The Effectiveness of Using Memrise Application in Improving Students' Speaking Skills

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Abstract
This study applied a quantitative approach with a quasi-experimental design for data collection. A total of 64 students were involved in the study, and data were obtained through pre- and post-tests using the Memrise application. The results of the t-test analysis showed a significance value of 0.005 ($p < 0.05$), indicating that the observed differences were statistically significant and not due to chance. There was a significant difference ($p < 0.05$) between the experimental group and the control group, indicating that the use of the Memrise application in learning can improve students' speaking skills more effectively than traditional methods. Furthermore, the results of this study prove that technology-supported language learning not only contributes to improving students' cognitive aspects but also has a positive effect on their motivation and affective aspects, which is crucial in the development of speaking skills. This finding also emphasises that technology in language learning has a significant influence on students' cognitive aspects and motivation, which is very important in the study of speaking skills.

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Abstrak
Penelitian ini menerapkan pendekatan kuantitatif dengan desain quasi-eksperimental untuk pengumpulan data. Sebanyak 64 siswa dilibatkan dalam penelitian dan data diperoleh melalui tes pra dan pasca menggunakan aplikasi Memrise. Hasil analisis t-test menunjukkan nilai signifikansi sebesar 0,005 ($p < 0,05$), yang menandakan bahwa perbedaan yang teramati adalah signifikan secara statistik dan tidak terjadi secara kebetulan. Terdapat perbedaan signifikan ($p < 0,05$) antara kelompok eksperimen dan kelompok kontrol, yang menunjukkan bahwa penggunaan aplikasi Memrise dalam pembelajaran dapat meningkatkan kemampuan berbicara siswa lebih efektif dibandingkan dengan metode tradisional. Selain itu, hasil penelitian ini membuktikan bahwa pembelajaran bahasa yang didukung oleh teknologi tidak hanya berkontribusi pada peningkatan aspek kognitif siswa, tetapi juga memberikan efek positif pada motivasi dan aspek afektif mereka, hal ini sangat krusial dalam pengembangan keterampilan berbicara. Temuan ini sekaligus menekankan bahwa teknologi dalam pembelajaran bahasa memiliki pengaruh yang signifikan terhadap aspek kognitif dan memotivasi siswa, yang sangat penting dalam studi keterampilan berbicara.

I. INTRODUCTION

In the contemporary educational landscape, the ability to communicate effectively in English has become increasingly important, especially in the context of globalization (Haryadi and Aminuddin, 2023). English not only serves as an international language but also as a key to accessing a wide range of knowledge and opportunities in various fields. However, many students, especially in lower secondary schools, face significant challenges in developing their speaking skills. This issue is particularly evident at SMP Negeri 12 Purworejo, where initial observations indicate that students struggle with fluency, pronunciation, and confidence when speaking English. The application of technology in language education has emerged as a potential solution to these problems (Tabasi et al., 2024).

In the current digital era, technology has become an essential tool in supporting both professional and educational activities worldwide. (Hutasuhut and Harahap, 2024). Education can be described as an educational experience that occurs in all circles and throughout human life (Nugraeni et al., 2023). In this environment, it is obvious that learning English as a Foreign Language (EFL) is growing increasingly vital and that technology assistance is required to assist people in meeting their learning objectives more successfully and in accordance with current expectations. One of the most important yet difficult skills for learners of English as a foreign language (EFL) is speaking ability. Speaking in English is essential for EFL learners, as noted by Asmae and Sakale Sana (2024). Many EFL learners in Indonesia continue

to struggle with their speaking skills, suffering challenges like as a restricted vocabulary, inaccurate pronunciation, and a lack of confidence when speaking verbally (Firdaus and Jamilah, 2024). Therefore, interactive learning media that can stimulate speaking skills effectively and enjoyably is needed. Research shows that the use of learning applications can increase student motivation and engagement, which in turn can contribute to improving their language skills (Lahji, 2024).

The development of Computer-Assisted Language Learning (CALL), Technology-Enhanced Language Learning (TALL), and Mobile-Assisted Language Learning (MALL) has transformed language learning by giving unique tools that promote collaborative learning experiences. In particular, MALL utilises mobile devices to provide flexible and accessible learning anytime, anywhere. Research indicates that the use of mobile applications can significantly enhance student motivation and engagement, which in turn improves their language skills (Estado and Mounkoro, 2024).

