**ASSESSING THE EFFICACY OF AI-DRIVEN ELSA IN ENHANCING
PRONUNCIATION SKILLS OF EFL LEARNERS
IN VOCATIONAL HIGH SCHOOL**

SKRIPSI

*Submitted in Partial Fulfillment of Requirement
For the Degree of Sajarna Pendidikan (S.Pd)
English Education Program*

By:

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UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
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Ujian Mempertahankan Skripsi Sarjana Bagi Mahasiswa Program Strata 1
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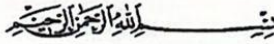Dekan

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Tanggal	Deskripsi Hasil Bimbingan Skripsi	Tanda Tangan
1-10-2024	Abstract, Acknowledgments, Table of Contents	
	Introduction, Review of literature, Research Method, Data collection, Data Analysis, references	
10-10-2024	Abstract, Acknowledgments, Introduction formulation of the problem, significance of the st	
11-10-2024	Review of literature, Previous study.	
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13-10-2024	Tables	
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PERNYATAAN KEASLIAN SKRIPSI

بِسْمِ اللهِ الرَّحْمَنِ الرَّحِيمِ

Saya yang bertanda tangan dibawah in:

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Dengan ini menyatakan bahwa skripsi saya yang berjudul "Assessing the Efficacy of Ai-Driven Elsa in Enhancing Pronunciation Skills through EFL (English Foreign Language) Learners in Vocational High School . Adalah benar bersifat asli (original), bukan hasil menyadur mutlak dari karya orang lain.

Bilamana dikemudian hari ditemukan ketidaksesuaian dengan pernyataan ini, maka saya bersedia dituntut dan diproses sesuai dengan ketentuan yang berlaku di Universitas Muhamamdiyah Sumatera Utara

Demikian pernyataan ini dengan sesungguhnya dan dengan sebenar-benarnya.

Medan, 18 Oktober 2024
Hormat saya
Yang membuat pernyataan,

Nadya Azrani Siahaan

ABSTRACT

Nadya Azrani Siahaan. 2002050048. "Assessing the Efficacy of Al-Driven Elsa in Enhancing Pronunciation Skills of EFL Learners in Vocational High School". Skripsi: English Education, Faculty of Teacher Training and Education, Universitas Muhammadiyah Sumatera Utara. Medan. 2024.

This research assesses the efficacy of the ELSA (English Language Speech Assistant) tool, an AI-powered mobile application designed to enhance English pronunciation through personalized, real-time feedback. ELSA assists learners by analyzing their speech and providing corrections, focusing on common challenges such as stress, intonation, and articulation that EFL (English as a Foreign Language) learners often encounter. The primary objective of this study is to determine the effectiveness of the ELSA tool in improving pronunciation skills among vocational high school students. The research was conducted at SMK Gema Buwana, involving 30 students from the vocational high school level. A qualitative and quantitative research method was employed, utilizing pronunciation tests as the main instrument. The process commenced with a pre-test to establish students' baseline pronunciation abilities. After using the ELSA tool for 4 weeks, a post-test was administered to evaluate improvements in pronunciation.The students' scores from the pre-test and post-test were compared to assess the efficacy of the ELSA tool. Additionally, expert linguistic validation was conducted on the recordings to ensure accuracy and consistency of findings. Results indicated that the ELSA tool significantly improved students' pronunciation, particularly in stress and intonation, while also boosting their confidence and motivation in using English. This research highlights the potential of AI-driven tools like ELSA to enhance pronunciation learning for EFL students in vocational high school settings.

Keywords: *ELSA Speak, Pronunciation, EFL Learners, Vocational High School, Mix method Research*

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The researcher expresses deep gratitude for the support and guidance that made it possible to complete this study to fulfil the requirements for the Degree of Sarjana Pendidikan (S.Pd) at the Faculty of Teacher Training and Education, Universitas Muhammadiyah Sumatera Utara. This study is titled *"Assessing the Efficacy of AI-Driven Elsa in Enhancing Pronunciation Skills of EFL Learners in Vocational High School"* aims to explore how AI technology can help EFL learners improve their pronunciation. By examining AI-driven tools, the research seeks to determine their effectiveness and potential role in modern education.

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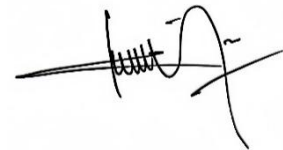
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May this research serve as a valuable reference for future studies in language learning and educational technology, enhancing teaching methods, especially in pronunciation through AI tools. Let it inspire educators and learners to embrace innovation and remind us that determination can lead to significant advancements in education.

Wassalamualaikum Warahmatullahi Wabarakatuh

Medan, 18 October 2024
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1CHAPTER I

INTRODUCTION

A.   Background of the Study

Indonesia is one of the countries that positions English as a foreign language so that Indonesia adheres to the EFL (English Foreign Language) system. People in Indonesia do not speak English fluently . The Indonesian government decided to make English a subject. English is considered an important subject because many areas of human life, especially in the field of education, use English as a language for communicating and sharing information.

English pronunciation is one of the most challenging skills to acquire and learn. English pronunciation is quite tricky for Indonesian students since they have been used to speaking their mother tongue since childhood (Jariyah, 2020:1). Foreign language pronunciation makes society become one thing difficult because it is not included in the language used in everyday life. Difficulty in pronouncing English can also be caused by the learning method used by the teacher.

If we want to improve our English pronunciation skills, it is a good idea to start with an assessment or evaluation. Pronunciation assessment is a useful tool to find out whether our English pronunciation is good or not (H. D. Brown, 2004). In addition to assessment, efficacy is also needed, efficacy is used to find out how well someone uses pronunciation to achieve communication goals. Pronunciation is how a word is pronounced, and it is more challenging to master than grammar and vocabulary. If a speaker has poor pronunciation, it will have a negative impact

1

on his/her overall language skills. If the speaker has good pronunciation skills, the listener will judge the speaker's language skills as effective, even to the point of tolerating grammatical errors (Pourhosein Gilakjani,2012:34). In addition, Pronunciation must be done quickly but still clearly and not long-winded.

A teacher who teaches English must really pay attention to pronunciation because pronunciation is an important part of learning. As stated by Brown et al (2001:785). An educator is required to be able to provide English teaching by paying attention to pronunciation that is adjusted to the rules because pronunciation is the most important part of learning English. conversation classes are a puzzle in language teaching. Therefore, students face many problems in speaking, ranging from feeling shy and afraid to speak to wondering how to pronounce a word (Brown et al., 2001:934). While the conversation class in this study is a question or puzzle during the English learning process. So that many of the students who have difficulty in learning to speak, this is caused by several factors such as lack of confidence and fear of their abilities.

Pronunciation is a crucial aspect of effective communication because it directly impacts the clarity and understanding of spoken language. When a word is pronounced incorrectly, it can not only alter its intended meaning but also lead to misunderstandings. Additionally, poor pronunciation may inadvertently convey negative connotations or make the speaker seem less credible. Therefore, mastering pronunciation is essential for ensuring that the intended message is conveyed accurately and respectfully, fostering better interactions and reducing the likelihood of miscommunication.

In learning English as a foreign language, pronunciation is very important. People who pronounce words badly often cause misunderstandings in interpersonal communication, and in some cases, this bad pronunciation even leads to tragic things such as fights (Wicaksana, 2022:76). When learning English, it is very important to pay attention to the pronunciation of the language properly and correctly. If someone mispronounces a word, it will cause misunderstanding with the interlocutor. This is not easy for some Efl students to learn. There are still many of them who are confused about pronouncing a word Students often find it difficult to pronounce words in English because learning English is very complex.

Sound or combination is causing different meanings (Dardjowidjojo, 2003:23). Each letter sound in English has a different meaning, so it requires correct pronunciation when speaking English. It will, thus, lead the hearers to misunderstand what is being tried to deliver. For instance, the word leave contains the sounds /ɪ/, /i:/ and /v/. When the sounds /i:/ is pronounced /ɪ/ that finally results in /lɪv/, the meaning is changed because /lɪv/ will be interpreted as the word live. Then, the hearers will misunderstand the speech because the speaker is unintentionally misleading the speech by performing mispronunciation (Rismawati et al., 2022:178). If someone mispronounces a letter, it will cause misunderstanding between the speaker and the listener because the meaning or meaning is already different. In learning pronunciation, students have to listen and repeat the sounds since it is common method of teaching pronunciation in English. However, nowaday, people can learn pronunciation from technology to correct error pronunciation.

Today's technology can be utilized in the learning process. One of the technologies that can be used is the Elsa application. Elsa Speaking application is one of the flexible programmers that features (Shrum & Glisan, 2010:456). Elsa Speaking is virtual language teacher software, used by individuals, language schools, universities and corporations around the world.

The English Language Speech Assistant software was created in 2015 by Vu Van and is based in San Francisco, California, United States. Elsa Speak uses speech synthesis that focuses on teaching vocabulary and grammar (Muamar et al., 2022:121). Elsa is an English learning application that applies artificial intelligence and speech recognition. The Elsa application focuses on the level of speaking ability. The Talking English application on Elsa has several indicators used to measure English language skills. In addition, there is also the Elsa Speak application. The usefulness of Elsa Speak is that users can measure pronunciation, intonation, fluency, grammar, and vocabulary. Elsa Speak can refine and improve students' English pronunciation by detecting more than 95% of pronunciation errors (Luu et al., 2021:74). Elsa application is very helpful for students in learning to speak English because in this application can measure pronunciation, intonation, and good grammar. So that it greatly facilitates teachers and students in the process of learning to speak English.

This application utilizes Artificial Intelligence (Ai) and speech recognition to help improve and perfect English pronunciation (Daulay and Ginting, 2024). Ai Driven Elsa is the latest feature of the Elsa Speak application. Ai Driven Elsa allows users to practice communicating with Ai in all life situations. The Ai

Driven Elsa feature can chat with users in any situation. In addition, users can choose the dialogue context proposed by the system or create the context desired by the user (Zakiah et al., 2023:23110). In the elsa application there is an Ai Driven feature so that students can chat with others anytime and anywhere. In that feature, you can also choose the context of the dialog you want. Unlike other applications, which only focus on learning vocabulary and grammar, Elsa uses speech recognition technology that can help users improve and perfect their English pronunciation. Elsa Speak provides more than 1,200 lessons and more than 60 topics for users to practice pronunciation, starting from English pronunciation exercises, phrases, and sentences. Another feature offered by Elsa is an interactive dictionary, which will help users how to pronounce the word or phrase they are looking for.

Elsa (English Language Speech Assistant) is a technological tool created to assist students in honing their English-speaking abilities in this setting (Rohmah et al., 2023:932). The meaning of Elsa in this research is an application that can facilitate students in learning English, especially in terms of speaking. This platform can identify pronunciation mistakes and offer improvement through detailed feedback and suggestions using Artificial Intelligence. English language skills can be mastered at any time and in any place. Consistent practice with Elsa Speak can be instrumental in elevating English speaking proficiency. Likewise, a recent study conducted by Rohmah et al., (2023:126) utilizing the Elsa program as an instructional tool has the potential to maintain enhancements in students' speaking capabilities and equip educators with valuable insights into the

application's effectiveness in augmenting students' oral proficiency. Elsa is a program that can improve students' ability to speak English, and can provide very important insights for a teacher. Akhmad & Munawir (2022:68) stated that the students are interested in and positively perceive using the Elsa Speak App application. This aligns with Aeni (2021:12) who argue that implementing intensive speaking using the Elsa application effectively boosts students' motivation levels, resulting in greater participation and heightened enthusiasm for learning. The researcher agrees with what is expressed by the experts that the Elsa application is very helpful for teachers and students in learning to speak English so that students' motivation to learn to speak increases and their ability to speak English also increases.

Several studies that have been conducted related to speaking learning including English pronunciation through Elsa speak media are Akhmad & Munawir (2022:67) highlighting the positive impact of using Elsa speak, by Aswaty & Indari (2022:45) emphasizing the effectiveness of learning English pronunciation through Elsa speak media, by Adityarini et al., (2022:88) and Other researchers, namely Nguyen & Pham (2021:56) focused on feedback from Elsa speak in the form of correct pronunciation correction and recommending if there is a pronunciation that needs to be repeated to the user. From the experts' explanation that the Elsa application, researcher can conclude some of the benefits of using the Elsa application in the process of learning to speak English, namely the Elsa application is very effective in being used as a learning medium, can correct if there are students who pronounce words with the wrong pronunciation.

Based on the results of observations conducted at SMK Gema Buana Medan in June 2024, students in grade X AKL and XII AKL did not yet accustomed to pronouncing English in their daily life because for them English is not an everyday language. Sometimes students are also reluctant to learn English in class because English is considered a very difficult language to learn. In addition, students' Pronunciation in English are still low due to the lack of students interest in learning English. To overcome this, teachers can provide pronunciation skills to train students. through learning media There are many English learning media that can be used to help students learn. These media can be audio, visual, or audio-visual media, and these media can be used using offline or online devices such as using smartphones. The media that can be used in learning English and is believed to be able to improve students' English pronunciation skills is the Elsa Speak application, which is an application that can be used as an online learning media as one of the media that can make it was easier for students to learn to speak English. The Elsa Speak application has criteria for improving pronunciation skills. In addition, this application is easily accessible via smartphone. Anggraini stated that students' pronunciation skills and motivation can be supported and improved by using the Elsa Speak application as a learning medium. There are many features that are quite complete to support students' learning in pronunciation, such as assessment tests, real communication, fast learning, and intonation mastery. This application not only improves speaking skills, but this application also provides a pronunciation practice feature by repeating what students have heard. The Elsa Speak app effectively engages

students in learning a new language and increases their motivation during pronunciation lessons.

With the development of systems found on smartphones, many features and applications can be downloaded on smartphones. Thus, this application can be used as a means to support learning, especially in learning English. Currently there are many applications that can help students learn about pronunciation, vocabulary, grammar, speaking, listening, reading, writing and much more. This research would discuss one application that can be used to improve speaking skills, especially to perfect English pronunciation through the Elsa Speak application. The Elsa Speak application is expected to help students improve their learning to speak English well and correctly, by paying attention to the pronunciation of each word because if a word is pronounced incorrectly it will change the meaning of the word. The researcher chose SMK Gema Buwana because it chose SMK Gema Buwana as the research location because the focus of vocational education in SMK is very relevant to the research objectives. In vocational schools, students are prepared to immediately enter the world of work, so they need practical skills, including the ability to speak English functionally and applicatively. In contrast to high schools that focus more on general academic education, vocational high school students are expected to have skills that can be directly used in professional contexts, such as in job interviews, presentations, or business communications. Based on this background, the author is interested in conducting a study entitled "*Assessing the Efficacy of Ai-Driven Elsa in Enhancing*

Pronunciation Skills through EFL (English Foreign Language) Learners in SMK Gema Buana Medan".

