

STUDENTS' EXPERIENCE IN USING THE ELSA SPEAK APPLICATION AS ENGLISH LEARNING MEDIA FOR DEE STUDENTS

Dila Permata Sari

Universitas Muhammadiyah Surakarta

a320210183@student.ums.ac.id

Muamaroh

Universitas Muhammadiyah Surakarta

mua237@ums.ac.id

ABSTRACT

This study aims to find out the reasons and experiences of 7th semester students in using ELSA Speak application as an English learning media. This research uses descriptive qualitative method involving 30 students of English Education Department Universitas Muhammadiyah Surakarta who have used ELSA Speak application consisting of 10 males and 20 females. Data was collected through an open questionnaire filled out by 30 students through Google Form and in-depth interviews were conducted with 10 students randomly using the spinner application, then the data was analyzed qualitatively thematically. The results found four reasons for students to use ELSA Speak, namely to improve students' English speaking, to improve English pronunciation, recommended by lecturers, can be used flexibly. Meanwhile, there are five experiences felt by students, namely interactive and non-boring exercises, increasing students' confidence in speaking English, knowing students' progress directly, getting feedback, practicing speaking directly based on the AI roleplay feature.

Keywords: *technology learning media, ELSA Speak application, students' experience*

INTRODUCTION

Based on the 2024 global statistical report on the wearesocial.com page by Simon Kemp, it is explained that there are 5.52 billion internet users globally who use the internet in early October 2024 so that internet users have increased by 151 million (+2.8 percent) over the past 12 months while internet users in Indonesia are 212.9 million (77% of the 276.4 million population). Thus, it can be seen that technology makes a major contribution to the activities of various sectors of life ranging from the economic sector, transportation, organizational management, health, to education (Yusuf et al., 2023). Especially in education has also entered the industrial era 4.0 which is characterized by the influence of technology in learning (Dhakshan et al., 2023). So that in this era, education includes digitization, personalized learning, and lifelong skills development. As a teacher in the era of the Industrial Revolution 4.0, it is necessary to adjust the learning media used based on the times, namely technology-based learning (Ajisoko, 2020). Because media is a technological component used in education that helps teachers and students capture messages given and received in the classroom (Tafano in Hidayad et al., 2023). In addition, students prefer learning strategies that suit their learning styles, such as hands-on learning and the use of digital media (Dayana & Muamaroh, 2025). With this, it is seen that technological developments are very helpful in the field of education in completing learning facilities and can adjust students' learning styles.

With the rapid development of technology, there are now many learning applications that can be used and downloaded on the playstore, App store, or other application download platforms (Anggraini, 2022). Learning applications that can be used are very diverse, such as quipper, ruang guru is a learning application that has accessible school subject material. While

the duolingo application, let me speak, cake, elsa speak are some examples of English language applications that can be used. In this era, it is very important to use foreign languages in communication, especially English (Leleka, 2023). However, in this day and age, there are still many students who experience difficulties in learning English, such as difficulty understanding the meaning of vocabulary, difficulty remembering all vocabulary material, and students often have difficulty with how to pronounce vocabulary correctly (Siregar et al., 2020). Based on research (Anggrisia & Robah, 2023) among university students, it shows that 42.2% of students feel there is a lack of vocabulary, 40% are deficient in sentence organization, and 33.3% of students feel they have not mastered grammar. Based on the results of this study, it can be concluded that many students feel that they are still lacking in mastering English. Therefore, with the development of technology today, it certainly makes it easier for the current generation to learn English (Taufiq & Megawati, 2023), namely by using ai applications to hone English language skills well. One of the ai application platforms that supports student learning is the Elsa Speak application.