Memrise, designed to help users learn vocabulary and phrases through fun and interactive methods, has become popular among EFL learners. The Memrise app has been extensively used in MALL (mobile-assisted language learning) as an instructional tool. This software enables pupils to study a variety of topics online (Baniara et al., 2024). Memrise offers an interactive and gamified approach to learning, thereby increasing motivation, independence, and providing an enjoyable learning experience for students (Aprizal and Wachyudi, 2024). The app not only focuses on vocabulary but also includes speaking exercises through video clips of native speakers, enabling learners to develop pronunciation and intonation in context. This corresponds with the Technology, Pedagogy, and Content Knowledge (TPACK) Framework, which stresses the incorporation of technology, pedagogy, and subject expertise to design meaningful learning experiences (Warr and Mishra, 2022). The app not only provides diverse learning materials but also allows users to practise speaking more naturally and contextually (Suyadi et al., 2024). Previous research shows that regular and meaningful speaking practice can enhance students' confidence in using the target language (Anjarani et al., 2025). By using Memrise, educators can provide a dynamic platform for students to develop their speaking skills while creating a more engaging and interactive learning environment.

Therefore, it is important to explore students' experiences and views in using language learning applications. By addressing this gap, study may help create more effective and relevant learning approaches for EFL students. This larger viewpoint is projected to help build a more supportive learning environment while also promoting students' spoken skill development.

Recent research on the use of apps in language learning has focused intensively on practical outcomes, such as how effective these tools are in improving students' language skills. However, there are still substantial gaps in our theoretical knowledge of why and how these applications work, particularly in terms of encouraging speaking abilities in EFL learners (Rajendran and Md Yunus, 2021). Many studies have emphasised quantitative outcomes, such as improvements in test scores or app usage frequency, without delving deeper into how these apps qualitatively influence students' learning experiences.

Furthermore, existing research often fails to consider the students' perspective directly, which is a critical element in understanding the impact of applications such as Memrise in the context of speaking classes (Ma et al., 2024). This limitation points to the need for a more holistic approach that combines empirical data with deeper theoretical insights (Maxwell, 2022). By not involving the students' perspective, research tends to lose the context that can explain how such applications function in everyday practice.

This study aimed to assess the efficacy of the Memrise application in enhancing the speaking abilities of eighth-grade kids at SMP Negeri 12 Purworejo during the 2024/2025 academic year, given the critical need to improve students' speaking skills and the potential of technology to help with this process. This study examines the impact of Memrise on students' speaking abilities in order to give useful information into the incorporation of technology in language education and its implications for teaching practices in Indonesia. This study is anticipated to contribute significantly to the creation of more effective and suitable teaching approaches, as well as to the establishment of a more supportive learning environment that promotes the optimal growth of EFL students' speaking abilities.

II. METHOD

The investigation used a quantitative research methodology based on a quasi-experimental

design, which has a control group but lacks total control over outside factors that influence the experiment (Alford and Teater, 2025; Denny et al., 2023). Two groups of pupils took part in this design, and their speaking ability improvement was assessed using a pretest before treatment (Memrise Application) and a posttest after treatment. The posttest findings revealed how well the participants performed after using the app, whereas the pretest data served as baseline information for assessing their initial speaking ability (Fauziah et al., 2024).

This study examines the influence of utilizing the Memrise app for learning as an independent variable, with speaking ability as a dependent variable. Pretest and posttest exams are the instruments used to measure these characteristics. The intervention involved conducting speaking lessons using the Memrise app over several sessions. Each session lasted approximately 80 minutes, and the intervention was conducted over five weeks, with two sessions per week. During this process, students participated in speaking activities facilitated by the Memrise app, which featured various speaking skills, including greeting, leave-taking, thanking, and apologizing (Darmawan, 2024). During the learning process, researchers gave instructions and assisted students in using the application and practising how to pronounce and write words in their books.

This study was conducted in the 2024–2025 academic year at SMP Negeri 12 Purworejo. Students in grade VIII at SMP Negeri 12 Purworejo were the population of this study. This class was selected as the experimental group to learn how to use the Memrise application to improve their speaking skills. In this study, researchers applied content validity to ensure that the tools used were appropriate for the measurement objectives. Content validity was used to ensure that the instruments measured aspects consistent with indicators of speaking ability (Almanasreh et al., 2019). Content validity testing was conducted by experts, namely the first supervisor, who assessed the suitability of the instrument items with five aspects of speaking ability: pronunciation, grammar, fluency, vocabulary, and comprehensibility. Therefore, it can be concluded that the instrument used in this study has adequate content validity and is suitable for measuring students' speaking skills during pre-tests and post-tests.

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In this study, researchers employed random sampling, a kind of probability sampling in which all members of the population have an equal opportunity of being chosen in the sample. This approach was used to guarantee that the sample properly reflects the entire population while minimizing the risk of selection bias (Alford and Teater, 2025). Sampling was conducted randomly from all eighth-grade students at SMP Negeri 12 Purworejo, without considering specific characteristics beforehand. Two classes, VIII C and VIII B, were chosen as research samples through a drawing process assisted by an English teacher. Class VIII C, which includes 32 pupils, was assigned as the experimental group, while Class VIII B, which also has 32 pupils, was assigned as the control group. With a total of 64 students, this division allowed for a balanced comparison to test the success of utilizing the Memrise app for developing English speaking abilities.