B.   The Identification of the Problem

Based on the background of the study, the problems are identified as follows:

1. Students are not yet able to accurately pronounce English words, because sounds present in English do not exist in their first language, making it difficult for them to perceive and reproduce these sounds correctly.

2. English has a variety of different accents and intonations, depending on the region and context. Efl students often have difficulty adjusting to these variations, which can affect their pronunciation.

3. Traditional teaching methods often do not provide a personalized and interactive enough approach to solving pronunciation problems. Practices that lack variety and non-specific feedback make its difficult for students to correct their pronunciation errors effectively.

C.   Scope and Limitation

Based on the identification of the issues previously delineated, this research focuses on assessing the efficacy of the Al-driven Elsa application in enhancing pronunciation skills among English as a Foreign Language (EFL) learners. The study specifically limits its focus to the X AKL and XI AKL classes

at SMK Gema Buana, Percut Sei Tuan District, Deli Serdang Regency, for the 2024/2025 academic year.

D.   The Formulation of the Problem

Based on the background of the study, the formulation of the problem in this research as follows:

1. how are the students' pronunciation skills before applying the Al-driven Elsa Speak application?

2. how to measure the efficacy of using Elsa Speak in enhancing students' pronunciation skills after applying the Elsa Speak application?

3. is there any efficacy of the Al-driven Elsa Speak application in enhancing students' pronunciation skills before and after its application?

E.   The Objectives of the Study

Based on these research questions, this research has some purposes are:

1. to describe the students' pronunciation skills before applying the Al-driven Elsa Speak application

2. to measure the efficacy of using the Al-driven Elsa Speak application in enhancing students' pronunciation skills after applying the application

3. to determine the efficacy of the Al-driven Elsa Speak application in enhancing students'pronunciation skills before and after its application.

F.   The Significance of the Study

There are two kinds of significances, namely theoretical and practical significances.

a.   Theoretical

The results of this study can be used as a reference for those who want to conduct research on AI-Based Elsa Efficacy Assessment in Improving Pronunciation Skills in EFL Learners in Vocational High School.

b.   Practical

1. For English teachers, the result of this study is supposed to give information and suggestion for teachers to use Elsa in their English class to enhance students' speaking skills.

2. For learners, the result of this study is supposed to motivate them to learn English through Elsa.

3. For the further researcher, the result of this study is supposed to give information and knowledge about Assessing the Efficacy of Ai-Driven Elsa in Enhancing Pronunciation Skills through Efl Learners in Vocational High School and to do the next research

CHAPTER II

REVIEW OF LITERATURE

A. Theoretical Framework

1. Assessing Efficacy of Assessing in Language Learning

Assessment is one of the most important aspects of language teaching and learning. Assessment has two main purposes: to make summative evaluations and to provide instructional feedback to help learners progress (Salman, Sutisna, and Sa'diyah, 2024). Both summative and formative assessment can be formal or informal. Assessment is the systematic field for reasoning about the development of students and the evaluation of the program and the effectiveness of the educational activities (Boud, 2013: 11).

1.1 Definition and Importance of Assessing in Language Learning

In language learning, assessing refers to the ongoing process of evaluating learners' skills, progress, and understanding throughout the course of study. This can involve informal methods like observation, quizzes, class discussions, and assignments, as well as formal assessments. Unlike assessment, which often refers to a final, summative evaluation, assessing is formative and continuous, aimed at providing feedback and guiding further instruction.

Some Importances of Assessing in Language Learning:

1. Monitoring Learner Progress

Continuous assessing helps teachers track learners' development in real time, ensuring they are meeting language learning goals. This allows for early

identification of issues, so students can receive targeted help before those issues become major obstacles . "Assessing students regularly provides critical insights into their language acquisition process, allowing for immediate adjustments to support learning" (Brown, 2004).

2. Adapting Instruction to Individual Needs

Every learner progresses at a different pace and faces different challenges in language learning. By continuously assessing, teachers can personalize instruction to meet each student's specific needs, ensuring more effective learning outcomes."Assessing students helps teachers to tailor their instruction, addressing the diverse needs of learners, thus improving their overall engagement and success" (Harmer, 2007).

3. Encouraging Student Reflection and Self-Regulation

When learners receive regular feedback from assessments, they are encouraged to reflect on their own progress and identify areas for improvement. This promotes self-regulation and autonomy in the learning process, making them more responsible for their own development. "Formative assessment is crucial in fostering learner autonomy as it encourages students to take charge of their learning through self-assessment and reflection" (Little, 2002).

4. Motivating Learners

Regular assessment, when done positively, can act as a motivator for learners. Seeing their progress, even in small increments, helps students stay engaged and motivated to continue learning. Constructive feedback can push them to set new goals and reach higher levels of language proficiency. "Frequent and

constructive feedback motivates students by making learning visible and attainable, which is key to maintaining engagement" (Dörnyei, 2001).

5. Supporting Skill Integration

Language learning involves integrating multiple skills—reading, writing, speaking, and listening. By assessing students in various ways, teachers can ensure that learners are developing all these skills simultaneously and comprehensively "Through continuous assessing, instructors ensure balanced skill development, providing opportunities for learners to practice and improve across all language domains" (Nation and Macalister, 2010).

1.2   Methodologies for Assessing Efficacy in English as a Foreign Language

When focusing on assessing in EFL, several methodologies can be utilized to evaluate the effectiveness of teaching strategies and the progress of learners (Cheng, Rogers, and Hu, 2004). Here are key approaches:

1. Classroom Observations

    Purpose: Evaluate teaching methods and student engagement.

    Efficacy: Provides insights into classroom dynamics. "Classroom observation reveals the complexities of teaching practices" (Fowler, 2009).

2. Learning Journals

    Purpose: Encourage self-reflection on learning experiences

    Efficacy: Helps students track progress over time. "Learning journals foster a deeper understanding of one's learning process" (Moon, 2006).

3. Informal Feedback

    Purpose: Offer immediate guidance during lessons

Efficacy: Enables quick adjustments in learning "Informal feedback is crucial for guiding student learning" (Hattie and Timperley, 2007).

4. Self-Assessment Techniques

Purpose: Increase awareness of personal progress

Efficacy: Empowers learners to control their learning journey. "Self-assessing helps develop critical thinking" (Boud, 1995).

5. Peer Review Processes

Purpose: Develop critical evaluation skills

Efficacy: Enhances understanding through peer feedback. "Peer review encourages active engagement" (Topping, 2009).

1.3 Assessing Tools and Techniques for Measuring Efficacy in EFL

Assessing tools and techniques for measuring efficacy in English as a Foreign Language (EFL) are essential for evaluating both student progress and instructional effectiveness. Observational checklists are widely used, enabling teachers to record specific behaviors and skills exhibited by students during lessons, thus providing valuable insights into classroom dynamics (Fowler, 2009). Surveys and questionnaires gather feedback from students about their learning experiences, offering quantitative and qualitative data that help identify areas for improvement and measure overall satisfaction (Hattie and Timperley, 2007). Additionally, portfolios serve as comprehensive collections of student work that showcase their growth and achievements over time, promoting self-reflection and demonstrating learning outcomes (Moon, 2006).

Assessment techniques for measuring students' success in English learning can be done through two assessments, namely feedback assessment and portfolio assessment. Performance assessments require students to apply their language skills in real-world contexts, allowing educators to gauge practical proficiency (Brown, 2004).

Standardized tests, such as the TOEFL and IELTS, provide a benchmark for assessing language proficiency on a global scale, yielding reliable data on student performance (Chalhoub-Deville, 2008). Furthermore, peer assessment techniques encourage collaboration and critical evaluation, enabling students to learn from each other while developing their analytical skills (Topping, 2009). Self-assessment tools empower learners to reflect on their own progress, fostering a sense of ownership and motivation in their language learning journey (Boud, 1995). By utilizing these diverse methodologies, educators can create a comprehensive framework for assessing the efficacy of EFL instruction, ultimately enhancing student learning outcomes.

2. Efficacy of Language Education Tools

2.1 Definition of Efficacy of Language Education Tools

Efficacy in the educational context refers to the ability of an educational program or teaching method to produce the desired learning outcomes. It emphasizes the capacity to achieve specific educational goals under ideal conditions, often considering the context and resources available. In language education, efficacy is particularly crucial as it assesses whether teaching strategies

effectively enhance students' language proficiency, engagement, and overall learning experiences. It focuses on the potential success of instructional practices and curricular frameworks, which can guide educators in selecting the most appropriate approaches to meet learners' needs.

2.2 Influencing Factors on Efficacy of Language Education Tools

Several factors influence efficacy in language education. Teacher competencies are paramount, as skilled educators with strong language proficiency and pedagogical knowledge can significantly enhance student learning outcomes. Student motivation also plays a critical role; motivated lealierners are more likely to engage with the material and invest effort in their language acquisition. Additionally, the learning environment, including resources, class size, and institutional support, affects efficacy (Yang & Gan, 2024). A supportive and resource-rich environment fosters effective learning experiences. Furthermore, curriculum design and the alignment of instructional materials with learning objectives are essential to ensure that teaching strategies effectively promote language development.

2.3 Distinction Among Efficacy, Effectiveness and Efficiency

Understanding the distinctions among efficacy, effectiveness, and efficiency is vital for evaluating language education.

1. Efficacy: This refers to the potential of a teaching method or educational program to produce desired learning outcomes when implemented under ideal conditions (Price, 2013). For example, a specific language teaching strategy might demonstrate high efficacy in

a controlled environment with motivated learners who have access to all necessary resources. Thus, the use of appropriate teaching methods can produce ideal learning.

2. Effectiveness: This term pertains to the actual success of a teaching method in achieving learning goals in real-world classroom settings. It reflects how well an instructional approach works across diverse learners and contexts (Paolini, 2015). For instance, a language program is considered effective if it consistently improves students' language skills, regardless of variations in teaching environments or student motivation. So the use of appropriate teaching methods can determine the success of learning objectives.

3. Efficiency: Efficiency relates to the relationship between the resources utilized (such as time, materials, and effort) and the outcomes achieved in language education (Bergmann et al., 2017). An efficient program not only achieves significant learning gains but also makes optimal use of available resources, ensuring that the benefits justify the investments made in the educational process (Bergmann et al., 2017). Optimal use of resources can achieve significant learning in the educational process.

3.   ELSA: Definition and Tools

3.1   Definition and Overview of ELSA

ELSA (English Language Speech Assistant) is an innovative mobile application designed to improve English language speaking skills through

advanced speech recognition and artificial intelligence (AI) technology. It helps learners enhance their pronunciation, fluency, and overall speaking abilities by providing personalized feedback based on their individual speaking patterns (Baker & Murphy, 2020). ELSA aims to make language learning more accessible and effective by allowing users to practice anytime and anywhere, catering to diverse learning needs and levels (Yang and Gan 2024). The Elsa application can be used on Android phones and iOS phones. In addition, ELSA requires a fairly large data connection, so learning ELSA requires a constant internet connection. To improve security and ensure the benefits of students, ELSA will limit the number of devices, 1 account can be used for a maximum of 3 different devices.

3.2 Features and Functions of ELSA

ELSA offers several key features that enhance the language learning experience. Its primary function is to analyze users' speech in real-time, comparing their pronunciation to that of native speakers (Pérez et al., 2021). The app includes various interactive exercises and challenges that target specific sounds and phrases, helping learners practice difficult aspects of English pronunciation. Additionally, ELSA provides detailed performance analytics, offering users insights into their progress over time (Zhou, 2022). Gamification elements, such as rewards and achievements, are integrated to motivate users and make the learning process engaging and enjoyable (Mompean & Fouz-Gonzalez, 2021).

3.3 Process of Using ELSA in Language Learning

The process of using ELSA in language learning is user-friendly and structured. This follow is how to use ELSA Speak, namely:

For Android

1. Open Google Play Store on yor device

2. Type "ELSA Speak" in the search bar

3. Select the ELSA Speak App from the search results.

4. Click "install" to download and install the app.

For iOS:

1. Open App Store on your device

2. Type "ELSA Speak" in the search bar

3. Select the ELSA Speak app from the search results

4. Click "Get" to download and install the app
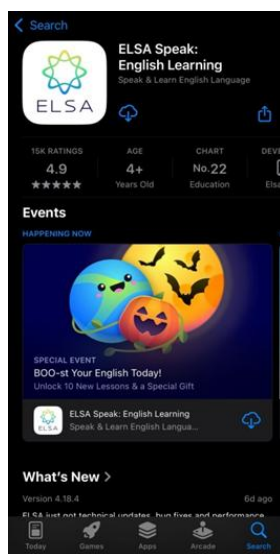
Figure 2.1 ELSA Speak Application

Creating an Account

1. After the app is installed, open ELSA Speak

2. You will be prompted to register of log in. you can use your email or social media account
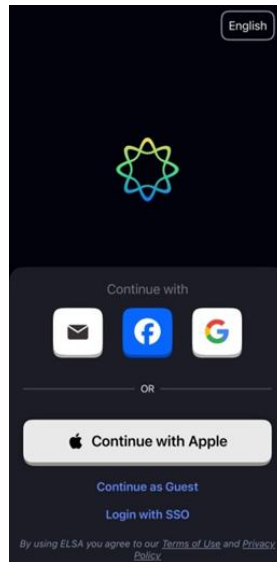
Figure 2.2 Login

After logging in, select a learning program that suits your goals, such as improving pronunciation, expanding vocabulary, or practicing conversation.
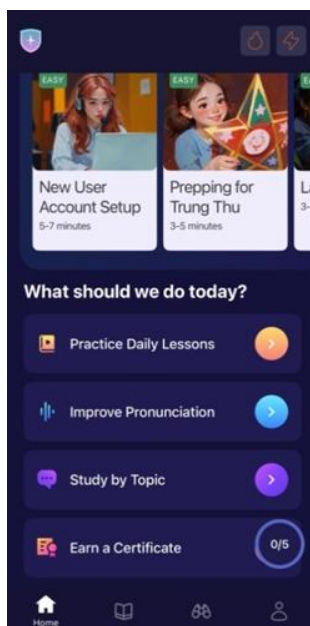
Figure 2.3 Choosing Learning Program

Then navigate to the main menu end choose the section dedicated to improving pronunciation. Look for options like "Pronunciation Practice" or "Speaking Exercises". Within the pronunciation section, select a specific topic or lesson that you want to practice. This could include sounds, words, phrases, or sentences commonly used in conversation.

