which we can interpret as having a significant improvement in increasing vocabulary between the two groups. In other words, the paired reading method showed a significant impact on students' reading comprehension at SMA Negeri 11 Palembang.

3.4. Result of Independent Sample t-Test

The testing process is based on the results of relevant statistical analysis as well as findings that support the formulation and implementation of hypothesis testing, in line with the focus of the research question. This study is intended to determine whether there is a significant difference in the improvement of vocabulary acquisition between students who use the Memrise application and those who do not use the application at SMA Negeri 11 Palembang.

The hypothesis in this study is formulated as follows:

- H₀ (Null hypothesis): There is no significant difference in vocabulary proficiency between students who do not use Memrise app and those who do.
- H₁ (Alternative hypothesis): There is a significant difference in vocabulary proficiency between students who use Memrise app and those who do not.

Testing Criteria:

- If the p value < 0.05, then the alternative hypothesis (H_1) is accepted and the null hypothesis (H_0) is rejected.
- Conversely, if the p value > 0.05, the null hypothesis (H_0) is accepted and the alternative hypothesis (H_1) is rejected.

Referring to the main question in this study, the researcher sought to identify any significant difference in vocabulary improvement between the experimental group that used Memrise and the control group that did not use the app.

The findings from further analysis displayed in Table 5 provide detailed information regarding the independent sample t-test results for post-test data.

Table 5. Independent Samples Test

Levene's Test for Equality of					t-	test for Equality of Means	0.1.7	Conf Interv	5% idence val of the Diff.	
Independent	Samples Test	Variance: F	S Sig.	t	df	Sig. (2tailed)	Mean Diff.	Std. Error Diff.	Low	IIn
macpenaent	Samples lest	I'	Sig.	ι	uı	(Ztalleu)	DIII.	DIII.	LUW	Up
Post_Ex_and_ Control	Equal variances assumed	10.99 4	.00 2	6.67 5	58	.000	12.267	1.838	8.588	15.94 5
	Equal variances not assumed			6.67 5	47.46 6	.000	12.267	1.838	8.571	15.96 3

This independent sample t-test was conducted to compare between two groups, namely post-test experiment and post-test control, by using Levene's Test to assess the equality of variants.

Pos-test experiment and control:

The Levene Test results show an F value of 10.994 with a significance value (p) of 0.002. Because the p value > 0.05, it can be concluded that the variance between the experimental group and the control group is homogeneous, meaning that the distribution of data in the two groups is not significantly different. T-test for Equality of Means Assuming equal variances: t-value = 6.675, df = 68, and p = 0.000.

Both p values > 0.05, so it can be concluded that there is a statistically significant difference in the post-test results between the groups that used Memrise and those that did not. This indicates that the initial vocabulary skills of students in both groups were at different levels.

4. DISCUSSIONS

The primary objective of this study was to determine whether there was a significant difference in vocabulary mastery between students who were taught using the Memrise application and those who were not at SMA Negeri 11 Palembang. Based on the results of the statistical analysis, the significance value (p = 0.000) obtained from the independent samples t-test was below the standard threshold of 0.05. This result confirms that the null hypothesis is rejected and the alternative hypothesis is accepted. In other words, there is a statistically significant difference in vocabulary achievement between students who used Memrise and those who did not.

The findings indicate that the students in the experimental group, who were taught using the Memrise application, showed higher vocabulary gains compared to those in the control group taught with traditional methods. Specifically, the mean score of the experimental group post-test was significantly higher than that of the control group. This supports the conclusion that the Memrise application can effectively improve vocabulary acquisition in EFL settings.

There are several factors that contribute to the success of Memrise-based instruction for example, Students in the experimental group showed greater engagement and consistency during the learning process. The Memrise app provides a structured and interactive learning environment that helps students retain vocabulary better through spaced repetition and multimedia elements. These features are consistent and may emphasize the positive effects of Memrise on vocabulary development.

In addition, the students who used Memrise have reflected positive attitudes towards using the app. Some of them felt that Memrise was easy to use, motivating, and helpful for independent learning. It can also be seen from them indicating that mobile-assisted vocabulary learning, if applied effectively, can improve not only cognitive outcomes such as vocabulary acquisition, but also affective aspects such as motivation and learning independence.

These findings align with the results of related studies, such as Ulfaeni & Gunawan (2024), who found significant improvements in students' vocabulary scores after using Memrise, and Erlinda (2024), who observed a notable increase from a poor to good performance category. Although the current study focused on senior high school students in Palembang, the consistency of positive outcomes across different settings and levels further supports the effectiveness of Memrise as a learning tool.

5. CONCLUSION

Based on the findings and discussion of this study, it can be concluded that the use of the Memrise application significantly improves students' English vocabulary mastery. The experimental group, which used Memrise during the treatment, showed greater improvement in vocabulary scores compared to the control group that received conventional instruction. The statistical results, particularly from the independent sample t-test, confirmed a significant

difference in the post-test results between both groups, supporting the effectiveness of Memrise in vocabulary acquisition.

The Memrise application's features, such as spaced repetition, multimedia content, and userfriendly design, contributed to increased student engagement, motivation, and consistency in learning. Furthermore, students expressed positive perceptions of Memrise, indicating that mobile-assisted vocabulary learning tools can support not only academic achievement but also learner autonomy and enjoyment.

Therefore, this study recommends that English teachers integrate digital applications like Memrise into classroom instruction to enhance vocabulary learning. Future research may consider exploring the long-term retention effects of such tools and their application across different levels of education and language skills.

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