ELSA Speak provides an engaging learning experience and hones students in improving their English based on their own pace (Gusrianto & Iswahyuni, 2024). So that this can develop the quality of learning, and can motivate students in learning English interestingly, easily and practically. Because the application in this feature has an attractive appearance, there is a score of the ability test results so that it can know the progress that is passed (Karim et al., 2023). In addition, this application can also be downloaded on a smartphone so that it is easy to use anytime and anywhere (Kholis, 2021). Therefore, researchers want to help educators to be more effective in utilizing AI technology-based learning media, namely the use of the English Language Speech Assistant (ELSA Speak) application to hone, train, and measure students' ability to learn English well. In addition, this research also provides information about the reasons and experiences of ELSA Speak which is good for learning English. This can be seen in the usefulness of ELSA Speak in improving English language skills which has been proven by several previous studies. In quasi-experimental research with 65 junior high school students, (Noviana, 2024) found that the use of the ELSA program significantly improved students' speaking ability. it can be seen in the results of her research that the p-value of $0.000 < 0.05$ which proves that found in statistical data, shows that ELSA improves students' speaking ability. Her research supports this study's conclusion that ELSA is a useful tool for students at all levels of education, despite its concentration on younger demographics. Similarly, in Maulidyah et al. (2024) study which used an experimental design to investigate how ELSA Speak affects pronunciation, twenty students took part in their study and completed 30 word pre- and post-tests. The students' pronunciation accuracy improved significantly, according to the results of the study, which stemmed from ELSA's real-time feedback function. The study also shows how the use of AI-powered language learning apps can increase student motivation and engagement. These results are consistent with other studies where students say that feedback and interaction are important factors in their continued engagement.

In addition, Febri (2023) conducted a pre-experimental study of 19 students at SMK Nur Ilham Pinggir, which further confirmed the beneficial effects of ELSA Speak. The results of his study showed a significant impact size and marked improvement in pronunciation after regular use of ELSA by the students. Febri's research, like the previous experimental studies, offers statistical evidence of the efficacy of ELSA, but ignores the individual experiences and viewpoints of the students. Furthermore, Rinaepi et al. (2022) emphasized that the

application increased learning motivation in addition to improving pronunciation accuracy. Students' perspectives and experiences with ELSA Speak have been researched in (Nazhira, 2021) where her research investigated the opinions of ten English major students at UIN Ar-Raniry about ELSA Speak from a qualitative perspective. The study, which included in-depth interviews, found that although the students recognized the app's shortcomings-such as its dependence on an internet connection and the requirement for paid access to special features-they found the app useful for improving pronunciation. This observation is consistent with the findings of the study, which showed that students were frustrated by the access restrictions but recognized the value of ELSA. Further to the research Brusil (2023) used a mixed methods approach to investigate how ELSA Speak affects the pronunciation of UTN University English students. The researcher found through surveys and interviews that ELSA self-study improved learners' fluency and confidence. When using the app for individual practice, students reported observable improvements. This is corroborated by current research, which shows that ELSA encourages students to practice speaking on their own and promotes self-directed learning.

Yuliawati & Suryadi (2023) used quantitative techniques to examine the perceptions of 60 high school students. According to their findings, which were based on a highly reliable questionnaire (Cronbach's alpha = 0.955), the students had an excellent opinion of ELSA Speak, especially in terms of the intuitive interface, real-time feedback, and customized information it provides. These opinions are in line with the findings from this study, which show that students also found the app useful and accessible for daily use. Ngoc & Thanh (2023) conducted qualitative research with 180 Vietnamese university students to further explore perspectives. The app's temporal flexibility, user-friendly UI, and improvement feedback were praised by the participants. However, they pointed out some shortcomings, such as the inability to interpret English accents and the absence of social interaction tools. In the same vein, this study found that while students appreciated the practical aspects of ELSA, they wanted more social and interactive learning components to boost their confidence when speaking. Nushi & Sadeghi (2021), who evaluated ELSA Speak in depth based on their own use, have a different point of view. Their assessment emphasized the advanced speech recognition technology and organized learning resources, but also pointed out its shortcomings, including its emphasis on American English dialects and lack of curriculum flexibility. Their concerns were similar to those expressed by the students in the current study, despite the fact that their analysis was more technical in nature. Finally, Mahmudah & Daulay (2024) examined the opinions of secondary school students. Their qualitative study, which involved interviews and observations, found that students valued things like word emphasis and intonation exercises. However, the survey mostly focused on general views, in contrast to the current study, which looked more closely at the usage experience.