Figure 2.4 Specific Features for ELSA

Practicing the Program

1. Before attempting to pronounce the words or sentences, listen to the example provided by the app. Pay close attention to the intonation, rhythm, and stress.

Figure 2.5 Example

2. Follow the instructions and practice pronouncing the words or sentences. Make sure to mimic the example as closely as possible. Record your voice when prompted. The app will analyze your pronunciation and provide feedback on how well you matched the correct pronunciation.
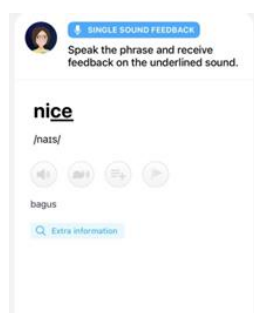
Figure 2.6 Pronounciation

3. Review Feedback and Scores

After recording, review the feedback provided by the app. This typically include your pronunciation score and specific areas where you can improve, such as specific sounds or syllables.
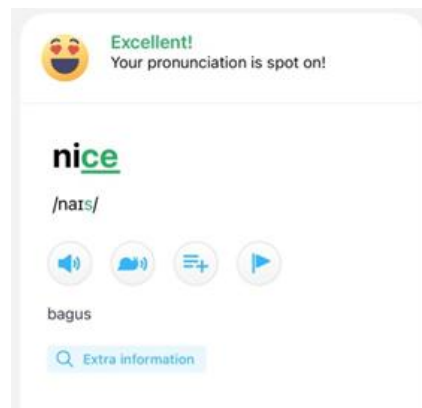
Figure 2.7 Review Feedback

4. Repeat the exercises multiple times, focusing on the areas highlighted in the feedback. Regular practice will help reinforce your pronunciation skills.
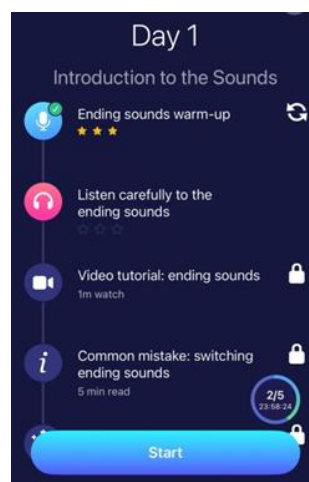
Figure 2.8 Exercises for Improvement

5. Explore Additional Features

ELSA Speak may offer additional features such as games, quizzes, or advanced learning modules. Take advantage of these features to deepen your learning.

Figure 2.9 Additional Features

3.4   Integration of AI Feedback in ELSA

One of the standout features of ELSA is its integration of AI feedback, which leverages sophisticated algorithms to evaluate users' speech. The AI technology compares the learner's pronunciation against a vast database of native speaker samples, identifying areas for improvement (Wang et al. 2020). This personalized feedback is crucial for language learners, as it helps them understand specific pronunciation errors and provides tailored suggestions for correction. The AI-driven approach not only enhances the accuracy of feedback but also adapts to the learner's progress, ensuring that the practice remains relevant and effective as they advance in their language skills (Upadhyay et al. 2021).

4.   Enhancing Pronounciation

4.1   Definition of Enhancing Pronounciation

Enhancing refers to the process of improving or augmenting a particular skill or ability, often through targeted practice and feedback (Nurbaini and Asyah,

2020). In the context of language learning, enhancing typically involves various methods and tools designed to boost learners' language capabilities, especially in speaking and listening (Thornbury, 2005). Pronunciation, on the other hand, is the way in which a word or language is spoken, encompassing the articulation of sounds, stress patterns, intonation, and rhythm (Celce-Murcia, Brinton, and Snow 1996)cel. Effective pronunciation is crucial for clear communication and plays a significant role in how language learners are perceived by native speakers.

4.2   Mechanism and AI Feedback for Improvement

The integration of mechanisms and AI feedback is essential for enhancing pronunciation skills in language learners. AI-driven applications, such as ELSA, use sophisticated algorithms to analyze learners' speech patterns and provide immediate, personalized feedback (Wang et al. 2020). These systems identify specific pronunciation errors, such as incorrect sound production or inappropriate stress and intonation patterns. By leveraging real-time speech analysis, learners receive tailored exercises that target their unique pronunciation challenges, thereby facilitating focused improvement (Z. Chen et al., 2020). Furthermore, the immediate feedback helps learners adjust their speaking habits more effectively than traditional methods, promoting greater retention and application of correct pronunciation (Upadhyay et al., 2021).

4.3   Strategies for Enhancing Pronounciation using ELSA

ELSA offers various strategies for enhancing pronunciation that cater to different learning styles and needs. One effective approach is the use of repetitive practice, where learners can repeatedly engage with challenging sounds or phrases

until mastery is achieved (Li, 2021). The app also employs visual aids to demonstrate proper mouth movements and tongue placement for sound production, helping learners physically understand how to produce specific sounds (Zhou, 2022). Additionally, shadowing exercises, where learners listen to and mimic native speakers, can significantly improve pronunciation and fluency (Mompean & Fouz-Gonzalez, 2021). Finally, the incorporation of gamified elements, such as earning points and rewards for achieving pronunciation goals, can increase motivation and engagement in the learning process.

5.   Pronounciationn Challenges for EFL Learners

5.1   Role of Pronounciations for Language Proficiency

Pronunciation plays a critical role in overall language proficiency, as it directly affects intelligibility and communication (Fadilla and Harisma, 2024). Effective pronunciation enables learners to convey their ideas clearly and be understood by native speakers, which is essential for successful interactions in both academic and social contexts (Derwing and Munro, 2005). Inaccurate pronunciation can lead to misunderstandings and hinder communication, thus affecting learners' confidence and willingness to engage in conversations (Saito & Plonsky, 2019).

5.2   Common Challenges Faced by EFL Learners

EFL learners often face several challenges regarding pronunciation, primarily due to differences between their native language and English. Common difficulties include mispronouncing specific sounds (e.g., differentiating between

/l/ and /r/), inappropriate stress and intonation, and the use of weak forms in connected speech (Gilakjani, 2012). Additionally, learners may struggle with the rhythm and flow of English, leading to a stilted or unnatural speaking style. Cultural factors and lack of exposure to native pronunciation models can also contribute to these challenges (Saito & Plonsky, 2019).

5.3 Strategies for Overcoming Pronounciation Challenges

To overcome pronunciation challenges, EFL learners can implement several strategies. Focused practice with pronunciation tools, like ELSA, allows learners to target specific sounds and receive immediate feedback (Wang et al. 2020). Engaging in listening exercises, where learners mimic native speakers, helps develop a better ear for pronunciation and intonation patterns (Saito & Plonsky, 2019). Additionally, learners can benefit from collaborative practice with peers, where they can provide mutual feedback and support in improving pronunciation (Thornbury, 2005). Lastly, incorporating phonetic training through visual and auditory resources can help learners understand the mechanics of sound production, enhancing their ability to articulate words accurately (Gilakjani 2012).

B. Previous Related Studies

A number of previous studies have been conducted related to this research: Rismawati (2022) with the title *"The Effectiveness of Elsa Speaking Application In Improving English Pronunciation"*. The use of technology has become an important part of the learning language. It helps the teachers to make the effective and attractive teaching language process.

Therefore,, this paper investigated the effectiveness of Elsa application in improving English pronunciation of students in junior high school level and described how the students' attitudes toward the use of Elsa application in learning English pronunciation. Data were collected in this study using tests including pretest and posttest, and then analyzed quantitatively. Based on the result of tests, it was found that t-count is higher than t-table (2.92 > 1.6773) in level of sigificant 005. It indicates that Ho was refused and Ha was accepted which means Elsa application is effective in improving students' pronunciation. Furthermore, the result taken from questionnaire shows that the students shows positive attitude toward the use of Elsa app in learning English pronunciation. Therefore, it can be stated that Elsa app is not only effective to use in teaching pronunciation but also effective in maintaining students' attitude in learning English pronunciation. Thus, to enrich the literature on teaching English, the writers suggest that the English teacher to use any application to improve students' English proficiency (Rismawati et al., 2022:177). This study has similarities with the research that would be studied, namely about the use of the Elsa application in learning English pronunciation. The difference between this study and the research that would be carried out lies in the method used, where previous research was carried out using quantitative methods, while the research that would be carried out uses quanitative methods.

Violeta (2022) Whit Title "*The Effectiveness of Using Elsa Speak For Boarding School Students' Learning Speaking Skills*" Elsa Speak is a mobile-based learning media to support student learning process. some mobile-based

learning media are used by teachers and students to help the learning process. this research aims to find out the level of effectiveness of the Elsa speak application in improving students' speaking skills before and after applying the Elsa speak application. this research uses quantitative methods using experimental design. this research was conducted on islamic boarding school students in pare, kediri with a sample of 25 islamic boarding school students. this research instrument is an unstructured-test with pre-test and post-test and calculate the results using t-test. the results show that students' speaking skills are assessed with an average score of 56.2360. having this score means that the student's speaking is relatively low. after use of the Elsa speak application, it shows that students' speaking skills are assessed higher than before with the average speaking score of 83.1720. students' grades increased by 27.551 or about 27% after the implementation of the Elsa speak application. the results of this research positively answer the research question. therefore, this research shows that students who use the Elsa speak application in speaking class have higher speaking score than those who do not use the Elsa speak application (Febyana, 2022). This study has similarities with the research that will be studied, namely about the use of the Elsa Speak application. The difference between this study and the research that would be carried out lies in the method used, where previous research was conducted using quantitative methods, while the research that will be conducted uses qualitative methods. In addition, This study uses college Boarding School Students' as samples, while the research that will be conducted uses vocational school students as samples.

Hanna, Harmayanthi, & Astuti (2022) with the title "*The Effect of Elsa Speak App towards Students' Speaking Skill*". This study aimed to find out whether Elsa Speak Application can improve students' skill. The participants of this study were 30 students at the first grade of SMK Sahid Jakarta. The data collection of this study was experimental design. The results of statistical analysis of the Pre-Test and Post-Test show that using Elsa Speak could improve students' speaking skill (Hanna et al., 2022 p. 16). This study has similarities with the research that will be studied, namely about the use of the Elsa Speak application. The difference between this study and the research that will be conducted is that this study uses an experimental design, while the research that will be conducted uses field research.

Makhlouf (2021) which aimed to investigate how far Ai could contribute to developing Speaking skills of non- English major students at preparatory year Albaha University. The title of this study is "*Effect of Artificial Intelligence-Based Application on Saudi Preparatory -Year Students' Efl Speaking Skills at Albaha University*". The participants of the study were 20 Preparatory-year students at Engineering college at Albaha university who study integrated English skills courses. The study adopted a mixed method research design, quasi-experimental one-group design for data collection. The findings of this study showed that the Ai-based App of Elsa was effective in helping the non-English major students improve their Efl speaking skills in the preparatory year at Albaha University. The Ai feedback improved students' linguistic knowledge and allowed them to learn more about their speaking skills (Becker & Edalatishams, 2019 p. 434). This

study has similarities with the research that would be studied, namely about the use of the Elsa Speak application. The difference between this study and the research that would be conducted lies in the sample used, this study uses a sample of students, while the research that will be conducted uses a sample of vocational high school students.

C.   Conceptual Framework

The focus of this research is to see how to use the Elsa Speak Application in improving students' English speaking skills. To determine the development of students' English pronunciation abilities in this research, observations will be made by testing students' abilities before and after using the Elsa application. Observations were carried out by testing students' abilities and interviews with students, how they responded after using the Elsa application regarding their English language abilities.
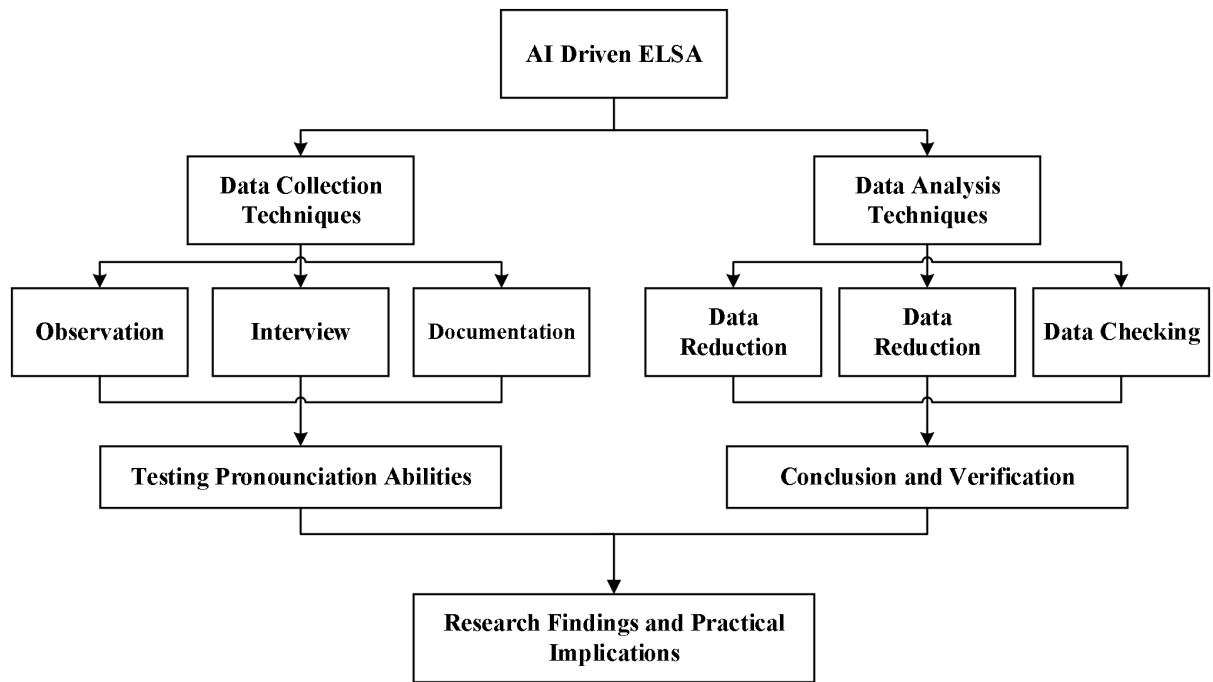
Figure 2.10 The Conceptual Framework

3CHAPTER III

METHODS OF RESEARCH

A.   Location and Time

This research was conducted at SMK Gema Buwana, Percut Sei Tuan District, Deli Serdang Regency, North Sumatra, which is one of the private vocational schools in Percut District that implements the 2013 Curriculum at the vocational high school level. This research began with a survey in June 2024 and the research was conducted from August to September 2024. The researcher chose SMK Gema Buwana because it chose SMK Gema Buwana as the research location because the focus of vocational education in vocational schools is very relevant to the research objectives. In vocational schools, students are prepared to enter the workforce directly, so they need practical skills, including the ability to speak English functionally and applicatively. Unlike high schools which focus more on general academic education, vocational high school students are expected to have skills that can be directly used in professional contexts, such as in job interviews, presentations, or business communications. Therefore, the implementation of the Elsa Speak application in vocational schools will be more beneficial in helping to improve students' pronunciation skills for these purposes.

