



The Effectiveness of English Learning Speech Assistant (ELSA) Speak Application to Improve Speaking Skill at the Tenth Grade of Senior High School

Melvi Faliska Arfandi¹, Wisran², Yuyun Ruqiyyat Said³

^{1,2,3}English Language Education Study Program, Faculty of Education and Teacher Training,
State Islamic University of Palopo, Indonesia

Article Info	Abstract
Received: 2026-04-10 Revised: 2026-05-15 Accepted: 2026-06-25 Keywords: ELSA Speak Application, Speaking Skills, Pronunciation, Vocabulary, Fluency DOI 10.24256/ideas.v14i1.10063 Corresponding Author: Melvi Faliska Arfandi melvifaliskaa@gmail.com English Language Education Study Program, Faculty of Education and Teacher Training, State Islamic University of Palopo, Indonesia	<i>This study aimed to investigate the effectiveness of the English Learning Speech Assistant (ELSA) Speak application in improving students' speaking skills at the tenth grade of SMAN 2 Palopo. This research employed a pre-experimental design using one-group pre-test and post-test design. The sample consisted of 32 students selected through purposive sampling. The instrument used in this research was a speaking test focusing on three aspects: pronunciation, vocabulary, and fluency. The data were analyzed using descriptive statistics, including mean score and standard deviation, and inferential statistics using a paired sample t-test through SPSS version 24. The findings revealed that students' speaking skills improved after the implementation of the ELSA Speak application. The mean score increased from 59.59 in the pre-test to 68.69 in the post-test. Furthermore, the result of the t-test showed that the significance value was lower than 0.05, indicating that there was a significant difference between the pre-test and post-test results. This indicates that the use of the ELSA Speak application was effective in improving students' speaking skills, particularly in pronunciation, vocabulary, and fluency. Therefore, it can be concluded that the ELSA Speak application is an effective learning medium to enhance students' speaking performance.</i>

1. Introduction

Speaking is one of the most essential skills in learning English as a foreign language (EFL) because it enables learners to communicate their ideas, opinions, and feelings effectively. However, many students still encounter difficulties in mastering speaking skills, particularly in pronunciation, vocabulary, and fluency. In the Indonesian EFL context, students often experience problems such as limited vocabulary, poor pronunciation, lack of confidence, and low motivation. These problems are mainly caused by limited opportunities for practice and the use of less interactive teaching methods. As a result,

students' speaking performance remains low and requires improvement through more effective learning strategies.

Recent studies have highlighted the role of technology in improving students' speaking skills, especially through Mobile Assisted Language Learning (MALL). Aeni et al. (2021) found that the use of the ELSA Speak application increased students' motivation in speaking activities. Nabila et al. (2022) reported that students showed significant improvement in pronunciation and fluency after using the application. Similarly, Nursaputri (2022) revealed that the ELSA Speak application effectively improved students' speaking performance. These studies indicate that technology-based applications, particularly those supported by artificial intelligence, provide interactive learning environments and immediate feedback, which are beneficial for enhancing speaking skills. However, most of these studies mainly focused on general speaking improvement.

In addition, several international studies have emphasized the effectiveness of Mobile Assisted Language Learning (MALL) in improving language skills. Burston (2015) found that mobile learning applications significantly contribute to language learning outcomes through increased accessibility and practice opportunities. Similarly, Kukulska-Hulme and Shield (2008) highlighted those mobile technologies support interactive and collaborative learning environments, which enhance students' engagement. Furthermore, Liakin et al. (2017) demonstrated that speech recognition technology in mobile applications can effectively improve learners' pronunciation through immediate feedback and repeated practice.

Despite these findings, there are still some limitations in previous studies. Most research has not provided a detailed analysis of specific speaking aspects such as pronunciation, vocabulary, and fluency. In addition, previous studies were mostly conducted in different educational contexts, such as universities, while limited research has been carried out at the senior high school level. Therefore, there is still a gap in understanding how the ELSA Speak application affects students' speaking skills in a more specific and contextualized setting, particularly in SMAN 2 Palopo.