In conclusion, previous research has repeatedly demonstrated the value of ELSA Speak as a tool for improving English speaking skills, especially pronunciation. The features of this app, which include organized development, role-play scenarios, and real-time feedback, are known to increase student autonomy and confidence. However, a number of persistent restrictions have also been noted, such as limited free access, inconsistent technical performance, and shortcomings in interactive peer-based learning. The impact of these apps has been demonstrated by many previous studies, however most of these studies were limited to a specific age group, mostly used quantitative techniques, or only looked from the perspective of university students. In order to provide a more thorough and nuanced picture

of students' experiences with ELSA Speak, this study takes a different approach using a qualitative descriptive methodology. Both educators and developers should anticipate that this research will provide useful insights into how to improve the program to better assist English language learning in a variety of learning scenarios.

METHOD

In this descriptive qualitative research, the research subjects were 30 students of English Education Study Program of Universitas Muhammadiyah Surakarta who used ELSA Speak application. Data were collected through open-ended questionnaires and in-depth interviews. Open-ended questionnaires were filled out by 30 students through google form, while in-depth interviews were conducted with 10 people selected randomly through the spinner application. Data analysis was conducted qualitatively with a thematic approach, which divided all respondents' responses into groups according to the research topic.

RESULTS

1. Reasons Students Use the ELSA Speak App

a. Improve students' English speaking

Based on the open questionnaire, it was found that the reason students use ELSA Speak was to improve their speaking English ability. The following is the evidence from the open questioner:

The reason I use ELSA Speak is to improve my speaking English skills and because there is currently one course that is quite difficult, so ELSA Speak is quite helpful in overcoming my difficulties. (S26)

Elsa Speak has various features that can be utilized to improve my speaking ability, this application can also be used for free and is flexible because it can be used anytime and anywhere. (S08)

The findings from this open-ended question are supported by findings taken from the interviews. Based on the interview results, the students stated that the use of ELSA Speak can improve their abilities. The following is the result of the interview:

I use ELSA Speak because it is very helpful in improving my speaking English skills, especially in pronunciation and fluency. I feel that after using this app, I am more confident in speaking. (S7)

I use ELSA Speak to improve my speaking English skills, especially pronunciation and fluency. This app really helps me to practice my pronunciation and increase my confidence in speaking. (S9)

b. Improve English pronunciation

Based on the open questionnaire, it was found that the reason students use ELSA Speak is to improve their pronunciation skills. The following is the evidence from the open questioner:

I use ELSA Speak to improve my speaking English skills, especially in terms of clearer and more accurate pronunciation. (S20)

Because the application can analyze the user's pronunciation in detail. (S25)

The findings from this open-ended question are supported by findings taken from the interviews. Based on the interview results, students stated that the use of ELSA Speak can hone their pronunciation skills. The following is the result of the interview:

The ability to thoroughly study the user's speech is one of the main advantages of this app. By following the advice given by the app, I can identify and correct pronunciation mistakes quickly. (S11)

This app really helped me learn pronunciation and how to pronounce English words correctly. With the exercises in it, I can be more confident in speaking because I am used to the correct pronunciation. (S29)

c. Recommended by lecturers

Based on the open questionnaire, it was found that the reason students use ELSA Speak is because it is recommended by lecturers who are used as learning media in pronunciation and speaking courses by lecturers. The following is the evidence from the open questioner:

The lecturer recommended using the Elsa Speak application in the pronunciation course. (S10)

I first learned about ELSA Speak during a pronunciation class and was advised by my lecturer to use the app. (S18)