In addition, vocational high school students have specific needs related to English that are more focused on the world of work, so this research will be more meaningful if it is conducted in vocational high schools than in high schools. English language skills, especially in terms of pronunciation, are an important

asset for vocational high school students who will later enter various industrial sectors. The use of Elsa Speak as a learning aid can help them increase their confidence in speaking English, which will ultimately increase their career opportunities. On the other hand, high school students may see English as one of the academic subjects that must be studied without any direct encouragement to apply these skills in professional life.

Not only that, the curriculum at SMK Gema Buwana is more open to the application of technology such as Elsa Speak, which can be well integrated into language learning. This is different from the high school curriculum which is more academically oriented. The characteristics of vocational high school students who focus more on technical skills also make this research more relevant to be conducted in this environment. Thus, research on improving English pronunciation skills through technology at SMK Gema Buwana provides more applicable and contextual insights than if it were conducted in high schools.

The planned implementation time for the research is January 2024 to September 2024. The following is a description of the research activities. This timeline is designed to ensure a systematic progression through each stage of the research process, from initial title submission and proposal observation to drafting, writing, and final revisions. According to Creswell (2014), "A well-organized timeline allows researchers to manage their resources effectively and meet critical deadlines." Following this guideline, each phase in the table has been carefully scheduled to ensure the research is completed efficiently and with thorough attention to each essential component.

Table 3.1 Research Activites Timeline

No	Type of activity	Month/Week																			
		January				February				March				April				May			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Title Submission				▓																
2	Proposal Observation					▓	▓	▓	▓												
3	Proposal Writing									▓	▓	▓	▓	▓	▓	▓	▓				
4	Drafting of Proposal																	▓	▓		
5	Final Revies and Revisions																			▓	▓

Source: Processed by the Researcher

Table 3.2 Timeline of Research Activities After the Seminar

No	Type of activity	Month/Week																			
		June				July				August				September				October			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Final Revies and Revisions	▓	▓	▓	▓	▓	▓	▓	▓	▓											
2	Proposal Seminar										▓										
3	Data collection													▓	▓						
4	Data Analysis and Coclusion															▓					
5	Finalizing Proposal and Revisions															▓	▓	▓	▓		
6	Skripsi Defence																				▓

Source: Processed by the Researcher

B.   Population and Sample

Population in research is something that is very important, because it is a source of information. According to Arikunto in (Adnyana, 2021) population is the entire object in research that is studied and also recorded all forms that exist in the field. The population in this study were 98 students of grade X and XII AKL at

SMK Gema Buana, Percut Sei Tuan District, Deli Serdang Regency in the 2024-2025 academic year.

A sample is simply defined as a part of a population that is the actual source of data in a study. In other words, a sample is a portion of a population to represent the entire population. According to Arikunto in (Adnyana, 2021), a sample is a small part of a population that is considered to represent the population regarding the research being conducted. This study used a purposive sampling method. So, the sample taken was 30 students, namely students of grade X AKL and XII AKL SMK Gema Buana, Percut Sei Tuan District, Deli Regency.

C.   Research Design

The research design of this study employed a mixed method approach, integrating quantitative and descriptive qualitative research. The quantitative method focused on measuring the efficacy of AI-driven ELSA in enhancing pronunciation skills among EFL learners through pre-test and post-test assessments. Meanwhile, the qualitative component was held to explore students' perceptions and experiences with the AI tool, collecting in-depth data through interviews and observations. This combination allowed for a comprehensive understanding of the impact of ELSA on pronunciation skills, as well as insights into students' preferences and challenges during the learning process. Thus, the research aimed to provide a thorough evaluation of EFL students' experiences with AI-driven learning in vocational high schools.

D.   Technique for Collecting Data

The data collection technique in this research is through direct interviews carried out at the researcher's home with the aim of obtaining information from informant/resource person orally or in writing, the researcher would use techniques or methods. The data collected in this case study are interviews and direct observations in the field. And also at least three members of the organization were interviewed for data triangulation.

In this study, the data collection instruments used observation, interviews and documentation. Researchers collected data using the Elsa Speak application as a medium in the pronunciation test and corrected students' pronunciation when pronouncing sentences from the researcher. Researchers collected data by recording students' pronunciation with the Elsa Speak application as a medium for the pronunciation test and correcting students' voices when pronouncing the sentences. Data collection techniques in this research are as follows:

a.   Pre-Test and Post-Test

The pre-test was conducted before the implementation of Elsa Speak to obtain initial data on students' abilities, while the post-test was conducted after using the application to see improvements in pronunciation. According to Creswell (2014), tests in qualitative research function to support descriptive analysis by providing an overview of the changes that occur.

1.   Pre-Test

Students are asked to pronounce a series of words that are often difficult to pronounce in English, especially words containing

phonemes such as /θ/ and /ð/ (examples: think, that). The Elsa Speak

application is used to provide scores based on pronunciation accuracy.

2. Post-Test

After intensive practice using the application for 4 weeks, students

pronounce the same words again. The results are recorded in the Elsa

Speak application to compare improvements from the pre-test.

3. Assesment Instruments (According to Experts)

a. Elsa Speak relies on speech recognition technology to automatically detect pronunciation errors. Becker & Edalatishams (2019) stated that this application is able to provide direct feedback with an accuracy rate of more than 95%.

b. The scores generated by the application are categorized as follows:

c. 1-39: "Try Again" (Poor pronunciation, many mistakes).

d. 40-79: "Almost Correct" (Quite good pronunciation with some mistakes).

e. 80-100: "Very Good" (Pronunciation close to native speakers, few or no mistakes).

4. Detailed Test Steps

a. Pre-test:

1. Students are asked to read 5 words. The selected words emphasize phonological difficulties such as the sounds /θ/ (eg, "think") and /ð/ (eg, "that").

2. Each student will pronounce the words, which are then assessed using Elsa Speak.

3. Example Words: Think, That, Water, Business, Weather

4. Each test result is accompanied by a score given by the application, which includes an in-depth analysis of the errors that occur, both at the phoneme, intonation, and word stress levels.

b. Post-test:

1. After 4 weeks of regular practice with Elsa Speak, students are retested with the same words to see improvements.

2. Post-test scores are recorded for comparison with pre-test results.

b. Observation

Spradley (1980) stated that participant observation is important to understand direct interaction in the context of learning. The researcher recorded students' reactions when using the Elsa Speak application and recorded their progress in terms of motivation and how they improved their pronunciation.

c. Interview

Semi-structured interviews were conducted to dig deeper into students' experiences while using this application. Moleong (2018) suggests this type of interview to get the views of research subjects naturally and without strict question limitations. The interview seems less formal and rigid between the

interviewer and the interviewee, the questions given also flow but must be adjusted to the research topic.

d.   Documentations

The documentation in this research comprises several important elements. First, audio recordings are specifically used during the pre-test and post-test to capture the verbal responses of the participants. This data is then transcribed and thematically analyzed to assess the development of participants' skills related to the research objectives. Video is not utilized, as the focus is on verbal data. In addition to audio recordings, the documentation also includes observation notes collected during the learning process and interview notes. The observation notes serve to record the interactions and dynamics within the classroom, while the interview notes provide qualitative insights into the participants' learning experiences. Thus, the combination of all these documentation elements offers a comprehensive view of the research without the need for video recordings.

E.   Technique for Analyzing Data

1.   Qualitative Data Analysis

Based on the Miles and Huberman (1994) model, data were analyzed in four steps: data reduction, data presentation, data checking and conclusion drawing/verification.

a.   Data Reduction

According to Miles and Huberman (1994), data reduction is the process of simplifying, selecting, and abstracting relevant data. Pre-

test and post-test data, interviews, and observations were reduced to focus on the main aspect, namely improving student pronunciation. So that the data obtained becomes more concise and easy to understand.

b.   Data Presentation

Sugiyono (2018) stated that the reduced data needs to be presented systematically. The pronunciation score results before and after using the Elsa Speak application are presented in tables and graphs. In addition, interviews and observations are explained narratively with a thematic analysis approach. In addition, the data obtained should be given an explanation so that it can make it easier for researchers to analyze the results of the research that has been carried out, the explanation can be in the form of tables and graphs.

c.   Data Checking

Data accuracy is tested through triangulation. According to Denzin (1978), triangulation involves the use of multiple data sources to ensure consistency. Data from tests, interviews, and observations are compared to increase validity. Member checking technique (Creswell, 2016) is also done by asking students to review the interpretation of interview data. In this section the data is rechecked for accuracy so that the data can be categorized as valid or not.

d.   Conclusion Drawing and Verification

Miles and Huberman (1994) explain that conclusions must be verified during the analysis process. Conclusions are drawn based on a comparison of the pre-test and post-test, and reinforced by interviews and observations, to determine how effective the Elsa Speak application is in improving students' pronunciation. In addition, the conclusion must contain a summary of the overall research results so that it can make it easier for researchers and readers to take the essence of this research.

2.   **Quantitative Data Analysis**

The quantitative method was held through statistic method for measuring the efficacy of AI-driven ELSA in enhancing pronunciation skills among EFL learners through pre-test and post-test assessments. In Quantitative data analysis, the data were analyzed through following steps.

a.   Data Preparation

The researchers collected pre-test and post-test scores from both the experimental and control groups, and then entered the data into statistical software (IBM SPSS version 26) for analysis.

b.   Descriptive Statistics

The researchers calculated descriptive statistics for each group, including:

1. The mean scores of pre-tests and post-tests.

2. The minimum and maximum score.

3. The standard deviation to measure the variation in scores.

c.   Inferential Statistics

1. The researcher conducted a normality test (Kolmogorov-Smirnov test) and homogeneity test to determine whether the data were normally distributed.

2. If the data were normally distributed the researcher used an independent t-test to compare the post-test scores between the experimental and control groups. If not, the researcher employed the Mann-Whitney U test as a non-parametric alternative.

d.   Interpretation of the Result

The researchers interpreted the analysis results to determine whether there were significant differences in pronunciation scores between the group using ELSA and the group not using it. They discussed the implications of the findings in the context of EFL learning.

F.   Research Instruments

a.   ELSA Speak Tools

This application uses Artificial Intelligence to analyze and provide immediate feedback on students' pronunciation. According to Becker & Edalatishams (2019), Elsa Speak has high accuracy in detecting phonological errors and providing suggestions for improvement. It is useful for teachers to monitor students' activities, whether they are really learning or just curious.

b.   Questionnaire

This instrument was designed to gather empirical data on students' perceptions and experiences with the Elsa application, incorporating both closed-ended and open-ended questions to facilitate qualitative analysis of its effectiveness and usability.

c.   Interview

A semi-structured interview guide was designed to explore students' experiences in using the application and how they see their pronunciation improving.

d.   Test Pronounciation

The test comprises a series of items that include isolated words. These items are specifically chosen to incorporate phonemes that are often difficult for EFL students, such as /θ/ (as in "think") and /ð/ (as in "this"). Additionally, the test scripts emphasize the correct application of stress in multisyllabic words, which is crucial for proper pronunciation and comprehension in English. Each participant is required to read the items aloud, allowing for direct assessment of their pronunciation capabilities.

G.   Research Procedures

According to Creswell (2014), research procedures should include detailed steps that explain how data is collected, analyzed, and interpreted. This study followed the following procedures:

1. Preliminary Observation

Before the study began, preliminary observations were conducted to identify students' pronunciation ability levels. Creswell (2014) suggests preliminary observations to provide context regarding the problem to be studied. In this stage, the researcher noted the difficulties faced by students in pronunciation, especially in certain phonemes such as /θ/ and /ð/. This is useful so that educators can find out how far the level of ability possessed by each student. So that educators can focus more on providing understanding for students who have low English-speaking skills.

2. Pre-test

A pre-test was conducted to measure students' initial pronunciation ability before using the Elsa Speak application. Students were asked to pronounce 5 words that had been determined.

3. Implementation of Elsa Speak

After the pre-test, students were asked to use the Elsa Speak application routinely for 4 weeks. According to Xodabande (2017), the use of technology such as Elsa Speak in language learning helps accelerate the pronunciation improvement process through direct feedback. Steps:

a. Students practice at least 30 minutes every day using the pronunciation practice feature in the application.

b. The application will provide direct feedback on pronunciation mistakes made by students, and they can repeat the exercises until they achieve a better score.

    c. Students' progress is monitored through the application report provided weekly.

4. Post-test

After the application usage period is over, a post-test is conducted to measure the improvement of students' pronunciation skills. This test uses the same script as the pre-test to ensure a valid comparison. Post-test steps:

a. Students repeat the pronunciation of the same 5 words.

b. Post-test scores are recorded by the application and compared to the pre-test scores.

5. Data Analysis

The data analysis process in this study is meticulously designed to ensure a thorough examination and meaningful interpretation of findings from the pre-test and post-test stages. Utilizing the Miles and Huberman (1994) framework, this analysis approach encompasses data reduction, data display, and conclusion drawing/verification. Each step is carefully structured to yield reliable insights and a comprehensive understanding of the impact of the ELSA Speak application on students' pronunciation skills. This structured analysis is divided into two main phases, as detailed below:

a. The first phase involves categorizing data from the pre-test and post-test according to specific pronunciation aspects, including phoneme errors, intonation, and word stress. By focusing on these categories, this phase aims to identify common pronunciation challenges faced by students and to assess areas where

significant improvements are observed after using the ELSA Speak application. This step not only aids in quantifying the changes in pronunciation accuracy but also provides a basis for understanding which linguistic elements (e.g., specific sounds or patterns) require further attention.

b. The second phase of analysis involves applying the triangulation method to enhance the validity and robustness of the findings. Triangulation is achieved by cross-referencing data from three primary sources: interviews, observations, and tests. This method is instrumental in reducing potential biases that may arise from relying solely on test scores, as it incorporates qualitative data to capture students' experiences, attitudes, and feedback on their learning journey.