In addition, most previous studies primarily focused on general speaking improvement without providing in-depth analysis of each speaking component. There is still limited discussion on how specific aspects such as pronunciation, vocabulary, and fluency develop differently through the use of AI-based applications. Furthermore, the majority of studies emphasized students' outcomes without exploring how the features of the application contribute to the improvement. Therefore, this study attempts to fill these gaps by providing a more detailed analysis of speaking aspects and examining how the ELSA Speak application supports students' speaking development in a specific educational context.

Based on these gaps, this study aims to answer the research question: *Is the ELSA Speak application effective in improving students' speaking skills at the tenth grade of SMAN 2 Palopo?* The objective of this study is to investigate the effectiveness of the ELSA Speak application in improving students' speaking skills, specifically in pronunciation, vocabulary, and fluency. The novelty of this research lies in its focus on specific speaking aspects and its implementation in a senior high school context, which provides a more detailed and contextualized understanding of the use of AI-based applications in EFL learning.

2. Method

This study employed a pre-experimental design using a one-group pre-test and post-test design to investigate the effectiveness of the ELSA Speak application in improving students' speaking skills. The research was conducted at SMAN 2 Palopo. The population of this study consisted of tenth-grade students, and the sample consisted of one class

comprising 32 students selected through purposive sampling. The selection was based on the consideration that the students had relatively similar levels of English proficiency.

The instrument used in this study was a speaking test designed to assess three aspects of speaking skills: pronunciation, vocabulary, and fluency. The data were collected through pre-test and post-test procedures. The pre-test was administered to measure students' initial speaking ability, while the post-test was conducted after the treatment using the ELSA Speak application. The data were analyzed using descriptive statistics, including mean score and standard deviation, and inferential statistics using a paired sample t-test through SPSS version 24 to determine the significance of the improvement.

3. Result

Students' Speaking Skill Improvement

This section presents the results of the data analysis from the pre-test and post-test conducted to measure students' speaking skills after the implementation of the ELSA Speak application. The results are presented using descriptive statistics and supported by inferential analysis.

Table 1. Descriptive Statistics of Students' Pre-Test and Post-Test

Test	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test	32	49	75	59.59	7.75
Post-test	32	53	83	68.69	9.18

Table 1 shows that the mean score of students' speaking skills increased significantly from 59.59 in the pre-test to 68.69 in the post-test. The minimum score improved from 49 to 53, while the maximum score increased from 75 to 83. This indicates that students' speaking performance improved after the treatment.

In addition, the standard deviation increased from 7.75 to 9.18, indicating slight variation in students' performance. Overall, the improvement in mean, minimum, and maximum scores demonstrates that the use of the ELSA Speak application had a positive impact on students' speaking skills.

Students' Speaking Aspects

The improvement of students' speaking skills can also be seen from the three assessed aspects: pronunciation, vocabulary, and fluency.

Table 2. Mean Score of Speaking Aspects

Aspects	Pre-test	Post-test
Pronunciation	59.78	67.44
Vocabulary	60.59	70.88
Fluency	58.59	67.81

Table 2 indicates that all aspects of speaking skills improved after the treatment. Vocabulary showed the highest increase, followed by fluency and pronunciation. This suggests that the ELSA Speak application contributed to a comprehensive improvement in students' speaking abilities.

4. Discussion

The Improvement of Students' Speaking Skills

The findings of this study indicate that the use of the ELSA Speak application significantly improved students' speaking skills. This is evidenced by the increase in mean scores from the pre-test to the post-test, as well as the statistical result which showed a

significant difference ($p < .05$). These results confirm that the application had a positive effect on students' speaking performance.

This improvement can be attributed to the application's ability to provide immediate and accurate feedback, allowing students to identify and correct their errors directly. Unlike conventional classroom activities, where feedback is often limited due to time constraints, the ELSA Speak application enables continuous and individualized practice. This supports more effective learning, as students can repeatedly practice until they achieve better performance.