The findings from this open-ended question are supported by findings taken from the interviews. Based on the interview results, students stated that ELSA Speak was used as a learning media in lectures suggested by pronunciation and speaking lecturers. The following is the result of the interview:

Yes, my lecturer recommended using ELSA Speak in the Pronunciation course. Since this app can give immediate feedback on pronunciation, I found it helpful in improving my speaking skills. (S20)

During the pronunciation class, I first saw this app. My teacher suggested that students use ELSA Speak to help them master their English pronunciation. (S7)

1) Can be used Flexibly

Based on the open questionnaire, it was found that the reason students use ELSA Speak is because this application is very flexible and can be used anytime and anywhere. The following is the evidence from the open questioner:

The Elsa Speak application is flexible so it is easy to use anytime and anywhere and we can receive immediate feedback, whether our speech is correct or incorrect, Elsa Speak will improve. (S08)

Because the application is easy to understand for beginners who want to learn English and can also be used anytime and anywhere. (S15)

The findings from this open-ended question are supported by findings taken from the interviews. Based on the interview results, students stated that the use of ELSA Speak is very flexible to use anytime and anywhere. The following is the result of the interview:

I think ELSA Speak is very flexible, which makes it easy to use anywhere and anytime. I can learn to speak English independently without having to go to a class or take a specific course. (S02)

The immediate feedback on pronunciation is a major advantage. The app instantly tells me whether my pronunciation is correct or incorrect when I say a word or sentence. It also tells me how to correct it. It really helped me improve my pronunciation more effectively with this help. (S30)

2. Experience Gained in Using the ELSA Speak Application

a. Interactive and non-boring exercises

Based on the open questionnaire, it was found that students' experience of using ELSA Speak is as an interactive and non-boring English Practice media. The following is the evidence from the open questioner:

There was a pronunciation course, and I was struggling to find a way to practice that skill. ELSA Speak helped me in practicing my pronunciation. Because ELSA Speak provides a complete assessment of the user's speaking ability, including pronunciation, intonation, and fluency. This assessment helps users understand the areas that need improvement. The ELSA app has features such as daily practice and time-based challenges, so users can learn while playing, making the learning process fun. So, I think it is very interesting to be used as a learning media. (S26)

The features in ELSA are interesting for learning English. ELSA Speak can directly assess speaking skills which makes me want to continue practicing speaking English. (S18)

The findings from this open-ended question are supported by findings taken from the interviews. Based on the interview results, students stated that ELSA Speak is an interactive and not boring English language training media. The following is the result of the interview:

This application is very enjoyable because the appearance of the application is very attractive, so it is eye catching and the exercises provided are not boring. (S13)

Time-based exercises are like playing a game, so they are challenging and fun. Especially when learning while playing. (S04)

b. Increasing students' confidence in speaking English

Based on the open-ended questionnaire, it was found that students' experience of using ELSA Speak is that it can increase their confidence in communicating with native speakers. The following is the evidence from the open questioner:

Yes, very useful. I feel more confident when speaking with other people and native speakers in English, both in class and in daily conversations, after using this app regularly. (S27)

When I got a perfect score in one of the tests, it was like a validation that the progress was real, and I felt more confident in speaking. (S16)

The findings from this open-ended question are supported by findings taken from the interviews. Based on the interview results, students stated that the use of ELSA Speak can increase their confidence in communicating with native speakers. The following is the result of the interview:

After using this app, I gradually gained more confidence. Because every time I do the exercises, I always get feedback, it makes it easier for me to understand how to pronounce correctly. (S1)

I also become confident when communicating with native speakers, because I often do pronunciation exercises using the ELSA Speak application. (S27)

c. Knowing students' progress directly

Based on the open questionnaire, it was found that students' experience of using ELSA Speak was due to being able to see real progress when practicing. The following is evidence from the open questioner:

The most memorable experience was when I could see significant progress in my pronunciation after a few weeks of practice, as well as feeling more confident when speaking in English. (S20)