4CHAPTER IV

RESULTS AND DISCUSSIONS

A.   **Data**

This chapter contained research results and explanations to answer the problem formulation. The researcher divided the data based on the results of observations and questionnaire. Researcher used 30 students as samples in the research and the sample was asked to fill out a 20 questions questionnaire. The following are the characteristics of respondents based on the results of the questionnaire given by the researcher are the respondent characteristics based on English learning time.

Table 4.1
Characteristics Based on English Learning Time

No.	Gender	Results	Percent
1.	< 1 Year	0	0%
2.	1 – 3 Years	0	0%
3.	4 – 6 Years	3	10.0%
4.	> 6 Years	27	90.0%
Amount		30	100%

Based on the results of the questionnaire in X and XII one majoring in AKL SMK Gema Buana, Percut Sei Tuan District, Deli Regency, researcher found that the results of student's responses on the questionnaire sheet were 90.0% or 27 peoples has been studying English for more than 6 years. While 3 peoples or 10.0% has been studying English for more than 4 – 6 years and 0% or 0 people on the results less than 1 year or 1 – 3 years.

The following are the names of the students who were participated as the primary data source in this study.

Table 4.2
Participants

No.	Initial Names
1.	CN
2.	FAR
3.	FR
4.	JF
5.	KA
6.	ML
7.	MD
8.	NW
9.	NZ
10.	I
11.	KAP
12.	LO
13.	MS
14.	NA
15.	PA
16.	SA
17.	SNA
18.	SRN
19.	SJA
20.	TL
21.	TVS
22.	SN
23.	VF
24.	VA
25.	YAS
26.	AS
27.	BS
28.	CZ
29.	DA
30.	FA

B.   Data Analysis

1.   The Results of Pre-Test and Post-Test Assesments

   a.   Pre-Test

Table 4.3
Pre-Test Results

No.	Initial Name	Words	Student Pronunciation	Dictionary Pronunciation (Oxford)	Status	Score
1.	CN	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0
2.	FAR	Nice	/Nis/	/Nais/	False	0
		Wish	/Wais/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biggest/	/'bi.gəst/	False	0
3.	FR	Nice	/Nis/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sek/	/Sik/	False	0
		Biggest	/Biges/	/'bi.gəst/	False	0
4.	JF	Nice	/Nice/	/Nais/	False	0
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0
5.	KA	Nice	/Nice/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sick/	/Sik/	False	0
		Biggest	/Biges/	/'bi.gəst/	False	0
6.	ML	Nice	/Nice/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sick/	/Sik/	False	0
		Biggest	/Biggest/	/'bi.gəst/	False	0
7.	MD	Nice	/Nice/	/Nais/	False	0

No.	Initial Name	Words	Student Pronunciation	Dictionary Pronunciation (Oxford)	Status	Score
		Wish	/Wais/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sek/	/Sik/	False	0
		Biggest	/Biges/	/'bi.gəst/	False	0
8	NW	Nice	/Nis/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sek/	/Sik/	False	0
		Biggest	/Biges/	/'bi.gəst/	False	0
9.	NZ	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sek/	/Sik/	False	0
		Biggest	/Biges/	/'bi.gəst/	False	0
10.	I	Nice	/Nis/	/Nais/	False	0
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0
11.	KAP	Nice	/Nice/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biggest/	/'bi.gəst/	False	0
12.	LO	Nice	/Nis/	/Nais/	False	0
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0
13.	MS	Nice	/Nice/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sick/	/Sik/	False	0
		Biggest	/Biggest/	/'bi.gəst/	False	0
14.	NA	Nice	/Nis/	/Nais/	False	0
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0

No.	Initial Name	Words	Student Pronunciation	Dictionary Pronunciation (Oxford)	Status	Score
15.	PA	Nice	/Nice/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sek/	/Sik/	False	0
		Biggest	/Biggest/	/'bi.gəst/	False	0
16.	SA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0
17.	SNA	Nice	/Nis/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0
18.	SRN	Nice	/Nis/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sek/	/Sik/	False	0
		Biggest	/Biggest/	/'bi.gəst/	False	0
19.	SJA	Nice	/Nice/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0
20.	TL	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0
21.	TVS	Nice	/Nice/	/Nais/	False	0
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sick/	/Sik/	False	0
		Biggest	/Biggest/	/'bi.gəst/	False	0
22.	SN	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Cottect	1

No.	Initial Name	Words	Student Pronunciation	Dictionary Pronunciation (Oxford)	Status	Score
		Biggest	/Biges/	/ˈbi.gəst/	False	0
23.	VF	Nice	/Nis/	/Nais/	False	0
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/ˈbi.gəst/	False	0
24.	VA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sick/	/Sik/	False	0
		Biggest	/Biges/	/ˈbi.gəst/	False	0
25.	YAS	Nice	/Nis/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/ˈbi.gəst/	False	0
26.	AS	Nice	/Nice/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/ˈbi.gəst/	False	0
27.	BS	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biggest/	/ˈbi.gəst/	False	0
28.	CZ	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/ˈbi.gəst/	False	0
29.	DA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sek/	/Sik/	False	0
		Biggest	/Biges/	/ˈbi.gəst/	False	0
30.	FA	Nice	/Nis/	/Nais/	False	0
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0

No.	Initial Name	Words	Student Pronunciation	Dictionary Pronunciation (Oxford)	Status	Score
		Sick	/Sick/	/Sik/	False	0
		Biggest	/Biges/	/ˈbi.gəst/	False	0
Total						26

b. Post-Test

Table 4.4
Post-Test Results

No.	Initial Name	Words	Student Pronunciation	ELSA Pronunciation	Status	Score
1.	CN	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/ˈbi.gəst/	/ˈbi.gəst/	Correct	1
2.	FAR	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wais/	/Wiʃ/	False	0
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biggest/	/ˈbi.gəst/	False	0
3.	FR	Nice	/Nais/	/Nais/	Correct	1
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sek/	/Sik/	False	0
		Biggest	/ˈbi.gəst/	/ˈbi.gəst/	Correct	1
4.	JF	Nice	/Nice/	/Nais/	False	0
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/ˈbi.gəst/	/ˈbi.gəst/	Correct	1
5.	KA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/ˈbi.gəst/	/ˈbi.gəst/	Correct	1
6.	ML	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0

No.	Initial Name	Words	Student Pronunciation	ELSA Pronunciation	Status	Score
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
7.	MD	Nice	/Nice/	/Nais/	False	0
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/'bi.gəst/	False	0
8	NW	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sek/	/Sik/	False	0
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
9.	NZ	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
10.	I	Nice	/Nais/	/Nais/	Correct	1
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
11.	KAP	Nice	/Nais/	/Nais/	Correct	1
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
12.	LO	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
13.	MS	Nice	/Nice/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
14.	NA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0

No.	Initial Name	Words	Student Pronunciation	ELSA Pronunciation	Status	Score
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/ˈbi.gəst/	/ˈbi.gəst/	Correct	1
15.	PA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/ˈbi.gəst/	/ˈbi.gəst/	Correct	1
16.	SA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/ˈbi.gəst/	/ˈbi.gəst/	Correct	1
17.	SNA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/ˈbi.gəst/	/ˈbi.gəst/	Correct	1
18.	SRN	Nice	/Nais/	/Nais/	Correct	1
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sek/	/Sik/	False	0
		Biggest	/Biggest/	/ˈbi.gəst/	False	0
19.	SJA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/ˈbi.gəst/	False	0
20.	TL	Nice	/Nais/	/Nais/	Correct	1
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biges/	/ˈbi.gəst/	False	0
21.	TVS	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Ha:d/	/Ha:d/	Correct	1
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/Biggest/	/ˈbi.gəst/	False	0
22.	SN	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0

No.	Initial Name	Words	Student Pronunciation	ELSA Pronunciation	Status	Score
		Sick	/Sik/	/Sik/	Cottect	1
		Biggest	/Biges/	/'bi.gəst/	False	0
23.	VF	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
24.	VA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wis/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
25.	YAS	Nice	/Nais/	/Nais/	Correct	1
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
26.	AS	Nice	/Nice/	/Nais/	False	0
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hard/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
27.	BS	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
28.	CZ	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Hadt/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
29.	DA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/Wish/	/Wiʃ/	False	0
		Hard	/Har/	/Ha:d/	False	0
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
30.	FA	Nice	/Nais/	/Nais/	Correct	1
		Wish	/ Wiʃ /	/Wiʃ/	Correct	1
		Hard	/Ha:d/	/Ha:d/	Correct	1

No.	Initial Name	Words	Student Pronunciation	ELSA Pronunciation	Status	Score
		Sick	/Sik/	/Sik/	Correct	1
		Biggest	/'bi.gəst/	/'bi.gəst/	Correct	1
Total						97

Table 4.5
Classification of the Pre-Test and Post-Test Results

No.	Student Initial	Pre-test	Classification	Post-test	Classifications
1.	CN	40	Poor	80	Good
2.	FAR	20	Very Poor	60	Average
3.	FR	0	Very Poor	60	Average
4.	JF	20	Very Poor	60	Average
5.	KA	0	Very Poor	60	Average
6.	ML	0	Very Poor	60	Average
7.	MD	0	Very Poor	40	Poor
8	NW	0	Very Poor	60	Average
9.	NZ	20	Very Poor	60	Average
10.	I	20	Very Poor	100	Excellent
11.	KAP	20	Very Poor	80	Good
12.	LO	20	Very Poor	80	Good
13.	MS	0	Very Poor	40	Poor
14.	NA	20	Very Poor	60	Average
15.	PA	0	Very Poor	100	Excellent
16.	SA	40	Poor	80	Good

No.	Student Initial	Pre-test	Classification	Post-test	Classifications
17.	SNA	20	Very Poor	60	Average
18.	SRN	0	Very Poor	60	Average
19.	SJA	20	Very Poor	40	Poor
20.	TL	40	Poor	80	Good
21.	TVS	0	Very Poor	60	Average
22.	SN	40	Poor	40	Poor
23.	VF	20	Very Poor	60	Average
24.	VA	20	Very Poor	60	Average
25.	YAS	20	Very Poor	80	Good
26.	AS	20	Very Poor	80	Good
27.	BS	40	Poor	40	Poor
28.	CZ	40	Poor	60	Average
29.	DA	20	Very Poor	60	Average
30.	FA	0	Very Poor	100	Excellent

Information

1 Point   = 20 scores

Score 0 – 20   = Very Poor

Score 40   = Poor

Score 60   = Average

Score 80   = Good

Score 100   = Excellent

The data collection in this study involved 30 students who participated in both pre-test and post-test assessments to evaluate the impact of ELSA Speak on pronunciation improvement. The test scores, classified into categories based on accuracy levels, are summarized in the following charts.
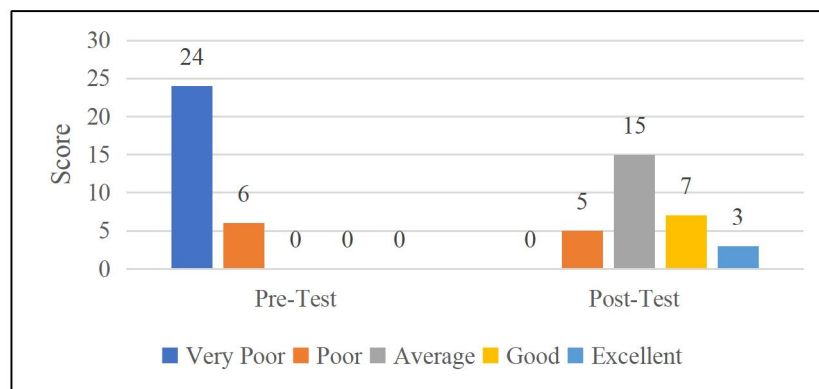

Figure 4.1 Pre-Test and Post-Test Results

In the pre-test results, out of 30 students, a total of 17 scored within the "Very Poor" range, meaning they achieved scores between 0 and 20 points. Additionally, 7 students scored in the "Poor" category, obtaining scores of 40, while none reached the "Average" or "Good" categories. In the post-test result, out of the same 30 students, only 4 scored within the "Very Poor" range, with scores between 0 and 20 points. A total of 10 students fell into the "Poor" category, scoring 40 points, while 12 students achieved "Average" scores of 60 points. Furthermore, 4 students reached the "Good" category with scores of 80 points, and 1 student excelled with a score of 100, categorizing them as "Excellent".

2. **Descriptive Statistics Results**

Table 4.6
SPSS Output for Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test	30	0	40	17.33	14.606
Post-Test	30	40	100	65.33	17.367
Valid N (listwise)	30				

In the pre-test results, the sample consisted of 30 students, with scores ranging from 0 to 40. The mean score was 17.33, indicating that, on average, the students demonstrated a limited understanding of pronunciation skills at the beginning of the study. The standard deviation of 14.606 indicated a wide variation in the scores, meaning some students performed significantly better or worse than others.

In the post-test, the scores ranged from 40 to 100, reflecting a substantial improvement after the intervention. The mean score increased to 65.33, showing that the students had gained more confidence and proficiency in their pronunciation skills by the end of the study. The standard deviation was 17.367, indicating that while most students improved, there was still some variability in their performance levels.

3. **Instrument Test**

   a. **Validity Test**

In this study, the validity of the measurement tool was tested using Pearson Product Moment correlation analysis. This method was chosen for its ability to measure the linear relationship between two variables, specifically the pre-test and post-test scores of the students. The validity of the measurement tool was considered acceptable if there is a significant correlation between the two

scores. The decision-making basis for the validity test was held by comparing the p-value (significance) obtained from the analysis. If the p-value less than 0.05, it concluded that there was a significant relationship between the two variables, indicating that the measurement tool was valid.

Table 4.7
SPSS Output for Pearson Correlation

		Pre-Test	Post-Test
Pre-Test	Pearson Correlation	1	.500
	Sig. (2-tailed)		.005
	Sum of Squares and Cross-products	6186.667	26.667
	Covariance	213.333	.920
	N	30	30
Post-Test	Pearson Correlation	.500	1
	Sig. (2-tailed)	.025	
	Sum of Squares and Cross-products	26.667	8746.667
	Covariance	.920	301.609
	N	30	30

The Pearson correlation analysis revealed a moderate positive relationship between the pre-test and post-test scores, with a correlation coefficient of 0.5. The significance level for this correlation was 0.005, indicating a statistically significant relationship between the two sets of scores. The pre-test showed a perfect correlation with itself, represented by a coefficient of 1 and a significance level of 0.025. Overall, these results demonstrated that the measurement tool was valid, effectively capturing the changes in performance between the pre-test and post-test assessments.

b. Reliability Test

Reliability test is a process used to assess the consistency and stability of a measurement tool in research. The decision-making basis for reliability test typically involves the use of Cronbach's Alpha, which measures internal consistency. Cronbach's Alpha values range from 0 to 1, with values above 0.70 indicating good internal consistency. If the value falls below 0.60, it suggests that the measurement tool may not be sufficiently reliable and may require revision.

