

**THE EFFECT OF MEMRISE APPLICATION TO ENHANCE SPEAKING SKILL
(A QUASI-EXPERIMENTAL AT THE ELEVENTH GRADE STUDENTS SENIOR
HIGH SCHOOL 03 IN BENGKULU CITY)**

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ABSTRACT

This study aimed to investigate the effect of the Memrise application on the speaking skills of eleventh-grade students at SMA Negeri 03 Kota Bengkulu. A quantitative approach was employed using a quasi-experimental design with a pre-test–post-test non-equivalent control group design. The sample consisted of 77 eleventh-grade students, comprising 38 students in the experimental class and 39 students in the control class. The experimental class was taught using the Memrise application, while the control class received conventional instruction. Students' speaking performance was measured through a paired-dialogue speaking test administered as a pre-test and a post-test, and assessed by two raters using the same scoring rubric. The collected data were analyzed through reliability, normality, and homogeneity tests, followed by an Independent Samples t-Test and an F-Test using SPSS. The results showed that the data from both groups were normally distributed and homogeneous. The Independent Samples t-Test yielded a significance value of 0.010 ($p < 0.05$), indicating a statistically significant difference between the post-test scores of the experimental and control groups. The F-Test produced a significance value of 0.010 with an F-value of 6.973, confirming that the Memrise application had a significant positive effect on students' speaking skills. The Partial Eta Squared value of 0.085 indicated that the treatment accounted for 8.5% of the variance in students' speaking achievement. These findings suggest that Memrise can be considered an effective learning medium for improving students' English-speaking skills.

Keywords: *Memrise application, speaking skill, quasi-experimental research, English learning.*

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan aplikasi Memrise terhadap keterampilan berbicara siswa kelas XI di SMAN 03 Kota Bengkulu. Penelitian ini menggunakan pendekatan kuantitatif dengan desain kuasi eksperimen berupa pre-test–post-test control group design. Sampel penelitian berjumlah 77 siswa kelas XI yang terdiri atas 38 siswa pada kelas eksperimen dan 39 siswa pada kelas kontrol. Kelas eksperimen diberikan pembelajaran menggunakan aplikasi Memrise, sedangkan kelas kontrol memperoleh pembelajaran secara konvensional. Instrumen penelitian berupa tes berbicara yang

diberikan dalam bentuk pre-test dan post-test. Penilaian dilakukan oleh dua orang penilai menggunakan rubrik yang sama. Data dianalisis menggunakan uji validitas, uji reliabilitas, uji normalitas, uji homogenitas, Independent Samples t-Test, dan uji F dengan bantuan program SPSS. Hasil penelitian menunjukkan bahwa data kedua kelompok berdistribusi normal dan homogen. Hasil Independent Samples t-Test menunjukkan nilai signifikansi (Sig. 2-tailed) sebesar 0,010, lebih kecil daripada 0,05, sehingga terdapat perbedaan yang signifikan antara nilai post-test kelas eksperimen dan kelas kontrol. Hasil uji F menunjukkan nilai signifikansi sebesar 0,010 dengan nilai F sebesar 6,973, yang membuktikan bahwa penggunaan aplikasi Memrise memberikan pengaruh positif yang signifikan terhadap keterampilan berbicara siswa. Nilai Partial Eta Squared sebesar 0,085 menunjukkan bahwa perlakuan memberikan kontribusi sebesar 8,5% terhadap variasi kemampuan berbicara siswa. Dengan demikian, aplikasi Memrise efektif digunakan sebagai media pembelajaran untuk meningkatkan keterampilan berbicara bahasa Inggris siswa.

Kata Kunci: Aplikasi Memrise, Keterampilan Berbicara, Penelitian Kuasi-Eksperimental, Pembelajaran Bahasa Inggris.

A. Introduction

English is one of the most widely spoken international languages and plays an important role in various professional fields, ranging from technology, health, commerce, research, to tourism (Rao, 2019a). In order to be able to compete in the global era, mastery of spoken English is a skill that is urgently needed by the younger generation. In the Indonesian education system, English is designated as a compulsory subject in schools (Iman et al., 2024), with the expectation that students will not only master linguistic theory, but also be able to communicate actively and effectively, especially in speaking skills.

Among the four language skills, speaking occupies a central position in

oral communication (Milania et al., 2022), as it demands students to be able to verbally convey ideas, opinions and feelings appropriately. However, compared to reading, writing, and listening, speaking is generally considered the most difficult language skill to master because it requires intensive practice (Rao, 2019b). Some of the important elements of this skill include pronunciation, vocabulary, grammar, fluency, and confidence when speaking.