Furthermore, the findings are consistent with previous studies (Aeni et al., 2021; Nabila et al., 2022), which reported that ELSA Speak enhances students' speaking ability through continuous practice and instant feedback. However, this study extends previous research by providing a more specific analysis of speaking components, which offers deeper insight into how speaking skills develop using AI-based applications.

Improvement in Speaking Aspects

The results also revealed that students experienced improvement in all three aspects of speaking skills: pronunciation, vocabulary, and fluency. Among these aspects, vocabulary showed the highest increase, followed by fluency and pronunciation.

This finding may occur because vocabulary acquisition is more directly influenced by repeated exposure to words and phrases provided by the application. The ELSA Speak application offers various contextualized examples and interactive exercises that help students recognize, remember, and use new vocabulary effectively. Compared to pronunciation, which requires precise articulation and continuous correction, vocabulary improvement tends to be faster as students can easily imitate and practice new words during learning activities.

In addition, the improvement in fluency indicates that students became more confident and were able to speak more naturally after repeated practice. This improvement also suggests that frequent speaking practice using technology can reduce students' anxiety in speaking English. When students practice independently using the application, they feel less pressure compared to speaking in front of their peers, which creates a more supportive learning environment and enhances fluency development.

Pronunciation, Vocabulary, and Fluency Development

The improvement in pronunciation is closely related to the speech recognition technology embedded in the ELSA Speak application, which provides detailed and immediate feedback on pronunciation accuracy. This feature enables students to identify specific errors in their pronunciation and correct them effectively.

Meanwhile, the increase in vocabulary suggests that students were exposed to a wide range of words and expressions during the learning process. This exposure plays a significant role in expanding students' lexical knowledge and improving their ability to communicate ideas. In terms of fluency, continuous practice allows students to develop smoother speech production and reduce hesitation when speaking.

These findings are in line with Nursaputri (2022), who found that the ELSA Speak application contributes to overall speaking development. However, this study provides a more detailed explanation of how each speaking component improves, highlighting the specific contribution of technology to different aspects of speaking skills.

The Role of Technology in Language Learning

The effectiveness of the ELSA Speak application highlights the important role of technology in language learning, particularly within the framework of Mobile Assisted Language Learning (MALL). The application allows students to practice anytime and anywhere, increasing their engagement and learning opportunities.

However, the effectiveness of technology-based learning also depends on how it is integrated into classroom instruction. Without proper guidance, students may not fully utilize the features of the application. Therefore, the role of teachers remains essential in facilitating learning, providing direction, and ensuring that the use of technology aligns with instructional objectives.

This indicates that technology should not replace teachers but rather complement traditional teaching methods to create a more effective learning environment.

AI-Based Learning and Student Engagement

Furthermore, the integration of artificial intelligence (AI) enables personalized learning experiences. Students receive feedback based on their individual performance, allowing them to improve at their own pace. This personalized approach increases students' motivation and autonomy in learning.

Recent studies (Choo et al., 2019; Wang, 2022) emphasize that technology-based learning can enhance students' engagement, independence, and overall language performance. In this study, students showed greater participation and enthusiasm during the learning process, indicating that AI-based applications can create a more interactive and student-centered learning environment.

Therefore, the use of AI-based applications such as ELSA Speak not only improves students' speaking skills but also promotes active learning and long-term language development.

5. Conclusion

This study concludes that the ELSA Speak application is effective in improving students' speaking skills among tenth grade students at SMAN 2 Palopo. The findings showed a significant improvement in students' speaking performance, particularly in pronunciation, vocabulary, and fluency, as indicated by the increase in the mean score from pre-test to post-test. The application provides interactive learning and immediate feedback, which help students practice more actively and improve their speaking ability. Therefore, the ELSA Speak application can be considered an effective learning medium to support the development of students' speaking skills.

However, this study has several limitations. First, the research employed a pre-experimental design without a control group, which limits the ability to compare the effectiveness of the treatment with other teaching methods. Second, the sample size was limited to one class consisting of 32 students, which may not represent the broader population. Therefore, the findings of this study should be interpreted carefully and cannot be generalized widely.

