

Students' Perception and Acceptance of "ELSA" to Improve Pronunciation Skill

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ABSTRACT

Pronunciation is important for effective communication. However, many learners still struggle with pronunciation skills. In the 4.0 technology era, artificial intelligence (AI) technology can be used, such as the ELSA Speak application. While previous studies have highlighted the effectiveness of the technology itself, it pays less attention to students' perceptions of the application's use as an independent learning medium. This research aims to investigate students' perception and acceptance of ELSA technology as an independent learning medium for improving pronunciation skills. This qualitative approach used a case study design. The researchers utilized semi-structured interviews for data collection, which focused on perceived usefulness and perceived ease of use. Students stated that ELSA is useful in improving students' pronunciation skills through effective learning. With its user-friendly application, ELSA supports the learning process effectively. Thus, students positively perceive the usefulness and user-friendliness of the ELSA to improve their pronunciation skills.

Keywords: Students' Perception, ELSA Speak Application, Pronunciation Skill

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INTRODUCTION

One crucial aspect of mastering English is pronunciation skill. In accordance with (A. P. Gilakjani (2016), pronunciation is a crucial aspect of language instruction and essential for learners' proficiency. Good pronunciation is the key to effective communication. Accurately pronouncing vowels and consonants is crucial for learning English pronunciation (Hidayah et al., 2021). When someone pronounces English words correctly, it is easier for other people to understand what they are saying. Nevertheless, misspelled pronunciation can cause misunderstandings and confusion. The way letter sounds are pronounced in words and the emphasis placed on different syllables can significantly modify the meanings and contexts of those words, ultimately changing the intended message (Kobilova, 2022).

Even after years of learning English, many learners still struggle with pronunciation skills (A. Gilakjani et al., 2011). In line with the researcher's experience, while carrying out teaching practice activities at SMPN 15 Malang, researcher found that IX D class students needed better English pronunciation skills compared to other class IX students that the researcher taught. This is reflected in their difficulty pronouncing words correctly, which often causes misunderstandings in verbal communication. Problems faced by IX D class students at SMPN 15 Malang include the need for pronunciation skills. This can be due to various factors, ranging from inadequate practice and the impact of the first language to learning methods that are not effective in improving pronunciation skills. In the 4.0 technology era, artificial intelligence (AI) technology can be used (Abimanto & Sumarsono, 2024).

The technology acceptance model (TAM) states that external factors of new technology affect users' perceptions of its usefulness and ease of use, which impacts their adoption and attitudes towards it (Na et al., 2022). According to Al-Adwan et al. (2023), the goal of

developing the TAM was to discover the cognitive and psychological factors that influence users' acceptance of new technologies. Conforming to Davis (1989), the technology acceptance model (TAM) highlights two key aspects: perceived usefulness (PU), which represents the belief that using a specific technology enhances one's performance, and perceived ease of use (PEU), which signifies the degree of simplicity in utilizing a particular technology.

The researcher introduced and used the ELSA Speak application during the learning process to address this issue. Vu Van from Vietnam made the ELSA (English Language Speech Assistant) Speak application in 2015, now based in San Francisco, USA (Febri, 2023). To meet learners' needs, ELSA Speak application connects outstanding and efficient features, and its subsidy policy further enhances students' attachment and motivation, creating an excellent and desirable environment for learning (Thanh et al., 2021). This app is designed to help students practice pronunciation in an interactive and personalized way. As claimed by Kholis (2021), ELSA Speak application analyzes and provides feedback on students' pronunciation of words and sentences. According to Samad & Aminullah (2019), this app's features help learners practice correct word pronunciation, including vowels, consonants, and word stress. Speech recognition technology, a tailored curriculum, a complimentary online dictionary, and a free evaluation test enhance the app's capabilities (Hanna et al., 2022). Referring to Saragih et al. (2021), ELSA enables students with different learning styles to learn independently and organize their learning, allowing them to adapt to a rapidly changing world and thrive in a global society. Thus, ELSA assists users in enhancing their pronunciation abilities by identifying mistakes and providing explanations for the correct pronunciation (Akhmad & Munawir, 2022).