In fact, many Indonesian students still have difficulty developing English speaking skills, often feel anxious about mistakes, lack confidence in front of peers, and are hesitant to express their opinions orally (Milania et al., 2022). This condition shows that students' speaking skills

have not been optimally developed and the English learning process still requires special attention. The development of the Industry 4.0 era, especially in the field of multimedia, has changed the way foreign languages are taught and learned, including in building speaking competencies through digital devices (Nguyen & Pham, 2022). The limited use of technology in English learning is one of the main causes of students' low speaking skills, because digital learning applications are still rarely used by teachers, especially to practice speaking skills.

In addition to technological limitations, teachers' teaching methods also affect students' low speaking skills. Teachers still tend to use conventional approaches that focus on written exercises and material explanations, so that student involvement in learning decreases and opportunities to practice communicative speaking become limited (Tawir & Bin Baharum, 2024). Students tend to be passive and reluctant to speak for fear of making mistakes, so their speaking skills, especially in terms of pronunciation, vocabulary mastery, and fluency, do not develop optimally.

One workable solution is to integrate digital technology into speech

learning. Memrise is one of the popular language learning applications, which combines three main techniques, namely spaced repetition, game elements (gamification), and memory aids (mnemonic), to help users learn more effectively (Wardani, 2025). Through its various features, this application allows students to listen to the pronunciation of native speakers and imitate them repeatedly, so that it is expected to improve pronunciation, vocabulary mastery, fluency, as well as students' confidence in speaking English.

Based on this description, this study was conducted with the aim of determining the influence of the use of the Memrise application on the speaking skills of grade XI students at SMA Negeri 03 Bengkulu City through a quasi-experimental approach. This research is expected to provide theoretical benefits in the form of enriching the study of English pedagogy, especially the integration of technology to strengthen students' oral communication skills, as well as practical benefits for students, teachers, schools, and researchers in developing more innovative technology-based English language learning.

B. Research Methods

This study uses a quantitative approach with a quasi-experimental design, because it allows testing the influence of a treatment through numerical data and statistical testing on field conditions that do not allow random assignment of subjects (Hastjarjo, 2019). The research design used was Non-Equivalent Control Group Design, which is a quasi-experimental design involving an experimental group and a control group without random assignment, with both groups given a pre-test and a post-test to measure the effect of the treatment (Abraham & Supriyati, 2022).

The experimental group obtained speaking learning using the Memrise application, while the control group obtained conventional learning. Both groups followed a pre-test before treatment and post-test after treatment to measure the improvement of students' speaking skills (Anantasia & Rindrayani, 2025). The research design is presented in Table 1.

Table 1 Non-Equivalent Control Group Research Design

Group	Pretest	Treatment	Posttest
Eksperimen	Y_1	X_1	Y_2

Kontrol	Y_3	X_2	Y_4
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Description: X_1 = learning using the Memrise application; X_2 = conventional learning; Y_1, Y_3 = pretest score; Y_2, Y_4 = posttest score.

The research was carried out on grade XI students of SMA Negeri 03 Bengkulu City, which is located at Jalan RE. Martadinata Number 41, Bengkulu City, in the 2025/2026 school year. The research population was 436 students in class XI spread across twelve classes (XI A–XI L). Based on the researchers' considerations, the research sample was determined to be 77 students, consisting of class XI L as the experimental class (38 students) and class XI E as the control class (39 students).

The research data was collected through a speaking test in the form of a pair dialogue. Each pair of students is given one minute to prepare and about three minutes to display a dialogue using expressions and vocabulary from the Memrise app. The assessment was carried out by two raters using the same rubric, covering aspects of pronunciation (accuracy), fluency (fluency), and comprehension (comprehension). Documentation is used as a supporting technique to strengthen research data.

The data obtained was analyzed with the help of the SPSS version 25 program through several stages of statistical testing, namely: (1) inter-rater reliability test using Cronbach's Alpha coefficient, with the instrument declared reliable if the alpha value ≥ 0.70 (Sugiyono, 2013); (2) normality test using the Shapiro-Wilk method, with data declared to be normally distributed if the significance value > 0.05 ; (3) homogeneity test using Levene's Test, with data declared homogeneous if the significance value > 0.05 ; (4) t-test (Independent Samples T-Test) to determine the significant difference between the experimental class and the control class, with the criterion of significant influence if the significance value is < 0.05 ; and (5) F-test (Tests of Between-Subjects Effects) to test the magnitude of the influence of independent variables on bound variables while obtaining an effect size value in the form of Partial Eta Squared.