The analytical methods used in this study include prerequisite assessment and hypothesis testing. Before commencing the study, a preliminary assessment was performed to see if the data had a normal distribution and if the variances between categories were comparable. To assess the hypothesis, a t-test was conducted to compare the average ratings between the two groups. After delivering the intervention, an independent samples t-test was used to compare the pre- and posttest results for the experimental and control groups. This statistical approach was used to see if there was a considerable increase in students' speaking ability. The findings of this research offered important insights into the efficacy of Memrise as a learning tool for enhancing students' speaking performance. These findings encourage the inclusion of technology into foreign language learning, notably in the development of speaking skills.

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IV. RESULT AND DISCUSSION

A. Result

In this study, the researchers conducted three stages: pre-test, treatment, and post-test. During the data analysis phase, the researchers used organised and appropriate methods to evaluate the collected data and determine the impact of the two research variables. After collecting the data, the analysis was performed using SPSS statistical software. The results of the Pre-Test Normality Test are shown in the table below:

Table 1. Descriptive Statistics of Pre-Test Normality Test Results

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Control	.139	32	.116	.948	32	.128
Experiment	.129	32	.188	.979	32	.774

a. Lilliefors Significance Correction

Based on Table 1, a normality test was performed to see if the pretest data from the control and experimental groups were normally distributed. According to the Kolmogorov-Smirnov test, both groups had significance values above 0.05. This means that the data in both groups followed a normal distribution, fulfilled the normality assumption, and allowed the use of parametric analysis.

Table 2. Descriptive Statistics of Pre-Test Homogeneity Test Results

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Based on Mean	1.435	1	62	.236
Based on Median	1.196	1	62	.278
Based on Median and with adjusted df	1.196	1	61.752	.278
Based on trimmed mean	1.143	1	62	.289

Based on Table 2, a homogeneity test was performed to see if the variation between the control and experimental groups was consistent. The Levene test result had a significance value of 0.236, which is greater than 0.05. This suggests that the variance between the two groups was not statistically different. As a result, the data was deemed homogeneous and suitable for analysis using the t-test.

Table 3. Descriptive Statistics of Post-Test Normality Test Results

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Control	.138	32	.129	.958	32	.242
Experiment	.149	32	.070	.947	32	.116

a. Lilliefors Significance Correction

Table 4. Descriptive Statistics of Post-Test Homogeneity Test Results

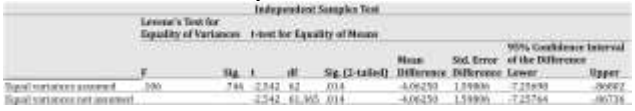
Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Based on Mean	.106	1	62	.746
Based on Median	.090	1	62	.765
Based on Median and with adjusted df	.090	1	60.782	.765
Based on trimmed mean	.121	1	62	.729

Following treatment, normality tests were performed again using the posttest data. The KolmogorovSmirnov test data, displayed in Table 3, indicate that the significance values for both groups were higher than 0.05. This indicates that the posttest statistics from both the control and experimental groups had a normal distribution, allowing for parametric analysis in the next step. In Table 4, the homogeneity of variance test for the post-test data shows a significance value of 0.746 based on the Levene test. Because this value is greater than 0.05, it may be inferred that there is no statistically significant variation in variation between the control and experimental groups. Therefore, the variances of the two groups are considered similar and meet the requirements for performing a t-test.

Table 5. Descriptive Statistics of Group Statistical Test Results

Group Statistics				
Class	N	Mean	Std. Deviation	Std. Error Mean
Control	32	77.3750	6.70941	1.18607
Experiment	32	81.4375	6.05852	1.07100

Table 6. Descriptive Statistics of Independent Samples Test Results



The t-test in Tables 5 and 6 was conducted to determine the difference in post-test results between the control and experimental groups. The results indicated that the experimental group had a greater average score (81.44) than the control group (77.38), with a difference of 4.06 points. A significance value of 0.005 is less than 0.05 ($p < 0.05$), indicating that the observed variation is statistically significant. This indicates that using the Memrise app has been shown to be more effective in enhancing speaking skills than traditional methods. Therefore, the use of the

Memrise app has a significant positive impact on students' speaking abilities when compared to conventional approaches.

B. Discussion

This research will look into the effectiveness of the Memrise app in boosting the speaking skills of eighth-grade pupils at SMP Negeri 12 Purworejo. The experiment was divided into three stages: pretest, treatment, and posttest. The data was analyzed using the statistical package SPSS. The study findings clearly demonstrate that Memrise has a considerable influence on improving the speaking abilities of pupils in the experimental group, as compared to the control group who did not use the application.