The use of ELSA is significant in improving students' pronunciation skills and is regarded positively by students learning English pronunciation (Mahmudah & Daulay, 2024); (Samad & Ismail, 2020); (Zakiah et al., 2023). The research findings indicated that ELSA serves as a practical medium for enhancing English pronunciation in every aspect of evaluation and education.

However, these studies focus more on the effectiveness of the technology itself and pay less attention to students' perceptions of the application's use as an independent learning medium. This lack of focus on user experience creates a gap in understanding students' perceptions about the app and its impact on their learning. To bridge this gap, more research needs to be conducted to explore students' perceptions of using ELSA to improve their pronunciation skills. The purpose of this research is to investigate students' perception and acceptance of ELSA technology as an independent learning medium for improving pronunciation skills. To meet the objective, the researchers formulate this research question: How do students perceive using ELSA to improve their pronunciation skills? Hopefully, this research can make a valuable improvement in developing more effective pronunciation learning methods that suit students' needs.

METHOD

Research Design

This qualitative approach used a case study design to investigate students' perception and acceptance of ELSA technology as an independent learning medium for improving pronunciation skills. Referring to Nassaji (2020), qualitative research is an exploration conducted in a real-world context that focuses on data that is not numerical and seeks to understand and analyze it.. This is in accordance with the purpose of this research, which is to understand and investigate students' perception and acceptance of ELSA technology as an independent learning medium for improving pronunciation skills. As far as the results are concerned, the case study provides a comprehensive understanding of the bounded unit and assists the reader in comprehending the case to learn from it (Schoch, 2009). The case study design allows researchers to collect rich and in-depth data about individual students' experiences.

Research Subject

The participants of this study were IX D class of SMPN 15 Malang. The six participants were selected through purposive sampling, considering their willingness to participate and provide in-depth information. Their participation is invaluable, as they are willing to share their opinions and ideas openly, allowing the researchers to obtain rich and quality data.

Data Collection

The researchers utilized semi-structured interview for data collection, adapted from a previous study conducted by Davis (1989) which focused on perceived usefulness and perceived ease of use. The purpose of this to gather more valid and reliable data on students' perceptions and acceptance of ELSA Speak as a technological innovation in language learning. Perceived usefulness refers to the belief that technology enhances performance, whereas perceived ease of use signifies the belief that it requires minimal effort (Alfadda & Mahdi, 2021). Interviews allow researchers to explore information in more depth. In line with (Naz et al., 2022), engaging in an interview is a valuable approach for collecting information in qualitative research that employs case study because it aids in clarifying, comprehending, and delving into the opinions, behavior, and experiences of research subjects. The interview questions are as follows:

Table 1. Interview Questions

Aspect	Questions
Perceived Usefulness (PU)	1. Does your pronunciation learning be difficult without ELSA? 2. Does using ELSA improve your pronunciation skill? 3. Does using ELSA make it easier to learn pronunciation? 4. Do you find ELSA useful for improving your pronunciation?
Perceived Ease of Use (PEU)	1. Do you often become confused when using ELSA? 2. Do you make errors frequently when using ELSA? 3. Is using ELSA often frustrating? 4. Do you find it easy to fix mispronunciations while using ELSA? 5. Is ELSA rigid and inflexible to use? 6. Does ELSA provide helpful guidance in pronouncing words? 7. Do you find ELSA easy to use?

Data Analysis

Qualitative data obtained from the interview will be analyzed using a thematic analysis with a priori coding approach. Conforming to Braun & Clarke (2006), thematic analysis involves the identification, examination, and presentation of patterns (themes) within data. Furthermore, a priori coding involves creating codes in advance and applying them to the analyzed data (Stemler, 2001). Multiple steps were required to examine the data using Braun and Clarke's technique, including analyzing it through coding, combining it to identify themes, and reviewing it to discover crucial elements relevant to the research questions.