C. Research and Discussion Results

1. Data Description

The research was carried out in three stages, namely pre-test, treatment, and post-test. In the first stage, both classes are given a pre-test

to measure students' initial speaking ability. Furthermore, the experimental class obtained four learning meetings using the Memrise app, with students learning vocabulary and expressions through interactive exercises and practicing speaking in pairs and groups. The control class learned the same material through conventional methods with the teacher's textbooks and explanations, without using the Memrise app. After the treatment was completed, both classes were given a post-test to measure the improvement of students' speaking skills. A summary of the descriptive statistical scores of the pretest and posttest scores of the two groups is presented in Table 2.

Table 2 Descriptive Statistics of Pretest and Posttest Scores of Speaking Skills

Group	N	Pretest Mean	Posttest Mean	Skor Min–Maks
Eksperimen	38	52,81	63,51	40,00 – 80,00
Kontrol	39	54,52	58,63	40,00 – 80,00

The data in Table 2 shows that the average score of the experimental class increased from 52.81 in the pretest to 63.51 in the posttest, which is an increase of 10.70 points. Meanwhile,

the average score of the control class only increased from 54.52 to 58.63, or by 4.11 points. This comparison indicates that the improvement in speaking skills in classes using the Memrise application is greater than in classes using conventional methods.

2. Reliability Test

A reliability test was conducted to determine the level of consistency of assessment between the two raters on students' speaking performance, using Cronbach's Alpha coefficient. The results of the reliability test are presented in Table 3.

Table 3 Inter-rater Reliability Test Results

Data	Cronbach's Alpha	Interpretation
Pretest – control class	0,902	Excellent Reliability
Pretest – Experiment class	0,915	Excellent Reliability
Posttest – control class	0,934	Excellent Reliability
Posttest – Experiment class	0,827	Good Reliability

The entire value of Cronbach's Alpha is in the range of 0.827–0.934, well above the minimum threshold of 0.70 (Irwanto et al., 2025). Thus, the assessments given by the two raters

are consistent and worthy of use for further statistical analysis.

3. Normality Test

The normality test was carried out using the Shapiro-Wilk method to find out whether the pretest and posttest data of the two groups were normally distributed. The results of the normality test are presented in Table 4.

Table 4 Normality Test Results (Shapiro-Wilk)

Data	Significance	Interpretation
Pretest – Experiments	0,078	Normal
Pretest – Control	0,121	Normal
Posttest – Experiment	0,156	Normal
Posttest – Control	0,211	Normal

Since the overall significance value is greater than 0.05, the pretest and posttest data in both groups are declared to be normally distributed, so that parametric statistical analysis can be continued.

4. Homogeneity Test

The homogeneity test was carried out using Levene's Test to determine the equality of variance between the experimental class and the

control class. The results of the homogeneity test are presented in Table 5.

Table 5 Homogeneity Test Results (Levene's Test)

Data	Significance	Interpretation
Pretest	0,191	Homogeneous
Posttest	0,211	Homogeneous

The significance value of the pretest and posttest was greater than 0.05, so that the variance of the two groups was declared homogeneous and the data was eligible for analysis using a parametric statistical test, namely the Independent Samples T-Test.

5. T-test

The t-test (Independent Samples T-Test) is used to determine whether there is a significant difference between the posttest score of the experimental class and the control class. The results of the t-test are presented in Table 6.

Table 6 Independent Samples T-Test Results

Statistics	Value
Average experimental posttest (SD)	63,51 (7,18)
Average control posttest (SD)	58,63 (8,91)
Average difference	4,88

Statistics	Value
Value t	2,644
df	75
Sig. (2-tailed)	0,010
95% confidence interval	1,20 – 8,56

Based on Table 6, the significance value (Sig. 2-tailed) of 0.010 is smaller than 0.05, so H_0 is rejected and H_a is accepted. This shows that there is a significant difference between the posttest scores of the experimental class and the control class, with an average difference of 4.88 points supporting the conclusion that the use of the Memrise application has a positive effect on students' speaking skills.

6. F-Test

The F-test (Tests of Between-Subjects Effects) was used to determine the effect of the use of the Memrise application on students' posttest scores of speaking skills. The results of the F-test are presented in Table 7.

Table 7 F-Test Result (Tests of Between-Subjects Effects)

Statistics	Value
F Value	6,973
Significance	0,010
Partial Eta Squared	0,085

R Squared (Adjusted R Squared)	0,085 (0,073)
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The F-test significance value of 0.010 (< 0.05) indicates that the use of the Memrise application has a significant effect on students' posttest speech skills scores. A Partial Eta Squared value of 0.085 indicates that the Memrise app accounts for about 8.5% of the variation in students' speaking skill scores, while the remaining 91.5% is influenced by other factors beyond the scope of this study.