Seeing scores improve after intensive practice gives a sense of accomplishment, especially if the user previously found it difficult to speak correctly. (S26)

The findings from this open-ended question are supported by findings taken from the interviews. Based on the interview results, students stated that the use of ELSA Speak can see real progress. The following is the result of the interview:

After a few weeks of practice, I could witness great progress in my pronunciation; it was the most memorable experience for me. I feel more confident now, especially when speaking in English. (S1)

After practicing repeatedly, the app showed that I could finally pronounce difficult words correctly. It really proved the result of my efforts. (S26)

d. Getting feedback

Based on the open-ended questionnaire, it was found that students' experience of using ELSA Speak was getting feedback/score and ability analysis. The following is evidence from the open questioner:

With direct feedback, I can be motivated to continue learning so that it really helps me improve my English skills. (S08)

Because ELSA Speak provides correct spelling, scores and daily tests are provided. (S15)

The findings from this open-ended question are supported by findings taken from the interviews. Based on the interview results, students stated that the use of ELSA Speak

provided feedback/score and analysis of their abilities. The following is the result of the interview:

The live feedback really motivated me to keep learning, which was very helpful in improving my English. (S15)

ELSA Speak provided correct spelling justifications, which was essential for improving my pronunciation. In addition, the app also provides daily scores and tests, which allows me to monitor my progress regularly. (S26)

e. Practicing speaking directly based on the AI roleplay feature

Based on the open questionnaire, it was found that students' experience using ELSA Speak is that there is an AI-based roleplay feature that can help practice in real situations. The following is evidence from the open questioner:

The roleplay feature with AI is very helpful. We can chat on various topics and after the chat ends, we get corrections from the feature. (S13)

Learning to speak English with a roleplay approach, creating an atmosphere where I chatted with the AI on the topic of planning a birthday party. (S30)

The findings from this open-ended question are supported by findings taken from the interviews. Based on the interview results, students stated that the AI-based Roleplay feature in the ELSA Speak application can help practice in real situations. The following is the result of the interview:

Yes, I think the AI roleplay feature is very useful. With this feature, I was able to practice speaking on various topics like real-world situations. The app corrects my pronunciation errors immediately after the chat, so I know where to improve. (S01)

I've learned to speak English by roleplaying, and the app made me feel like I was talking to an AI about planning a birthday party. The atmosphere felt more alive because it was like talking to a real person. It helped me learn how to use vocabulary and intonation when talking to people. (S13)

DISCUSSION

The results of this study provide a thorough understanding of DEE students' experiences in using the ELSA Speak app as a learning tool, especially to improve their speaking English skills. The results of the theme analysis show that students find ELSA Speak very helpful for independent practice, building confidence in speaking, and improving pronunciation. The discussion in this section will emphasize the specific contributions of this study in addition to comparing the research findings with previous studies. First of all, students' motivation in using the ELSA Speak app is in line with other studies. Noviana (2024) found that ELSA greatly improved the speaking ability of junior high school students, and many students reported that they used ELSA Speak to improve their pronunciation and English proficiency. Similarly, the real-time feedback from ELSA increased students' attention and helped them pronounce words correctly, according to Maulidyah et al. (2024). This investigation corroborates the current study's conclusion that students think ELSA Speak is a useful tool to help them with speaking challenges. According to the current study, recommendations from lecturers-

particularly in speaking and pronunciation classes-are another factor in students' use of ELSA Speak. This shows the role of lecturers in promoting online learning resources. Yuliawati and Suryadi's (2023) findings also reveal the impact of lecturers, as higher app usage correlates with lecturer support. The importance of institutional assistance in adopting new technology was reaffirmed by the students in this study.