Ensuring the data accuracy and alignment with participants' experiences is achieved through member checking. In line with Candela (2019), member checking is commonly utilized in qualitative studies to ensure validity. Therefore, the researchers will share the data and interpretations with the participants to see whether they agree.

FINDINGS AND DISCUSSION

This study aims to investigate students' perception and acceptance of ELSA technology as an independent learning medium for improving pronunciation skills. Several themes

appeared from the thematic analysis using an a priori coding approach. The following explanation explores students' perception and acceptance of ELSA technology as an independent learning medium for improving pronunciation skills.

Table 2. Students' Perception and Acceptance of Technology "ELSA"

Categories	Themes	Example
Perceived Usefulness	Helpful	ELSA is useful in improving students' pronunciation skills through effective learning
	More Fun	Using ELSA makes students learn while playing
Perceived Ease of Use	User-friendliness	With a user-friendly application, ELSA supports the learning process effectively
	Flexibility	ELSA can be adapted to students' learning style.

Perceived Usefulness

The interview results shows that the participants gain significant benefits from the ELSA application in the English learning process, especially in pronunciation. All participants emphasized that ELSA was considered useful in improving pronunciation skills. This is expressed in the following statement:

"ELSA is very useful and effective application for improving English pronunciation skill." (Excerpt 1, Participant 3)

This shows that ELSA is a useful learning application that practically helps users improve their pronunciation skills. This shows that users gain theoretical knowledge and experience real progress in pronunciation practice. As stated by Annur & Safryadin (2024), students can enhance their English pronunciation accuracy and fluency by utilizing technology, as demonstrated in several studies, including the utilization of ELSA Speak application.

Furthermore, the participants also find it easier to learn English, particularly in enhancing their pronunciation. The 2nd, 4th, and 6th participants state that ELSA is designed to make learning easier for them and improve their pronunciation. This is stated as follows:

"...because ELSA makes it easier for users to speak or improve their pronunciation." (Excerpt 2, Participant 2)

This indicates that the app uses advanced technology, such as speech recognition, which allows users to get immediate feedback on their pronunciation. ELSA is a way of utilizing technological advances to make it easier to improve students' pronunciation skills (Rineapi et al., 2022). By combining technology that makes it easier for users to learn pronunciation with hands-on practice and the ability to provide direct and clear feedback, ELSA helps users achieve their goals of enhancing their pronunciation more efficiently.

Additionally, the 3rd participant's statement shows that ELSA plays an important role in learning English pronunciation. The participant states that without ELSA, the learning process would be more difficult, emphasizing that this application is useful and important in improving users' pronunciation skills. This is expressed in the following statement:

"It would be more difficult without ELSA. Because ELSA facilitates me to learn pronunciation." (Excerpt 3, Participant 3)

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By facilitating the learning process, ELSA also has the potential to accelerate students' progress in pronunciation. When users have access to fast and accurate feedback, they can quickly identify and correct errors, reducing the time needed to master correct pronunciation. In accordance with Tampubolon et al. (2023), ELSA facilitates users' pronunciation learning by allowing them to repeat and providing corrections when mispronounces. This emphasizes how important the role of technology is in education, especially in the language field, which often requires intensive guidance and practice. Conforming to Luckin & Holmes (2016), technology artificial intelligence (AI) holds great potential in education. It proves that technological innovation in language learning can significantly impact achieving better communication skills

The interview results also show that students experience a more fun learning experience, significantly contributing to their motivation to learn English. The 3rd, 5th, and 6th participants express the same opinion that ELSA makes the process of learning more fun and less boring. It is expressed in the following way:

"ELSA makes learning more fun and less boring." (Excerpt 4, Participant 5)

Language learning can often feel monotonous and tiring, especially when the methods used are less varied. ELSA seems to have succeeded in overcoming this problem by providing interesting material and different ways of learning so that students remain enthusiastic in the learning process. As believed by Khampusaen et al. (2023), learning a language becomes more fun with ELSA because it includes gamification features. The more fun learning experience experienced by students can increase consistency in practice. This is important in mastering a language, as significant progress is often achieved through consistent and repeated practice.