Table 4.8
SPSS Output for Cronbach's Alpha

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Pre-Test	65.33	301.609	.746	.832
Post-Test	17.33	213.333	.734	.819

For the pre-test, the corrected item-total correlation was 0.746, which suggests that each item is positively correlated with the overall score. The Cronbach's Alpha if the item is deleted was 0.832, indicating that the overall reliability would decrease if any individual item were removed. For the post-test, the corrected item-total correlation was 0.734, reflecting a similar strong positive correlation with the total score. The Cronbach's Alpha if an item were deleted was 0.819. Overall, both the pre-test and post-test scores demonstrate good reliability, with Cronbach's Alpha values well above the acceptable threshold of 0.70. This suggests that the measurement tools used in the study are consistent and reliable for assessing the intended constructs.

4.   Inferential Statistic Results

In this study, inferential statistics were employed to determine whether the observed changes in pronunciation skills from pre-test to post-test were statistically significant. The first step in this analysis involved conducting the Kolmogorov-Smirnov test for normality. The Kolmogorov-Smirnov test was performed to assess whether the pre-test and post-test scores followed a normal distribution. The results indicated whether parametric or non-parametric statistical tests should be used for further analysis. If the scores were normally distributed, it would justify the use of independent t-tests; if not, non-parametric tests would be more appropriate.

Table 4.9
SPSS Output for Kolmogorov-Smirnov Test

		Unstandardized Residual
N		30
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	17.36678531
Most Extreme Differences	Absolute	.286
	Positive	.286
	Negative	-.211
Test Statistic		.286
Asymp. Sig. (2-tailed)		.000[c]

With a sample size of 30, the mean was approximately 17.37, and the standard deviation was 0.00. The test statistic was 0.286, indicating the absolute deviation from normality. The Asymptotic Significance (2-tailed) value was 0.000, which is less than the commonly used alpha level of 0.05. This result suggested that the pre-test scores significantly deviated from a normal distribution. Given

these findings, the use of parametric tests, such as the independent t-test, would not be appropriate for further analysis. Instead, the researcher opted for non-parametric alternatives, namely Mann-Whitney U test, to compare the pre-test and post-test scores.

After conducting the normality tests, the researcher assessed the data for homogeneity. The researcher performed statistical tests to determine if the variances of the two groups were equal. Homogeneity indicates that the groups being compared are similar in certain characteristics or variances before any treatment or intervention is applied. In this study, it means that the pre-test scores of the two groups (before using ELSA) do not differ significantly, suggesting that any changes observed in the post-test scores can be attributed to the intervention rather than pre-existing differences. Below is the result of homogeneity test by using SPSS.

Table 4.10
SPSS Output for Homogeneity Test

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34560.000	1	34560.000	134.229	.000
Within Groups	14933.333	58	257.471		
Total	49493.333	59			

The homogeneity test results revealed a significant difference in pronunciation skills between the groups. The calculated F-value was 134.229, indicating a substantial difference relative to the variability within groups. With a significance level (p-value) of 0.000 (<0.05), the results are statistically

significant to reject the null hypothesis and conclude that the ELSA intervention had a notable impact on enhancing pronunciation.

The Mann-Whitney U test is a non-parametric statistical test used to compare two independent groups when the data do not meet the assumptions necessary for parametric tests. This test evaluates whether there is a significant difference in the distribution of scores between the two groups. In terms of decision-making, if the p-value obtained from the Mann-Whitney U test is less than the predetermined significance level (typically set at 0.05), the null hypothesis—which states that there is no difference between the two groups—is rejected. Conversely, if the p-value is greater than 0.05, the null hypothesis is not rejected, indicating no statistically significant difference between the groups.

Table 4.11
SPSS Output for Mann-Whitney U Test

	Test Results
Mann-Whitney U	15.000
Wilcoxon W	480.000
Z	-6.566
Asymp. Sig. (2-tailed)	.000
a. Grouping Variable: Group	

The results of the Mann-Whitney U test indicated a significant difference between the two groups. The Mann-Whitney U statistic was 15.000, and the Wilcoxon W value was 480.000. The Z score of -6.566 further highlighted the strength of the difference observed, the Asymptotic Significance (2-tailed) value was 0.000, which is well below the conventional alpha level of 0.05. Given that the p-value was significantly lower than 0.05, the researcher rejected the null

hypothesis. This finding suggested that there was a statistically significant difference in pronunciation skills between the students who used the AI-driven ELSA program and those who did not.

The final results indicated that after implementing the Elsa Application in the learning process there is an enhancement in students' English pronunciation skills. Therefore, it can be concluded that there is an effect of implementing the AI-Based Elsa Application on the improvement of students' English pronunciation skills in Vocational High Schools.

5. Questionnaire Results

This research is related to students' perception on ELSA Speak application as learning media in teaching pronunciation comprehension of English as a foreign language (EFL) secondary school learners. This research surveyed 30 class X and XII one majoring in AKL SMK Gema Buana, Percut Sei Tuan District, Deli Regency. There is this research using 20 questions to find out students' perception on ELSA Speak application as learning media in teaching pronunciation comprehension. Based on the data collected, researchers can analyze students' perceptions on ELSA Speak application as pronunciation learning media in teaching reading comprehension through 20 questions.

Table 4.12
Questionnaire Results

No	Statement	Answer				
		1	2	3	4	5
1.	How would you rate your English pronunciation skills before using ELSA Speak?	13 (43.2%)	7 (23.3%)	4 (13.3%)	6 (20,.0%)	0 (0%)
2.	How often do you find it difficult to pronounce English words clearly and correctly?	0 (0%)	5 (16.7%)	6 (20.0%)	5 (16.7%)	14 (46.7%)

No	Statement	Answer				
		1	2	3	4	5
3.	What were the man challenges you faced in improving you English pronunciation before using ELSA Speak?	7 (23.3%)	19 (63.3%)	6 (20.0%)	17 (56.7%)	7 (23.3%)
4.	Have you used any other methods to improve your English pronunciation before ELSA Speak? what methods did you use before?	19 (63.3%)	2 (6.7%)	10 (33.3%)	7 (23.3%)	5 (16.7%)
5.	How confident were you in speaking English in public before using ELSA Speak?	14 (46.7%)	6 (20.0%)	5 (16.7%)	5 (16.7%)	0 (0%)
6.	Experience using ELSA Speak, How long have you been using the ELSA Speak application?	0 (0%)	1 (3.3%)	19 (96.7%)	0 (0%)	0 (0%)
7.	How long does your average session with ELSA Speak last?	3 (10.0%)	9 (30.0%)	9 (30.0%)	9 (30.0%)	0 (0%)
8.	What features do you use most often in ELSA Speak?	20 (66.7%)	18 (60.0%)	3 (10.0%)	4 (13.3%)	0 (0%)
9.	How would you rate your ability to pronounce connected speech (e.g., "going to" becomes "Gonna") before using ELSA Speaking?	6 (20.0%)	13 (43.3%)	7 (23.3%)	4 (13.3%)	0 (0%)
10.	How important do you think understanding and using minimal pairs (words that differ by only one sound, such us "ship" and "sheep") is in improving pronunciation before using ELSA Speak?	15 (51.7%)	10 (34.5%)	4 (13.8%)	1 (3.3%)	0 (0%)
11.	Do you feel more confident speaking English after using ELSA Speak?	17 (56.7%)	12 (40.0%)	1 (3.3%)	0 (0%)	0 (0%)
12.	What pronunciation mistakes have you managed to correct?	15 (50.0%)	18 (60.0%)	20 (66.7%)	10 (33.3%)	9 (30.0%)
13.	How significant is the difference in pronunciation improvement between using ELSA Speak and conventional methods (e.g., face-to-face using books)?	16 (53.3%)	12 (40.0%)	2 (6.7%)	0 (0%)	0 (0%)
14.	How would you rate the quality of feedback provided by ELSA Speak compared to conventional methods	20 (66.7%)	9 (30.0%)	1 (3.3%)	0 (0%)	0 (0%)

No	Statement	Answer				
		1	2	3	4	5
	(e.g., feedback from teachers or tutors)?					
15.	In terms of speed of pronunciation improvement, how quickly did you see improvements after using ELSA Speak compared to conventional methods?	29 (96.7%)	1 (3.3%)	0 (0%)	0 (0%)	0 (0%)
16.	Do you feel that using ELSA Speak helps you be more prepared for real-world situations in communicating using English compared to conventional methods?	29 (96.7%)	1 (3.3%)	0 (0%)	0 (0%)	0 (0%)
17.	How likely are you to recommend ELSA Speak to others who want to improve their English pronunciation?	0 (0%)	1 (3.3%)	10 (33.3%)	19 (63.3%)	0 (0%)
18.	What are you main reasons for recommending or not recommending ELSA Speak?	20 (66.7%)	20 (66.7%)	12 (40.0%)	1 (3.3%)	0 (0%)
19.	In your opinion, are there any drawbacks in using the ELSa Speak application to improve English pronunciation skills?	7 (33.3%)	16 (53.3%)	17 (56.7%)	13 (43.3%)	1 (3.3%)
20.	Do you have any suggestions for developing the ELSA Speak application to be more effective in helping improve English pronunciation skills in the future?	19 (63.3%)	14 (46.7%)	17 (56.7%)	4 (13.3%)	2 (6.7%)

6.   Interview Results

This question aims to find out their own perceptions of efficacy of Al-Driven ELSA in enhancing pronunciation skills through EFL (English Foreign Language) learners in their schools. Based on data obtained from in-depth interviews, it can be concluded that the results are related to student perceptions from 15 item questions, as follows:

Table 4.13
Interview Results

No.	Statement	Respondents	Answer
1.	How does ELSA Speak help you understand your specific pronunciation mistakes and guide you to correct them?	Student 1	ELSA Speak gave me instant feedback on my frequent mispronunciation of "comfortable" by showing exactly which syllable to stress. This made me correct my error faster than traditional methods.
2.		Student 2	The app pointed out that I often drop the final consonant in words like "asked". After repeated practice, I'm now more aware of how to pronounce the whole word clearly
3.	How effective is ELSA Speak in helping you differentiate between similar vowel sounds (e.g., "ship" vs. "sheep")?	Student 3	I often confused short vowels with long vowels, but ELSA Speak helped me train my ear to catch the differences, especially between "ship" and "sheep." Now, I can hear and pronounce them accurately.
4.		Student 4	Before ELSA Speak, I didn't know how subtle the differences between short and long vowels were. The app's feedback showed me how important the length of the vowel is in distinguishing words.
5.	What is your experience with ELSA Speak's feature that gives real-time feedback on pronunciation errors?	Student 5	The real-time feedback is incredibly helpful. I used to mispronounce "weather," but the app immediately corrected me and showed how to shape my mouth differently.
6.		Student 6	I found the instant feedback motivating. It allows me to correct mistakes in the moment, like when I said "thank" without properly pronouncing the "th" sound.

7.	What do you think about the accuracy of ELSA Speak's feedback on your pronunciation?	Student 7	I think the feedback is very accurate. It consistently highlights the same mistakes, which helps me know exactly where I need to improve
8		Student 8	The feedback is precise and useful. It pointed out subtle errors that I didn't even realize, like my inconsistent pronunciation of the "r" sound in "world."
9.	How has ELSA Speak improved your awareness of connected speech (e.g., how words link together in fluent conversation)?	Student 9	I used to separate every word too much when I spoke. ELSA Speak showed me how native speakers connect words, like saying "gonna" instead of "going to," which made my speech sound more natural
10.		Student 10	ELSA Speak helped me realize that fluent speakers often link sounds, like the "t" in "don't" almost disappearing in fast speech. Now I try to incorporate this connected speech into my conversations
11.	What role does the repetition feature in ELSA Speak play in mastering difficult sounds?	Student 11	The repetition feature has been crucial for me in learning the /r/ sound, which I found very hard. I would practice it multiple times until I could pronounce it correctly without thinking.
12.		Student 12	I struggled with the /v/ sound, so I used the repetition feature to keep practicing until I could pronounce words like "very" clearly. Without this feature, it would've taken me longer to improve
13.	How does ELSA Speak help you manage difficult consonant clusters (e.g., "strength", "twelfth")?	Student 13	I found it difficult to pronounce "strength" because of the many consonants, but ELSA Speak guided me through each sound

			separately, which made it easier to pronounce clearly.
14.		Student 14	Words like "twelfth" were hard because of the final consonant cluster. ELSA Speak's repetition exercises helped me break down the sounds and pronounce them smoothly
15.	How does ELSA Speak help you identify and improve weak areas in your pronunciation?	Student 15	I found it difficult to pronounce "strength" because of the many consonants, but ELSA Speak guided me through each sound separately, which made it easier to pronounce clearly
16.		Student 16	Words like "twelfth" were hard because of the final consonant cluster. ELSA Speak's repetition exercises helped me break down the sounds and pronounce them smoothly
17.	What features of ELSA Speak do you believe enhance your overall English pronunciation skills the most?	Student 17	I found it difficult to pronounce "strength" because of the many consonants, but ELSA Speak guided me through each sound separately, which made it easier to pronounce clearly.
18.		Student 18	The **daily challenges** feature motivates me to practice every day. These challenges keep the learning process fun and engaging, and I look forward to completing them
19.	What specific pronunciation challenges do you still face, and how does ELSA Speak help you address these challenges?	Student 19	I still struggle with the /v/ and /w/ sounds. ELSA Speak provides tailored exercises to practice these sounds repeatedly, which helps me improve gradually.
20.		Student 20	Pronouncing words with multiple consonants can be tricky for me. ELSA Speak's breakdown of each sound

			helps me practice until I feel comfortable with them.
21.	In what ways has ELSA Speak changed your perception of learning English pronunciation?	Student 21	I used to think pronunciation was something that could only be learned through conversation. ELSA Speak showed me that targeted practice is just as important
22.		Student 22	ELSA Speak made me realize that pronunciation is a skill that can be developed through consistent practice. It's not just about speaking; it's about speaking correctly.
23.	How does ELSA Speak provide better pronunciation practice compared to traditional language classes?	Student 23	ELSA Speak allows me to practice pronunciation at my own pace, which isn't possible in a traditional classroom where the teacher sets the speed for everyone. This personalized approach helps me focus on my specific weaknesses.
24.		Student 24	In traditional classes, we often don't get enough individual feedback on our pronunciation. ELSA Speak provides immediate corrections, which helps me understand and fix my mistakes right away
25.	Do you find using ELSA Speak enjoyable while improving your pronunciation skills? Why or why not?	Student 25	Absolutely! ELSA Speak turns learning into a game with its interactive exercises and daily challenges. I love that I can earn points and badges for my progress, which makes me feel accomplished. It's like leveling up in a video game, and that motivates me to practice regularly without it feeling like a chore.
26.		Student 26	Yes, I find it really enjoyable! The app incorporates fun elements like role-playing

			scenarios and themed exercises that reflect real-life situations. It feels less like studying and more like having a conversation with a friend. Plus, the instant feedback is exciting; I can hear the improvement in my pronunciation right away, which makes the whole experience rewarding and fun.
27.	In what ways does ELSA Speak motivate you to improve your pronunciation while keeping the learning process fun?	Student 27	The app tracks my progress and gives me scores, which motivates me to improve each time. The competitive element makes me want to practice more.
28.		Student 28	ELSA Speak's daily challenges and fun exercises keep me engaged. I look forward to completing them, which makes practicing my pronunciation enjoyable.
29.	After using ELSA Speak, how do you feel about your progress in English pronunciation, and what's your strategy for continued improvement?	Student 29	ELSA Speak has completely transformed my pronunciation. I'm now much more confident, especially with tricky sounds. I plan to keep using the app daily and also practice with native speakers whenever I can to push my fluency even further
30.		Student 30	I,m thrilled with the progress I've made! ELSA Speak helped me correct mistakes I didn't even know I was making. Moving forward, I'll use it as part of my daily routine, but I also want to challenge myself by joining conversation clubs or practicing with friends

C.   Research Findings

The findings on this research described as follows.