The students praised the adaptability of this app as it can be used anytime and from anywhere, which is one of the important discoveries. One of the main advantages mentioned by Cisneros Brusil (2023), who observed that self-study using ELSA improved students' fluency and confidence, was the flexibility that encourages self-study. In a similar vein, Ngoc and Thanh (2023) found that usability and time flexibility are important factors in a good user experience. Students in the current study highlighted how this flexibility freed them from the confines of the classroom to learn English on their own. The interactive elements of ELSA Speak were also rated favorably. To make learning more fun and less boring, students appreciated the app's design, regular practice exercises, and gamification features such as time-based challenges. This supports the findings of Karim et al. (2023), who found that students were motivated to practice more often by the attractive appearance of the app. Additionally, the survey identified ELSA Speak's AI-based roleplay function as one of the most valued features, which gives students the opportunity to mimic real-world discussions. This aspect is unique to our research as it has not been discussed in detail in previous studies.

Students also cited the opportunity to track their development as a major benefit. Pronunciation ratings and real-time feedback encouraged them to keep learning and gave them a concrete indicator of progress. Nushi & Sadeghi's (2021) assessment highlights the value of feedback by praising ELSA's immediate remedial feedback as a key quality. Seeing their progress in real time gave students in the current research a sense of empowerment and boosted their confidence. Students in this study pointed out a number of ELSA Speak's drawbacks in spite of these advantages. The restricted amount of free content was a frequent grievance. It is challenging for all students to fully utilize the application's benefits because many useful features and classes require a paid membership. This result validates the criticisms made by Mahmudah and Daulay (2024) and Rinaepi et al. (2022), who noted that users faced a major obstacle due to restricted access to material. Affordability becomes a key consideration for long-term use among college students. The inaccuracy of speech recognition was another technical issue raised, especially for users with regional accents or in noisy situations. Many students complained that although they felt their pronunciation was correct, the app would sometimes mispronounce things. This concern is in line with Ngoc and Thanh (2023), who also observed that students had difficulty getting the app to identify their speech correctly. This implies that although ELSA Speak's AI is robust, accent recognition and environment adaptation can still be improved. Another element of ELSA Speak that the students felt was lacking was social engagement. The dynamic and unpredictable elements of genuine human relationships cannot be replaced by the roleplay capabilities of the AI, even though the AI can mimic conversations. A number of students stated that they felt lonely during the learning process and that a group project or interaction with peers would be beneficial. This shortcoming was highlighted by Ngoc and Thanh (2023), who stated that ELSA lacks elements that encourage group practice or real-time social engagement. It is interesting to note that by using a qualitative approach to record student voices, this research enriches the literature. The research offers narrative-based insights that explain how and why students value certain aspects, in contrast to many previous studies that concentrate on statistical

results or general impressions. The students' justifications of their increased motivation, the value of feedback, and increased confidence provide a human angle that enhances the already existing quantitative results.

In conclusion, our research shows that ELSA Speak is a useful and entertaining tool for learning English, especially in terms of pronunciation. Real-time feedback, adaptability, interactive design, and the capacity to monitor individual progress were the aspects that students liked the most. Issues such as limited free access, difficulties with speech recognition, and lack of engagement indicate areas for future improvement. This study adds to the literature by presenting comprehensive qualitative data from university students describing their use and experience of using ELSA Speak in the real world. One recommendation for teachers is to use ELSA Speak as an additional resource for teaching pronunciation and speaking. According to this study, developers could improve the app's AI identification across accents, increase the variety of materials it offers, add a more dynamic social component, and expand its free service. Future researchers could use a mixed methods approach to compare ELSA with other AI-based language learning tools or investigate the long-term consequences of using the app. Finally, this study adds to the body of research supporting learner-centered and technology-enabled English language training.