Additionally, the 4th participant reveals that ELSA creates a positive learning atmosphere. When students can learn while playing, this shows the presence of gamification elements in the application, where learning is not only seen as a task to be done but also as an entertaining activity. This is expressed in the following statement:

"ELSA makes me feel happy because I can learn while playing." (Excerpt 5, Participant 4)

This reflects how ELSA makes students feel happy during the learning process. By combining game elements in learning, ELSA makes the learning process more interesting and increases student motivation and engagement. In line with Rismawati et al. (2022), learning the material while playing with the ELSA Speak application is more fun. This shows that the happy aspect of learning is important in encouraging success in language learning, and ELSA has successfully implemented this principle.

Moreover, statements from the 1st and 5th participants show that ELSA interactivity plays an important role in creating a fun and effective learning experience. This interactivity includes some features such as pronunciation practice, instant feedback, and various interactive tasks encouraging students to practice actively. This is stated as follows:

"Using ELSA makes it easier for me to learn pronunciation in English because it is very interactive." (Excerpt 6, Participant 1)

Both participants indicate that ELSA's interactivity made the learning experience more fun. This application is interactive because ELSA is a fun and captivating resource that will assist students in improving their English pronunciation (Tamala et al., 2023). ELSA's interactivity encourages students to not only be passive listeners but also active participants in learning. This is important in language learning, where speaking and listening practice are crucial. By providing opportunities for interaction, students' pronunciation skills are better. This highlights the importance of interactive elements in language learning, which can significantly improve learning outcomes and maintain student enthusiasm.

Perceived Ease of Use

The interview results show that students find ELSA easy to use, which is an important factor in the effectiveness of the learning medium. The 1st, 4th, and 6th participants emphasize that ELSA is very easy to use, even for beginners. This is expressed in the following statement:

"I think ELSA is easy for anyone to use." (Excerpt 7, Participant 6)

User-friendliness contributes to learning efficiency. When users do not have time to understand how to use the app, they can straight into the learning material. This allows them to maximize study time and get better results in less time. Conforming to Indriyani et al. (2024), one advantage of using ELSA is that it is easy to use for those starting to learn English. By making it easier for beginners to access learning and offering a simple interface, ELSA improves the learning experience as well as motivates more students to engage in the learning process. This user-friendliness is key to creating a positive learning experience and motivating users to continue practicing and learning.

Besides, the 5th participant states that ELSA presents learning material in a way that is easy to understand. This is stated as follows:

"ELSA provides very clear and easy-to-understand guidance, so I can quickly master the material taught." (Excerpt 8, Participant 5)

The ease of understanding the material helps reduce the frustration that is often experienced when learning a language. When users do not feel confused or have difficulty understanding the learning material, they are more likely to stay motivated and enthusiastic about the learning process. In accordance with Assalamah et al. (2024), ELSA functions as an easy-to-understand resource for students to practice pronouncing words. This creates a more positive and enjoyable learning experience.

In addition, the 5th participant also states that ELSA provides instructions that can be easily followed, an important aspect of the learning experience. This is expressed in the following statement:

"...because ELSA provides instructions that are easy to follow." (Excerpt 9, Participant 5)

The student emphasizes that the instructions provided by ELSA are easy to follow. This shows that the application is well designed, where each step in the learning process is presented logically and systematically. In agreement with Al-Shallakh (2023), students noted that the ELSA is easy to use and appreciated its features because of the straightforward instructions provided. With a clear structure, users can follow the learning process without feeling confused or losing direction. Moreover, when the instructions are easy to follow, students are often more active in their learning. They feel more confident trying out the different exercises and features offered by ELSA.