1. Based on the non-parametric Mann-Whitney U test, given that the p-value was significantly lower than 0.05, the researcher rejected the null hypothesis. This finding suggested that there was a statistically significant difference in pronunciation skills between the students who used the AI-driven ELSA program and those who did not. Based on the mean difference from the descriptive statistics, there was an improvement before and after the implemented of the Elsa Application.

2. The results of the questionnaire obtained by the researcher showed that many students enjoyed using the application because of the reason for English pronunciation and being able to practice English pronunciation correctly.

3. The results of interviews conducted by researchers show that there is feedback from the application to users in the form of English pronunciation that has been made by the application so that they can improve their English pronunciation skills.

D.   Discussions

Based on the results of the pre-test and post-test, along with data gathered from questionnaires and interviews conducted by the researcher, it is clear that the ELSA Speak application significantly enhances students' pronunciation skills. Pronunciation is a crucial component of learning English as a

Foreign Language (EFL), and it is essential for effective communication. Therefore, teachers must employ innovative and effective learning methods to improve this vital skill among their students. The introduction of AI-driven learning tools, such as the ELSA Speak application, presents an exciting opportunity to achieve this goal.

The findings revealed a significant increase in student scores following the use of the ELSA Speak application. Initially, the average score in the pre-test was only 26, indicating that many students struggled with proper pronunciation. However, after the intervention utilizing the ELSA application, the average post-test score increased to 97. This improvement suggests that the application effectively addresses the challenges students face in mastering English pronunciation. The application's design, which includes interactive features and immediate feedback, played a significant role in this improvement. Students were able to practice their pronunciation in a supportive environment that encouraged learning through repetition and correction.

To further validate the findings, a Mann-Whitney U test was conducted to compare the pre-test and post-test scores. The analysis confirmed a statistically significant difference between the two sets of scores, with a p-value well below the conventional threshold of 0.05. This statistical evidence supports the conclusion that the ELSA Speak application not only led to improved pronunciation skills but also that these improvements were statistically significant. Such findings reinforce the importance of integrating technology into language

learning, as it provides measurable outcomes that traditional methods may not achieve.

Moreover, the ELSA Speak application not only focused on pronunciation but also contributed to building students' confidence in speaking English. Many students expressed that they felt more comfortable practicing their speaking skills in a private setting with the app compared to traditional classroom environments. This increase in confidence can have a lasting impact on their overall language proficiency and willingness to engage in conversations in English, which is crucial for effective communication.

In conclusion, the research underscores the significant positive impact of the ELSA Speak application on enhancing pronunciation skills among vocational high school students. The combination of quantitative improvements in test scores and qualitative feedback from students illustrates the application's effectiveness as a learning tool. As the demand for proficient English speakers continues to grow, incorporating innovative solutions like ELSA Speak into language education will be vital for helping students achieve their linguistic goals. The findings advocate for further exploration and implementation of AI-driven applications in educational scope.

5CHAPTER V

CONCLUSION AND SUGGESTION

A.   Conclusions

In learning English, speaking is important. When speaking, there are several important components that need to be considered in order to speak well and not cause misunderstandings when communicating with other people. One component of speaking ability is pronunciation. Good pronunciation will produce good speaking. In learning English as a foreign language, pronunciation is very important. The use of learning media is one way for teachers to improve English pronunciation skills. Learning media that can be used by the ELSA Speak application via a hand phone or laptop that can be accessed by anyone and at any time.

Based on the results of research conducted by researchers, namely the results of the pretest and posttest which showed an enhancing in the number of students who were able to pronounce English correctly. The results of the questionnaire obtained by the researcher showed that there was a reciprocal effect from the use of the ELSA Speak application in the learning process providing benefits to students in the form of correct English pronunciation. In addition, the results of interviews conducted by the researcher with students showed that students felt that they had enhancing their English pronunciation skills after using the ELSA Speak application.

B. **Suggestions**

a. For students, in order to achieve significant improvement in English language skills, students need to take a more active role in the learning process. Paying close attention to the materials and instructions presented by the teacher is crucial for their understanding and mastery of the subject. Beyond the classroom, students should also make efforts to practice consistently, especially in areas like speaking and pronunciation. Regular engagement with English, whether through conversations, self-study, or language apps, will help students build their confidence and fluency. It's important for students to recognize that mastering a language requires dedication and continuous improvement, and focusing on their speaking abilities will better prepare them for real-world communication.

b. For the school, the school plays a crucial role in supporting students' language development by incorporating modern tools like the ELSA Speak application into the curriculum. This app provides interactive, personalized feedback to improve pronunciation and speaking skills. The school should combine such technology with traditional methods to create a more engaging learning environment, helping students build stronger language abilities for both academic and professional success.

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APPENDICES

Appendix 1. Curriculum Vitae

CURRICULUM VITAE

PERSONAL DATA

Name	: Nadya Azrani Siahaan
Place & Date of Birth	: Huta Baru, May 18th 2002
Gender	: Female
Religion	: Islam
Address	: Alfalah Raya, Medan Timur
Postal Code	: 20238

PARENTS' DATA

Father's Name	: Muhammad Darwis Siahaan
Mother's Name	: Sumiati Butar-Butar, S.Pd., M.Si

FORMAL EDUCATION

1. SD Negeri 112292 Kuala Beringin - Graduated in 2014
2. SMP Negeri 3 Kualuh Hulu - Graduated in 2017
3. SMA Muhammadiyah 9 Kualuh Hulu - Graduated in 2020
4. Registered as a students in Faculty of Teacher Training and Education, English Education Study Program, Universitas Muhammadiyah Sumatera Utara (2020-2024)

NON FORMAL EDUCATION AND ORGANIZATION

1. Participant in Regional English Debate Competition, 2016-2017
2. Intensive English Language Course, 2019-2020
3. Editing and Coding Staff, Central Statistics Agency (Badan Pusat Statistik) of Labuhan Batu Utara – 2022

Medan, October 18th 2024

Nadya Azrani Siahaan

Appendix 2. RPP and students' attendance

RPP
(Rencana Pelaksanaan Pembelajaran)

Satuan Pendidikan   : Gema Buwana
Mata Pelajaran   : Bahasa Inggris
Kelas/Semester   : X/XII/Genap
Materi Pokok   : Peningkatan Keterampilan Pengucapan Melalui AI (Elsa
                    Speak)
Alokasi Waktu : 4 Pertemuan (2 x 45 menit)

I. Standar Kompetensi
    1. Memahami dan menggunakan bahasa inggris secara lisan dan tulisan dalam konteks sehari-hari
    2. Meningkatkan keterampilan pengucapan bahsa inggris dengan bantuan teknologi.

II. Kompetensi Dasar
    1. Memahami dan merespon ungkapan lisan sederhana dalam konteks EFL
    2. Menggunakan aplikasi teknologi untuk meningkatkan keterampilan berbicara, khususnya dalam pengucapan

III. Indikator Pencapaian

No.	Indikator
1	Siswa dapat mendemonstrasikan pengucapan kata-kata dalam bahasa inggris dengan benar menggunakan aplikasi ELSA
2	Siswa dapat menganalisis kemajuan pengucapan mereka sebelum dan setelah menggunakan aplikasi AI
3	Siswa dapat memberikan umpan balik terhadap penggunaan aplikasi ELSA dalam pembelajaran pengucapan
4	Siswa dapat mengisi kuisioner tentang pengalaman mereka menggunakan aplikasi ELSA

IV. Tujuan Pembelajaran
    1. Siswa dapat mengenali dan memperbaiki kesalahan pengucapan dalam bahasa inggris
    2. Siswa dapat menggunakan epliksai ELSA untuk berlatih pengucapan secara mandiri
    3. Siswa dapat mengevaluasi afektivitas penggunaan aplikasi ELSA dalam meningkatkan keterampilan pengucapan mereka

4. Siswa dapat memberikan umpan balik yang konstruktif melalui kuisioner dan wawancara

V. Materi Pembelajaran
1. Teori pengucapan : Konsep dasar pengucapan dalam bahasa inggris
2. Aplikasi ELSA : cara penggunaan, fitur, dan manfaat aplikasi
3. Latihan Pengucapan : kegiatan praktik menggunakan aplikasi

VI. Langkah-Langkah Kegiatan Pembelajaran

Kegiatan	Deskripsi	Waktu
Pendahuluan	- menyapa siswa dan menjelaskan tujuan pembelajaran - diskusi singkat tentang pentingnya pengucapan dalam bahasa inggris	15 menit
Kegiatan Inti		
1. Pre-Test	Melaksanakan pre-test untuk mengevaluasi penguacapan siswa sebelum menggunakan aplikasi ELSA	30 menit
2. Teori	Memperkenalkan konsep pengucapan yang benar	15 menit
3. demonstrasi	Menunjukkan cara menggunakan aplikasi ELSa	15 menit
4. praktik	Siswa berlatih pengucapan menggunakan aplikasi ELSA, baik secara individu maupun kelompok	30 menit
5. umpan balik	Siswa saling memberikan umpan balik terhadap pengucapan satu sama lain	20 enit
Pertemuan 2		
6. Latihan mandiri	Siswa berlatih pengucapan secara mandiri menggunakan aplikais ELSA dan mencatat kemajuan mereka	30 Menit
7. Diskusi kelas	Siswa berbagi pengalaman mereka tentang latihan mandiri dan kemajuan yang dicapa	20 menit
8. Wawancara	Siswa melakukan wawancara dengan guru tentang	20 menit

	pengalaman belajar menggunakan aplikasi ELSA	
9. kuisioner	Siswa mengisi kuisionaer tentang pengalaman mereka dalam pembelajaran dan menggunakan aplikasi ELSA	15 menit
Pertemuan 3		
10. evaluasi keterampilan	Siswa menggunakan aplikasi ELSA untuk menilai kemajuan pengucapan mereka dan merekam suara mereka	30 menit
11. refleksi dan umpan balik	Siswa mendiskusikan hasil evaluasi dan memberikan umpan balik mengenai pengalaman belajat	20 menit
Pertemuan 4		
12. Post-Test	Melaksanakan post-test untuk mengevaluasi pengucapan siswa setelah menggunakan aplikasi ELSa	30 menit
13. Penutup	Menyimpulkan pembelajaran, memberikan motivasi untuk terus berlatih dan memperbaiki keterampilan pengucapan	10 menit
	Diskusi reflektif tentang keseluruhan pengalaman pembelajaran	20 Menit

VII. Media dan Sumber Belajar
  1. Aplikasi ELSA (English Language Speech Assistant)
  2. Buku teks dan materi pengucapan bahasa inggris
  3. Proyektor dan laptop untuk demonstrasi

VIII. Penilaian

Jenis Penilaian	Deskripsi
1. Pre-Test	Evaluasi awal pengucapan siswa sebelum menggunakan aplikasi
2. Post-Test	Evaluasi akhir pengucapan siswa setelah menggunakan aplikasi
3. Kuisioner	Mengumpulkan data tentang pengalaman siswa menggunakan aplikasi ELSA

4. Wawancara	Penilaian berdasarkan wawancara siswa mengenai pengalaman belajar mereka
5. Observasi	Observasi siswa saat berlatih menggunakan aplikasi
6. Umpan Balik	Diskusi kelas mengenai pengalaman belajar dan hasil evaluasi

IX. Refleksi

1. Mengidentifikasi keberhasilan dan tantangan yang dihadapi siswa selama pembelajaran
2. Merencanakan tindak lanjut untuk perbaikan keterampilan pengucapan di pertemuan berikutnya

The students' Attendance of Experimental Group at Vocational High School

No.	Name	Observation First meeting	Pre-test Second meeting	Interview Third meeting	Post-test Fourth meeting	Sign
1.	CN	✓	✓	✓	✓	Cath
2.	FAR	✓	✓	✓	✓	Q
3.	FR	✓	✓	✓	✓	R
4.	JF	✓	✓	✓	✓	Jf
5.	KA	✓	✓	✓	✓	Kamil
6.	ML	✓	✓	✓	✓	Mlure
7.	MD	✓	✓	✓	✓	mbd
8	NW	✓	✓	✓	✓	Naf
9.	NZ	✓	✓	✓	✓	SR
10.	I	✓	✓	✓	✓	Inggh
11.	KAP	✓	✓	✓	✓	Kamgta
12.	LO	✓	✓	✓	✓	LbAs
13.	MS	✓	✓	✓	✓	Smd
14.	NA	✓	✓	✓	✓	Hbl
15.	PA	✓	✓	✓	✓	Sw
16.	SA	✓	✓	✓	✓	So
17.	SNA	✓	✓	✓	✓	Sf
18.	SRN	✓	✓	✓	✓	Rawal
19.	SJA	✓	✓	✓	✓	H
20.	TL	✓	✓	✓	✓	Tut
21.	TVS	✓	✓	✓	✓	Vuiaf
22.	SN	✓	✓	✓	✓	Sunt
23.	VF	✓	✓	✓	✓	Sgrd
24.	VA	✓	✓	✓	✓	WE
25.	YAS	✓	✓	✓	✓	Fara
26.	AS	✓	✓	✓	✓	Adm
27.	BS	✓	✓	✓	✓	Bus
28.	CZ	✓	✓	✓	✓	Cil
29.	DA	✓	✓	✓	✓	Ptr
30.	FA	✓	✓	✓	✓	Fark