CONCLUSION

The results of this study show that the ELSA Speak application is very helpful for students in improving their English language skills, especially speaking and pronunciation. There are five reasons why students use the ELSA Speak application, namely because they want to hone their speaking skills, recommended by lecturers in lectures, improve pronunciation skills, the application is flexible so that it can be used anywhere and anytime, the application also has immediate feedback in the Practice feature. Students' experiences show that the app makes learning interactive, fun, and structured with its features, such as role-playing, quizzes, and instant grading. Students are helped to correct mistakes and improve pronunciation accuracy through immediate feedback provided by AI technology. The students also said they were more confident in speaking English, especially after seeing the progress recorded in their results. The study found a drawback to using the ELSA Speak app that students cannot use it for free as many advanced features require a paid subscription. In addition, attention was paid to technical issues such as inaccurate voice recognition and the need for a stable internet connection. Students also said that if the app only focuses on pronunciation, the learning process feels incomplete. In addition, the absence of the social interaction aspect was considered a limitation as students wanted the opportunity to practice speaking in real social situations. The result is that ELSA Speak has proven to be an interesting and useful tool for improving English speaking. However, the developers were asked to address its current limitations by improving the speech recognition technology, expanding the free content, incorporating grammar and vocabulary exercises, and adding features that facilitate social interaction.

REFERENCES

- Ajisoko, P. (2020). The use of duolingo apps to improve English vocabulary learning. *International Journal of Emerging Technologies in Learning*, 15(7), 149–155. <https://doi.org/10.3991/IJET.V15I07.13229>
- Anggraini. (2022). *IMPROVING STUDENTS' PRONUNCIATION SKILL USING ELSA SPEAK APPLICATION*. Anggraini Universitas Bina Sarana Informatika. <http://ejournal.budiutomomalang.ac.id/index.php/journey>
- Anggrisia, N. F., & Robah, A. (2023). Exploring challenges and strategies in English speaking among Indonesian university students: A case study of AKM university. *Englisia: Journal of Language, Education, and Humanities*, 11(1). <https://doi.org/10.22373/ej.v11i1.19156>
- Brusil, G. L. C. (2023). *Self-Learning activities using Elsa Speak App to improve pronunciation in the second semester of English Major students at UTN University, academic period 2022-2023*.
- Dayana, J. M., & Muamaroh. (2025). *LEARNING STRATEGY USED BY STUDENTS OF ENGLISH DEPARTMENT IN SATURDAY ENGLISH GATHERING PROGRAM (SEGA)*. 26(1). <https://doi.org/10.23917/jph.v26i1.9138>
- Depalina Siregar, S., Meutia Sari, S., Fitria Simamora, D., & Tinggi Agama Islam Negeri Mandailing Natal, S. (2020). Using Application Based on Smartphone Android... Syamsiah Depalina et. In *English Journal for Teaching and Learning* (Vol. 08, Issue 01). <http://jurnal.iainpadangsidimpuan.ac.id/index.php/EEJ>
- Dhakshan, S., Balamurugan, G., Shyam Mohan, J. S., & Tyagi, A. K. (2023). *Role of Emerging Technologies in Education 4.0* (pp. 131–154). <https://doi.org/10.4018/978-1-6684-9285-7.ch006>
- Febri, Y. S. (2023). The Effect Of Using Elsa Speak Application To Improve Students' Pronunciation. In *Jolly Journal of English Education* (Vol. 1, Issue 2). <http://ejournal.staihwduri.ac.id/index.php/jjee>
- Gusrianto, E., & Iswahyuni, I. (2024, August 7). *ELSA Speak Application as an Advanced Program for Improving Pronunciation for Students in Indonesia: A Literature Review*. <https://doi.org/10.4108/eai.25-10-2023.2348268>
- Hidayad, F., Agustin, A., Marsinah, M., & Purwanto, M. B. (2023). PORTRAIT OF LEARNING ENGLISH AT MI DARRUN NAJJAH. *Wiralodra English Journal*, 7(2), 137–149. <https://doi.org/10.31943/wej.v7i2.240>
- Karim, S. A., Hamzah, A. Q. S., Anjani, N. M., Prianti, J., & Sihole, I. G. (2023). Promoting EFL Students' Speaking Performance through ELSA Speak: An Artificial Intelligence in English Language Learning. *Journal of Languages and Language Teaching*, 11(4), 655. <https://doi.org/10.33394/jollt.v11i4.8958>
- Kholis, A. (2021). Elsa Speak App: Automatic Speech Recognition (ASR) for Supplementing English Pronunciation Skills. *Pedagogy: Journal of English Language Teaching*, 9(1), 01. <https://doi.org/10.32332/joelt.v9i1.2723>
- Leleka, T. (2023). THE ENGLISH LANGUAGE TEACHING IN THE CONDITIONS OF THE WORLD GLOBALIZATION AND SOCIETY DIGITALIZATION. *Academic Notes Series Pedagogical Science*, 1(207). <https://doi.org/10.36550/2415-7988-2022-1-207-185-189>
- Mahmudah, R., & Daulay, S. H. (2024). Elsa Speak Application as an Innovation to Improve English Pronunciations of Speaking Skills: Student's Perception Beyond Boundaries: Innovations in Arabic and English Language Teaching for the Future Elsa Speak Application as an Innovation to Improve English Pronunciations of Speaking Skills: Student's Perception. In *ANCOLT International Proseeding on Language Teaching* (Vol. 1, Issue 1).
- Maulidyah, L., Achadiyah, R., & Azmi, M. U. (2024). Elsa Speak Application As Artificial Intelligence Tools To Enhance Students' Pronunciation Skills In Rural Area Beyond Boundaries: Innovations in Arabic and English Language Teaching for the Future Elsa Speak Application As