The participants also examine that ELSA provides significant flexibility in the learning process. The 3rd and 4th participants agree that ELSA is a flexible application. This is stated as follows:

"ELSA provides many exercise options, so it is flexible." (Excerpt 10, Participant 4)

ELSA allows students to select the learning materials they want. This reflects that students have control over their learning process. With a large selection of exercises, students can explore various aspects according to their progress and interests. This is in line with Yosintha & Rekha (2022), conveying that ELSA Speak provides students with all the resources necessary, such as intonation, word stress, and accents, to practice pronunciation on their schedule and at different skill levels. This shows that ELSA provides high flexibility in the

learning process, allowing users to choose materials and exercises that suit their needs. This flexibility helps students to improve their pronunciation skills.

The 1st participant highlights how ELSA provides a non-rigid learning experience, greatly contributing to the effectiveness of learning pronunciation. This is expressed in the following statement:

"In my opinion, ELSA is not rigid and is good for practicing English. Because the examples attached to ELSA are also inspired by everyday life." (Excerpt 11, Participant 1)

The participant emphasizes that the examples used in ELSA are inspired by everyday life. This shows that this application does not only provide theory, but also provides practical context that users can directly apply. As stated by Aswaty & Indari (2022), the topics provided by ELSA include daily conversation, cuisine, holidays, technology, culture, and others. With this approach, students can see the relevance of English in everyday situations, which makes the learning process easier. When students feel free to learn without strict restrictions, they are more likely to practice better.

Additionally, the 6th participant highlights the importance of flexibility in ELSA applications, allowing adaptation to individual learning styles. This is stated as follows:

"ELSA can be adapted to each individual's learning style." (Excerpt 12, Participant 6)

The participant highlights that ELSA can be customized for each student's learning style. In line with Sholekhah & Fakhurriana (2023), due to the app's adaptability to different learning schedules and rates, students can progress at their speed and allocate their time and effort to their preferences. This shows that the application provides a variety of methods and approaches from which students can choose. Each individual has a different way of understanding and remembering information, and given these options, students can choose the most effective strategy.

CONCLUSION

The use of the ELSA application significantly enhances students' English pronunciation skills, as participants in the study reported considerable benefits, particularly in learning the correct pronunciation of words. They highlighted the app's user-friendliness, which made learning enjoyable and engaging, as well as the relevance and simplicity of its materials, catering to diverse proficiency levels. Additionally, ELSA's quick and constructive feedback motivated students to practice more and track their progress effectively. These findings underscore the potential of technology in self-directed language learning, showcasing ELSA's accessibility and effectiveness in supporting pronunciation improvement, and paving the way for further exploration of similar tools in global language education.