Based on these limitations, it is recommended that future researchers conduct studies using more rigorous research designs, such as true experimental designs involving control groups. Further research is also suggested to involve larger sample sizes and explore other aspects of speaking skills, such as grammar and comprehension. In addition, future studies may investigate the long-term effectiveness of the ELSA Speak application in improving students' speaking ability.

6. Acknowledgement

The author would like to express sincere gratitude to all parties who contributed to the completion of this research. Special appreciation is addressed to the supervisors for their valuable guidance, constructive suggestions, and continuous support throughout the research process. The author also extends gratitude to the headmaster, English teacher, and students of SMAN 2 Palopo for their cooperation and participation in this study.

In addition, the author would like to thank the lecturers and academic staff of the English Language Education Study Program, Faculty of Education and Teacher Training, State Islamic University of Palopo, for their support and assistance. Finally, the author is deeply grateful to family and friends for their encouragement, motivation, and prayers.

7. References

- Aeni, N., Fitri, N., Hasriani, H., & Asriati, A. (2021). Inserting ELSA application in hybrid learning to enhance students' motivation in speaking. *Celebes Journal of Language Studies*, 1(2), 271–277. <https://doi.org/10.51629/cjls.v1i2.70>
- Akhmad, N. W., & Munawir, A. (2021). Improving students' pronunciation ability by using ELSA Speak app. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 10(1), 846–857. <https://doi.org/10.24256/ideas.v10i1.2868>
- Burns, A. (2019). Concepts for teaching speaking in the English language classroom. *LEARN Journal*, 12(1), 1–11.
- Burston, J. (2015). Twenty years of MALL project implementation: A meta-analysis of learning outcomes. *ReCALL*, 27(1), 4–20. <https://doi.org/10.1017/S0958344014000159>
- Choo, D. B., Chew, P., & Zhang, M. (2019). Smartphone application in postgraduate clinical psychology training: Trainees' perspective. *International Journal of Interactive Mobile Technologies*, 13(4), 206–220.
- Elsani, E., Salsabila, R., Putra, M. F. I., Nabila, N. K., & Nahartini, D. (2023). The effect of using ELSA Speak app for first-semester students' English-speaking proficiency. *Edukatif: Jurnal Ilmu Pendidikan*, 5(6), 2644–2655. <https://doi.org/10.31004/edukatif.v5i6.5976>
- Godwin-Jones, R. (2018). Using mobile technology to develop language skills and cultural understanding. *Language Learning & Technology*, 22(3), 1–17.
- Irsan, A., Noni, N., & Baa, S. (2023). ELSA Speak application as a supporting media for developing students' speaking skill. *Performance: Journal of English Education and Literature*, 2(4), 458–465. <https://doi.org/10.26858/performance.v2i4.54282>
- Kholis, A. (2021). ELSA Speak app: Automatic speech recognition for supplementing English pronunciation skills. *Pedagogy: Journal of English Language Teaching*, 9(1), 1–10. <https://doi.org/10.32332/joelt.v9i1.2723>
- Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, 20(3), 271–289. <https://doi.org/10.1017/S0958344008000335>
- Nabila, N. K., Salsabila, R., Putra, M. F. I., & Nahartini, D. (2022). The use of ELSA Speak application to improve students' speaking skills. *Edukatif: Jurnal Ilmu Pendidikan*, 4(6), 8574–8581. <https://doi.org/10.31004/edukatif.v4i6.4177>
- Nursaputri, E. (2022). The use of ELSA Speak application as a medium to improve English speaking skill. *Journal of Education Research*, 7(1), 55–60.
- Liakin, D., Cardoso, W., & Liakina, N. (2017). Learning L2 pronunciation with a mobile speech recognition application: French /y/. *CALICO Journal*, 34(1), 1–25. <https://doi.org/10.1558/cj.26749>

- Richards, J. C. (2008). *Teaching listening and speaking: From theory to practice*. Cambridge University Press.
- Wang, X. (2022). An overview of ICT and educational change. *Journal of Contemporary Educational Research*, 6(8), 1–8. <https://doi.org/10.26689/jcer.v6i8.4191>