7. Discussion

The results of the t-test showed that the average posttest score of the experimental class ($M = 63.51$; $SD = 7.18$) higher than the control class ($M = 58.63$; $SD = 8.91$), with a significance value of 0.010 (< 0.05). Thus, H_0 is rejected and H_a is accepted, which means that the use of the Memrise app has a significant influence on students' speaking skills. These findings are reinforced by the F-test results ($F = 6.973$; $Sig. = 0.010$) which showed that the variation between groups was greater than the variation within the group, with a Partial Eta Squared of 0.085. Although classified as a medium category, the magnitude of this influence is still significant in terms of

education, because the improvement in speaking skills is rarely caused by a single learning factor.

The improvement of students' speaking skills in the experimental class is inseparable from the various features that the Memrise application has, such as examples of native pronunciation of English speakers, multimedia content, spaced repetition systems, interactive exercises, and instant feedback. These features allow students to practice English repeatedly in a fun learning setting, even outside of class hours, so students get more language exposure and speaking practice opportunities than students in a control class that relies solely on textbooks and teacher explanations.

These findings are in line with the speech assessment framework from Brown (2004), which states that speaking skills include not only word production, but also pronunciation, vocabulary, fluency, grammar, and comprehension as interrelated components. Students' pronunciation improves because they can listen to and imitate the original speaker's recordings over and over again. Vocabulary mastery is improved through a combination of visual, audio, contextual use, and paused repetition cues that

support long-term retention. Students' fluency also increases as pauses and doubts when speaking are reduced, because the process of taking words becomes more automated, so that students can focus more on conveying ideas rather than finding the right vocabulary.

In addition to the cognitive aspect, the application of the Memrise application also increases student motivation and involvement in learning. Attractive visuals, game elements, scoring system, and tracking of learning progress make the classroom atmosphere more enjoyable than conventional methods. This increased motivation encourages students to practice speaking more often and reduce anxiety in communicating using English, considering that speaking anxiety is one of the main obstacles in foreign language acquisition.

The control class also showed an increase in scores from pretest to posttest, but the increase was smaller than that of the experimental class. This shows that conventional learning still provides benefits, but lacks the opportunities for personalized practice, repeated vocabulary exposure, and authentic pronunciation models provided by Memrise.

The findings of this study are in line with the results of Rahmadewi's (2025) research which found that Memrise significantly improves students' speaking skills, especially in pronunciation, vocabulary, and fluency. These findings also strengthen the results of research by Manullang et al. (2023) which showed that Memrise has a significant effect on students' pronunciation mastery, as well as the research of Mendrofa et al. (2025) which found that Memrise is effective in improving students' vocabulary mastery. In addition, the results of this study are in line with Satrianto et al. (2025) who found that Memrise not only improves speaking achievement, but also student motivation, confidence, and involvement in the classroom. In contrast to previous studies that generally focused on junior high school students or examined only one language component separately, this study examined integrated speaking skills in grade XI high school students through a quasi-experimental design with a control group, thus providing stronger empirical evidence on the effectiveness of Memrise at the upper secondary education level.

The study had several limitations, including a relatively short

treatment period, a limited scope of research to one school and two classes, a focus on speaking skills only, a form of speech assessment that was limited to dialogue tasks, and reliance on device access and students' internet connections. Therefore, the results of this study need to be interpreted in the context of these limitations.

D. Conclusion

Based on the results of the research, it can be concluded that the use of the Memrise application has a significant effect on the speaking skills of grade XI students of SMA Negeri 03 Bengkulu City. Students who were taught using the Memrise application showed better speech skills than students who were taught using conventional methods. The increase can be seen from the increase in the average score of the experimental class from 52.81 in the pretest to 63.51 in the posttest, while the control class only increased from 54.52 to 58.63. The results of the t-test showed a significance value of 0.010 (< 0.05), so H_0 was rejected and H_a was accepted. The results of the F-test also showed a significant influence ($F = 6.973$; $\text{Sig.} = 0.010$) with a magnitude of influence

(Partial Eta Squared) of 0.085 or moderate.

Thus, the Memrise application can be recommended as an alternative learning medium to improve students' English speaking skills, especially in the aspects of pronunciation, vocabulary, fluency, and comprehension. Teachers are advised to combine the use of Memrise with various communicative activities in the classroom so that students' speaking practice is maximized. Students are advised to use Memrise independently and regularly outside of class hours to enrich vocabulary and improve speaking confidence. Researchers are further advised to engage a wider and more diverse sample, extend the treatment period, and examine the effect of the Memrise application on other language skills, such as listening, reading, and writing.

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