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REFERENCES

- Abimanto, D., & Sumarsono, W. (2024). Improving English Pronunciation with AI Speech-Recognition Technology. *Acitya: Journal of Teaching and Education*, 6(1), 146–156. <https://doi.org/10.30650/ajte.v6i1.3810>
- Akhmad, N. W., & Munawir, A. (2022). Improving the 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>
- Al-Adwan, A. S., Li, N., Al-Adwan, A., Abbasi, G. A., Albelbisi, N. A., & Habibi, A. (2023). "Extending the Technology Acceptance Model (TAM) to Predict University Students' Intentions to Use Metaverse-Based Learning Platforms". *Education and Information Technologies*, 28(11), 15381–15413. <https://doi.org/10.1007/s10639-023-11816-3>
- Al-Shallakh, M. A. I. (2023). Artificial intelligence-based mobile learning in English language teaching (ELT) for EFL learners: Enhancing pronunciation with ELSA SPEAK in Oman. *Arab Humanities Journal*, 4(3), 208–221.
- Alfadda, H. A., & Mahdi, H. S. (2021). Measuring Students' Use of Zoom Application in Language Course Based on the Technology Acceptance Model (TAM). *Journal of Psycholinguistic Research*, 50(4), 883–900. <https://doi.org/10.1007/s10936-020-09752-1>
- Annur, Y. F., & Safryadin, S. (2024). English Elocution: Students' Perceptions of Elsa Speak. *Proceeding AISELT (Annual International Seminar on English Language Teaching)*, 9(1), 157–166.
- Assalamah, T. M., Hilza, I. F., & Wafiroh, L. H. (2024). Students' Attitudes Toward the Use of Edtech as a Powerful Pronunciation Learning Tool in EFL. *International Journal of Education, Language, Literature, Arts, Culture, and Social Humanities*, 2(3), 161–177. <https://doi.org/10.59024/ijellacush.v2i3.973>
- Aswaty, P., & Indari, A. (2022). the Effect of Using Elsa (English Language Speech Assistant) Speak Application on Students' Speaking Ability for the Eleventh Grade of Mas Darul Al Muhajirin in the Academic Year 2021/2022. *Serunai: Jurnal Ilmiah Ilmu Pendidikan*, 8(1), 18–23. <https://doi.org/10.37755/sjip.v8i1.616>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Candela, A. G. (2019). The Qualitative Report Exploring the Function of Member Checking. *How To Article*, 24, 3–24. <https://nsuworks.nova.edu/tqr/vol24/iss3/14>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>
- Febri, Y. S. (2023). The Effect Of Using Elsa Speak Application To Improve Students' Pronunciation. *Jolly Journal of English Education*, 1(2), 54–63. <http://ejournal.staihwduri.ac.id/index.php/jjee>
- Gilakjani, A., Ahmadi, S., & Ahmadi, M. (2011). Why is Pronunciation So Difficult to Learn? *English Language Teaching*, 4(3), 74–83. <https://doi.org/10.5539/elt.v4n3p74>
- Gilakjani, A. P. (2016). English Pronunciation Instruction: A Literature Review - International Journal of Research in English Education. *Ijree*, 1(1), 1–6. <https://ijreeonline.com/article-1-21-en.html>
- Hanna, A. N., Harmayanthi, V. Y., & Astuti, S. (2022). The Effect of Elsa Speak App Towards Students' Speaking Skill. *Proceeding of International Conference on Education-01*, 32, 16–20. <https://doi.org/10.37640/ice.01.240>
- Hidayah, N., Hadi, M. S., & Islah, N. (2021). Pronunciation Practice Experiment Using English Language Speech Assistant (Elsa) Application As A Learning Media. *Jeell*, 7(2), 81–86.
- Indriyani, N., Faizah, I., Khasanah, E. N., & Rahmatika, A. Y. (2024). *The Use of Elsa Speak as the Pronunciation Learning of Students English Education Study Program at the UIN Prof. K. H. Saifuddin Zuhri Purwokerto*. 207–214.
- Khampusaen, D., Chanprasopchai, T., & Lao-Un, J. (2023). Empowering Thai Community-based Tourism Operators: Enhancing English Pronunciation Abilities with AI-based Lessons. *Journal of Mekong Societies*, 19(1), 132–159.
- 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>
- Kobilova, N. R. (2022). Importance of Pronunciation in English Language Communication.