The preliminary phase of analysis was performed utilizing a normality test through the Kolmogorov-Smirnov approach. The purpose of this test was to verify that the data utilized followed a normal distribution, which is essential for conducting parametric tests. According to the test findings, the control group's significance value in the pretest was 0.116, whereas the experimental group's value was 0.188. In the posttest, the control group's significance value dropped to 0.129, while the experimental group's value fell to 0.070. All significance values exceeded 0.05, indicating that the data from both groups, prior to and following the treatment, were normally distributed. Thus, the data were suitable for further analysis using parametric statistical techniques such as the t-test (Yang, 2024).

After that, a test was conducted to check whether the variability within both groups was similar. According to the Levene test findings, the significance value for the pretest score was 0. 236, while the posttest score was 0. 746. Both values were larger than the usual cutoff of 0. 05, indicating that the difference between the experimental and control groups was insignificant. This strengthens the statistical basis that the two groups were equivalent before the treatment and that a valid comparison of post-test results can be made (Shi, 2022).

The main focus of this analysis is on the t-test results for the post-test scores. According to the data, the experimental group had an average score of 81.44, whereas the control group had a score of 77.38, with a 4.06-point difference. The calculated tvalue is 2.845, with 62 degrees of freedom and a significance level of 0.005. Since the p-value is less than 0.05, the difference between the two groups is statistically significant. (Willigenburg and Poolman, 2023). These findings suggest that using the Memrise application significantly enhances speaking skills when compared to traditional teaching methods. The experimental group used Memrise as their learning tool, while the control group followed conventional instruction through textbooks and teacher-led oral exercises.

From a pedagogical perspective, Memrise's effectiveness can be attributed to its interactive features that support vocabulary development, pronunciation, and contextual understanding through visual and auditory means. Additionally, the spaced repetition approach implemented in this app allows students to review material adaptively and periodically, thereby helping to retain vocabulary in long-term memory (Kryukova et al., 2024). In the implementation of the treatment in this study, students in the experimental group also demonstrated enthusiasm and active participation, which contributed to the improvement of their post-test scores.

These findings are consistent with previous research, such as that conducted by (Mardiah et al., 2022), who discovered that utilizing the Memrise app for English language learning can enhance students' confidence and speaking abilities. Similarly, Aminatun and Oktaviani (2019) noted that, such digital learning materials foster a more flexible and interesting learning environment, encouraging students to actively use English. In addition, students will be interested in learning when teachers use technology in the learning process (Tusino et al., 2022).

These results align with what has already been written about in academic studies and highlight the value of using technology-based learning tools like Memrise in English as a foreign language classrooms. As a result, it can be said that Memrise is a useful method for helping students improve their speaking abilities. This application not only supports the cognitive aspects of English language learning but also provides opportunities for the development of students' affective and metacognitive skills through modern and adaptive technology-based learning.

V. CONCLUSION AND SUGGESTION

A. Conclusion

The findings of data analysis and discussion show that using the Memrise software substantially enhances eighth-grade students' speaking abilities at SMP Negeri 12 Purworejo. This is shown by the experimental group's higher average score on the final test, which was 4.06 points more than the control group's. The ttest findings, which have a significance level of 0.005 ($p < 0.05$), demonstrate that the disparity is statistically significant and unlikely to have occurred by chance. As a result, studying using the Memrise technique is more effective than standard learning in improving students' speaking skills.

The success of the Memrise application in improving speaking skills can be attributed not only to its learning content structure based on spaced repetition and pronunciation practice but also to its interactive and user-oriented learning design. This application facilitates independent learning while providing visual and auditory stimuli that support vocabulary retention, pronunciation clarity, and increased confidence in using English orally. These results demonstrate that technology-aided language learning enhances students' cognitive factors while also positively influencing the emotional and motivational elements that are crucial for oral communication proficiency. Educators are encouraged to integrate such digital tools into classroom activities to maximise student engagement and learning outcomes, particularly to improve speaking skills in lower secondary school settings.

B. Suggestion

Based on the study's results, it is advised that English instructors utilize the Memrise software as an additional resource in their speaking courses. The use of this application can enrich teaching methods that have so far been dominated by conventional approaches. Schools are also expected to provide support through the provision of technological devices, adequate internet access, and training for teachers so that the use of digital media can be optimised. Additionally, students should be encouraged to develop independent learning skills and actively utilise learning applications as part of ongoing efforts to improve their English language skills.

For future research, it is recommended that the focus not be limited to the speaking skills of eighth-grade students but also include other language skills such as listening or vocabulary mastery. Further research could also be conducted at different educational levels to obtain a broader picture of the effectiveness of the Memrise application. Additionally, a study examining the use of Memrise in online or hybrid learning environments could offer valuable insights into how digital media can enhance the effectiveness of English language learning in the modern digital era.

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