- Artificial Intelligence Tools To Enhance Students' Pronunciation Skills In Rural Area. In *ANCOLT International Proseeding on Language Teaching* (Vol. 1, Issue 1).
- Nazhira, T. N. (2021). *STUDENTS' PERCEPTIONS ON USING ELSA SPEAK (Focusing on Language Exchange Application in Developing Pronunciation Skills)*.
- Ngoc, N. K., & Thanh, N. T. M. (2023). NON-SPECIALIZED STUDENTS' BENEFITS AND CHALLENGES IN USING ELSA SPEAK APPLICATION FOR PRONUNCIATION LEARNING. *European Journal of Alternative Education Studies*, 8(4). <https://doi.org/10.46827/ejae.v8i4.5149>
- Noviana, L. (2024). *The Influence of Using ELSA Application toward Students' Speaking Ability in the first Semester at the Ninth Grade Students of SMPN 11 Kotabumi Lampung Utara in the*.
- Nushi, M., & Sadeghi, M. (2021). A Critical Review of ELSA: A Pronunciation App. In *Computer Assisted Language Learning Electronic Journal (CALL-EJ)* (Vol. 22, Issue 3). <https://play.google.com/>
- Rinaepi, R., Triwardani, H. R., & Azi, R. N. (2022). THE EFFECTIVENESS OF ELSA SPEAK APPLICATION TO IMPROVE PRONUNCIATION ABILITY. *Jurnal Fakultas Keguruan & Ilmu Pendidikan*, 3(1).
- Taufiq, W., & Megawati, F. (2023). *Technology for English Language Learners*.
- We Are Social. (2024, October). *Digital 2024: October Global Statshot Report*. <https://wearesocial.com/sg/blog/2024/10/digital-2024-october-global-statshot-report/>
- Yuliawati, N. L., & Suryadi, S. (2023). Students' Perceptions on the Use of ELSA Speak Application to Improve English Speaking Skills. *TELL-US JOURNAL*, 9(4). <https://doi.org/10.22202/tus.2023.v9i4.7649>
- Yusuf, F. A., Wijayanti, L., Lukas, L., Octaviani, S., & Widawati, E. (2023). Applications of Educational Technology in Solving Learning Problems. *Athena: Journal of Social, Culture and Society*, 1(4), 253–256. <https://doi.org/10.58905/athena.v1i4.201>