- Luckin, R., & Holmes, W. (2016). Intelligence Unleashed: An Argument for AI in Education. In *Pearson Educación* (Issue February). <https://discovery.ucl.ac.uk/id/eprint/1475756/>
- Mahmudah, R., & Daulay, S. H. (2024). Elsa Speak Application as an Innovation to Improve English Pronunciations of Speaking Skills: Student's Perception. *Journal International Proceeding on Language Teaching*, 1(1), 154-164. <https://ancolt-pekanbahasa.unkafa.ac.id/index.php/proceeding/article/view/20>.
- Na, S., Heo, S., Han, S., Shin, Y., & Roh, Y. (2022). Acceptance Model of Artificial Intelligence (AI)-Based Technologies in Construction Firms: Applying the Technology Acceptance Model (TAM) in Combination with the Technology-Organisation-Environment (TOE) Framework. *Buildings*, 12(2). <https://doi.org/10.3390/buildings12020090>
- Nassaji, H. (2020). Good qualitative research. *Language Teaching Research*, 24(4), 427-431. <https://doi.org/10.1177/1362168820941288>
- Naz, N., Gulab, F., & Aslam, N. (2022). Development of Qualitative Semi-Structured Interview Guide for Case Study Research. *Competitive Social Sciences Research Journal (CSSRJ)*, 3(2), 42-52. www.cssrjournal.com
- Rineapi, Triwardani Henni, & Nur Raysal. (2022). The effectiveness of ELSA Speak application to improve pronunciation ability. *Jurnal Fakultas Keguruan & Ilmu Pendidikan*, 3(1), 28-33.
- Rismawati, D., Suryana, Y., & Agustiana, V. (2022). The Effectiveness of Elsa Speaking Application in Improving English Pronunciation. *The Proceedings of English Language Teaching, Literature, and Translation (ELTLT)*, 10(1), 178. <https://proceeding.unnes.ac.id/index.php/eltlt/article/view/1329>
- Samad, I. S., & Aminullah, A. (2019). Applying ELSA Speak Software in the Pronunciation Class: Students' Perception. *Edumaspul - Jurnal Pendidikan*, 3(1), 56-63. <https://doi.org/10.33487/edumaspul.v3i1.85>
- Samad, I. S., & Ismail, I. (2020). ELSA Speak Application as a Supporting Media in Enhancing Students' Pronunciation Skill. *Majesty Journal*, 2(2), 1-7. <https://doi.org/10.33487/majesty.v2i2.510>
- Saragih, E. E., Tabrani, N. P., & Muthmainnah, N. (2021). the Use of Digital Feedback on Elsa Speak in Learning Pronunciation for Seventh Grade of Junior High School. *JEELL (Journal of English Education, Linguistics and Literature) English Department of STKIP PGRI Jombang*, 8(1), 133. <https://doi.org/10.32682/jeell.v8i1.1937>
- Schoch, K. (2009). 6: Three Case Studies. 119-137. <https://doi.org/10.1484/m.lmms-eb.4.000093>
- Sholekhah, M. F., & Fakhurriana, R. (2023). The Use of ELSA Speak as a Mobile-Assisted Language Learning (MALL) towards EFL Students Pronunciation. *JELITA: Journal of Education, Language Innovation, and Applied Linguistics*, 2(2), 93-100. <https://doi.org/10.37058/jelita.v2i2.7596>
- Stemler, S. (2001). An overview of content analysis. *Practical Assessment, Research and Evaluation*, 7(17). <https://doi.org/10.1362/146934703771910080>
- Tamala, V. V., Artini, L. P., & Dewi, N. L. P. E. S. (2023). Proceedings 4 rd UIN Imam Bonjol International Conference on Islamic Education "Islamic Education in Era of Artificial Intelligence: Opportunities and Challenges" Harnessing The Potential Of Elsa Speak Application For Students' Speaking Proficiency. *Proceedings of the 4th Imam Bonjol International Conference on Islamic Education*, 233-239.
- Tampubolon, S., Bulan Lumban Gaol, D. P., Triana Sinaga, N., & Gultom, S. P. (2023). Students' Ability in Pronouncing English Words by Using ELSA Speak Application of the Second-Year Students of SMA Eka Prasetya Medan. *Journal Of Social Science Research*, 3, 5041-5048.
- Thanh, L. L. P., Qui, N. T. N., Thanh, V. N. T., & Hung, N. M. T. (2021). The Need of Applying English Learning Apps to Help Van Lang University Students Improve Their Spoken English Performance. *AsiaCALL Online Journal*, 12(2), 72-86. <https://asiacall.info/acoj>
- Yosintha, R., & Rekha, A. (2022). "Elsa Speak" in an Online Pronunciation Class: Students'

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Voices. *IJEE (Indonesian Journal of English Education)*, 9(1), 160–175.
<https://doi.org/10.15408/ijee.v9i1.23033>

Zakiah, I., Elang Gumelar, R., Education, E., & Anwar Banten, ul. (2023). *The Effect of English Language Speech Assistant (ELSA) Speak Application on Students' Pronunciation Mastery at The Tenth Grade of SMAN 15 Pandeglang in Academic Year 2022/2023*. 7, 23109–23114.