Medan, September 2024

English Teacher

Nabila Mawaddah

Researcher

Nadya Azrani Siahaan

Appendix 3. Research Activity List

RESEARCH ACTIVITY LIST

Name   : Nadya Azrani Siahaan

Npm   : 2002050048

Study Program   : English Education

No	DATE	DESCRIPTION	SIGN
1	Tuesday 20 - 08 - 2024	Submit a research permit and discuss the researcher Schedule with the school	
2	Friday 23 - 08 - 2024	Introduction and presentation of ELSA speak to class X and XII AKL student	
3	Monday 26 - 08 - 2024	Conduct Pre-test to assess the students' initial pronunciation abilities	
4	Tuesday 27 - 08 - 2024	Data collection from students' attendance and initial observations	
5	Wednesday 28 - 08 - 2024	Discuss lesson plan and further activities with the English teacher	
6	Friday 30 - 08 - 2024	Start treatment provide pronunciation lessons using ELSA speak to class X and XII AKL students	
7	Monday 02 - 09 - 2024	Observation Monitor students' engagement and progress during the use of ELSA Speak	
8	Wednesday 04 - 09 - 2024	Administer post-test to assess students' pronunciation improvement after using ELSA Speak	
9	Thusday 05 - 09 - 2024	Distribute questionnaires to gather feedback and opinions from students about ELSA Speak and the learning process	
10	Saturday 07 - 09 - 2024	Conduct interviews with selected students' and teachers to gain qualitative insights and conclude research	

Medan, 07 September 2024

The English Teacher

Nabila Mawaddah

The Reseacher

Nadya Azrani Siahaan

Appendix 4. Pre-Test and Post-Test Assesment

(1). Pretest

Nama siswa   **Dictionary Pronunciation (Oxford)**   **Student Pronunciation**

1). Cahya Nurzila :
- Nice →   • /Nais/   ∪ • /Nais/
- Wish →   • /wis/   ✗ • /wis/ : sh nya tdk terdengar
- Hard →   • /Ha:d/   ✗ • /Had/ : r terlalu jelas
- Sick →   • /sik/   ∪ • /sik/
- Biggest → • /'bi.gəst/   ✗ • /biges/ : st tdk terdengar.

2). Fatha Anjani :   Ramadina   ———
- /Nis/ ✗ : bunyi /as/ tdk terdengar
- /wsis/ ✗ : /sh/ tdk terdengar
- /hadt/ ✗ : tdk terdengar bunyi r samar : /diakhiri +.
- /sik/ ∪
- /biggest/ ✗ : suara g nya tertahan dan double.

3). Fasya Ramadani :   ———
- /Nis/   ✗ /as/ tdk terdengar
- /wish/   ✗ /sh/ menekan tdk seperti aliran udara
- /hard/   ✗ r terlalu jelas
- /sek/   ✗ /s/ diganti dgn /e/
- /biges/ ✗ /st/ tdk tajam.

4). Jihan Falhillah   ———
- /rice/   ✗ menyebut rice bukan ~~rice~~ nais
- /wis/   ∪
- /Har/   ✗ tdk diakhiri 'd' dgn menyentuh ujung lidah
- /sik/   ∪
- /'bi.gəst/ ∪

5). Kenya Amel   ———
- /Nice/   ✗ menyebut nice bukan nais
- /wish/   ✗ "h" tdk terlalu terdengar
- /hard/   ✗ "r" terlalu jelas
- /sick/   ✗ terdengar bunyi "ck"
- /biges/ ✗ /st/ tdk terdengar

6). Markhah Lubis   ———
- /Nice/   ✗ menyebut rice
- /wis/   ✗ bunyi h tdk terdengar
- /hat/   ✗ diakhiri 't' bukan 'd'
- /sick/   ✗ terdengar bunyi "ck"
- /biggest/ ✗ 'g' double dan tetahan.

12). Virly Auly> —— • /Nais/ ✓
- /wis/ ✗ tidak terdengar 'sh'
- /hard/ ✗ 'r' terlalu jelas
- /sick/ ✗ 'c' ikut diucapkan
- /biges/ ✗ 'st' tidak terdengar

13). Yola Artika —— • /Nis/ ✗ 'a' dihilangkan
San
- /wish/ ✗ tidak terdengar 'sh'
- /hard/ ✗ 'r' terlalu jelas
- /sik/ ✓
- /biges/ ✗ tidak terdengar 'st'

14). Andini Siregar —— • /Nice/ ✗ menyebut nice
- /wish/ ✗ tidak menekan 'sh'
- /hard/ ✗ 'r' terlalu jelas
- /sik/ ✓
- /biges/ ✗ tidak terdengar 'st'

15). Bella Safira —— • /Nais/ ✓
- /wish/ ✗ 'sh' tidak ditekan
- /har/ ✗ tdk diakhiri 'd'
- /sik/ ✓
- /biggest/ ✗ menyebut big-gest.

16). Callista Zahra —— • /Nais/ ✓
- /wish/ ✗ 'sh' tidak ditekan
- /hadt/ ✗ 'r' dihilangkan / tidak diakhiri 'd'
- /sik/ ✓
- /biges/ ✗ tidak terdengar 'st'

17). Dwi Aulia —— • /Nais/ ✓
- /wish/ ✗ 'sh' tidak ditekan
- /har/ ✗ 'r' terlalu jeles / 'd' tdk terucap
- /sek/ ✗ 'i' diganti 'e'
- /biges/ ✗ 'st' tidak terdengar.

7). Mirza Dermawan —
- /~~Nice~~ / nis/ ✗ "a" dihilangkan
- /wais/ ✗ ada tambahan "a" hilang "sh"
- /hat/ ✗ diakhiri 't'
- /sek/ ✗ diganti 'e'
- /biges/ ✗ 'st' tdk terdengar.

8). Natasych Wulandari —
- /Nice/ ✗ menyebut nice
- /wais/ ✗ ada tambahan bunyi "a" hilang "sh"
- /hard/ ✗ 'r' terlalu jelas
- /sek/ ✗ 'I' diganti 'e'
- /biges/ ✗ 'st' tdk terdengar

9). Nomi Zahara —
- /Nais/ ✓
- /wis/ ✗ tdk terdengar 'sh'
- /hadt/ ✗ "r" tdk terdengar / diakhiri 't'
- /sek/ ✗ "I" diganti "e"
- /biges/ ✗ tdk terdengar 'st'

10). Salwa Nabila —
- /Nais/ ✓
- /wis/ ✗ "sh" tdk jelas
- /har/ ✗ "r" terlalu jelas / tdk diakhiri 'd'
- /sik/ ✓
- /biges/ ✗ "st" tdk terdengar.

11). Vanisah Fadillah —
- /Nis/ ✗ hilang bunyi "a"
- /wis/ ✗ tdk terdengar "sh"
- /har/ ✗ "r" jelas /"d" tdk terdengar
- /sik/ ✓
- /biges/ ✗ tdk terdengar "st".

18). Fatimah Azzzhra ——
- /Nis/ ✗ 'a' dihilangkan.
- /wis/ ✗ 'sh' tidak terdengar
- /hard/ ✗ 'r' terlalu jelas
- /side/ ✗ terdengar 'ck'
- /bages/ ✗ 'st' tidak terdengar.

19). Inayah ——
- /Nis/ ✗ 'a' dihilangkan
- /wis/ ✗ 'sh' tidak terdengar
- /hard/ ✗ 'r' terlalu jelas
- /sik/ ✓
- /bages/ ✗ 'st' tidak terdengar.

20). Kanya Azlinda Putri —
- /Nice/ ✗ Menyebut nice
- /wish/ ✗ tdk terdengar 'sh'
- /hadt/ ✗ 'r' tdk terdengar / diakhiri 't'
- /sik/ ✓
- /biggest/ ✗ 'g' double.

21). Luna Ollvia ——
- /Nis/ ✗ 'a' dihilangkan
- /wis/ ✗ tdk terdengar 'sh'
- /hard/ ✗ 'r' terlalu jelas
- /sik/ ✓
- /bages/ ✗ 'st' tdk terdengar.

22). Melaisya Salsabila ——
- /Nice/ ✗ Menyebut nice
- /wish/ ✗ 'sh' tdk seperti aliran udara.
- /hadt/ ✗ 'r' tdk terdengar / akhir t
- /stek/ ✗ terdengar 'ck'
- /biggest/ ✗ 'g' double.

23). Nur Ajizah ——
- /Nis/ ✗ 'a' dihilangkan
- /wis/ ✗ 'sh' tdk terdengar
- /hadt/ ✗ 'r' tdk terdengar
- /sik/ ✓
- /bages/ ✗ 'st' tdk terdengar.

24). Putri Andayani ——
- /Nice/ ✗ Menyebut nice
- /wish/ ✗ 'sh' tdk seperti aliran udara
- /hard/ ✗ 'r' terlalu jelas
- /sek/ ✗ 'i' diganti "e"

25). Shintya Adelia ———
- /nais/ ✓
- /wɪs/ ✗ 'sh' tdk terdengar
- /har/ ✗ 'r' jelas /'d' tdk terdengar
- /sik/ ✓
- /biges/ ✗ 'st' tdk jelas.

26). Siti Nur Aisyah ———
- /nis/ ✗ 'a' dihilangkan
- /wish/ ✗ 'sh' tdk seperti aliran udara
- /had/ ✗ 'r' jelas
- /sik/ ✓
- /biges/ ✗ 'st' tdk jelas.

27). Suci Ramadani Nasution ———
- /nis/ ✗ 'a' hilang
- /wish/ ✗ 'sh' tdk spt aliran udara
- /had/ ✗ 'r' tdk diucapkan samar²
- /sek/ ✗ 'i' diganti 'e'
- /biggest/ ✗ 'g' terdengar ditahan.

28). Syaqila Jaya Anggraini ———
- /nice/ ✗ Menyebut nice
- /wish/ ✗ tdk seperti aliran udara 'sh'
- /hat/ ✗ 'r' tdk diucapkan samar² /diakhiri t
- /sik/ ✓
- /biges/ ✗ 'st' tdk terdengar.

29). Tiara Lestari ———
- /nais/ ✓
- /was/ ✗ 'h' tdk terdengar
- /had/ ✗ 'r' tdk diucapkan samar²
- /sik/ ✓
- /biges/ ✗ 'st' tdk jelas.

30). Tria Vika Sari ———
- /nice/ ✗ Mengucapkan nice.
- /wis/ ✗ 'h' tdk terdengar
- /had/ ✗ 'r' terlalu jelas.
- /sick/ ✗ 'ck' terdengar
- /biggest/ ✗ 'g' seperti ditahan.

② . Post test   ☐ X : Try Again |

(Nama Siswa)   (Elsa Pronunciation)   (Student Pronunciation)

1). Cahya Nursila
- Nice → /Nais/
- Wish → /wis/
- Hard → /Ha:d/
- Sick → /sik/
- Biggest → /ˈbɪ.gəst/

- /Nais/ ✓
- /wis/ ✗ sh tidak terdengar jelas.
- /Ha:d/ ✓
- /sik/ ✓
- /ˈbɪ.gəst/ ✓

2). Farha Anjani Ramadina
———————

- /Nais/ ✓
- /wais/ ✗ ditambah a /sh tlk terucap.
- /Ha:d/ ✓
- /sik/ ✓
- /biggest/ ✗ "g" ditekan /st tdk terdengar

3). Fasya Ramadani
———————

- /Nais/ ✓
- /wis/ ✓
- /hard/ ✗ r terlalu jelas
- /sek/ ✗ 'i' diganti 'e'
- /ˈbɪ.gəst/ ✓

4). Jihan Fadhillah
———————

- /Nice/ ✗ Menyebut nice
- /wis/ ✓
- /hat/ ✗ 'r'jelas /'d' tdk terucap.
- /sik/ ✓
- /ˈbɪ.gəst/ ✓

5). Keisya Amel
———————

- /Nais/ ✓
- /wish/ ✗ sh tdk spt aliran udara
- /hard/ ✗ r terlalu jelas.
- /sik/ ✓
- /ˈbɪ.gəst/ ✓

6). Mardlah Lubis ——
- /Nais/ ✓
- /wish/ ✗ <u>sh</u> tdk seperti aliran udara
- /hard/ ✗ <u>r</u> terlalu jelas.
- /sik/ ✓
- /'bi·gest/ ✓

7). Mirza Dermawan ——
- /Nise/ ✗ menyebut nise
- /wis/ ✓
- /hart/ ✗ <u>r</u> terlalu timbul.
- /sik/ ✓
- /biges/ ✗ <u>st</u> tdk terdengar.

8). Natasych Wulandari ——
- /Nais/ ✓
- /wish/ ✗ <u>sh</u> tdk terdengar
- /Had/ ✓
- /sek/ ✗ 'i' diganti 'e'
- /'bi·gest/ ✓

9). Nomi Zahara ——
- /Nais/
- /wis/ ✗ 'h' tidak terdengar
- /had/ ✗ 'r' tidak terucap samar?
- /sik/ ✓
- /'bi·gest/ ✓

10). Salwa Nabila ——
- /Nais/ ✓
- /Wis/ ✗ <u>sh</u> tdk jelas
- /har/ ✗ tdk berakhir dgn bunyi 'd'
- /sik/ ✓
- /biges/ ✗ <u>st</u> tdk terucap.

11). Vanisah Fadillah ——
- /Nais/ ✓
- /wis/ ✗ <u>sh</u> tdk seperti aliran udara.
- /har/ ✗ tdk terdengar 'd'
- /sik/ ✓
- /'bi·gest/ ✓

12). Virly Aulya ————
- /Nais/ ✓
- /wis/ ✗ sh tdk jelas
- /hard/ ✗ r terlalu jelas.
- /sik/ ✓
- /'bi·gest/ ✓

13). Yola Artika Sari ————
- /Nais/ ✓
- /wis/ ✓
- /hard/ ✗ r terlalu jelas
- /sik/ ✓
- /'bi·gest/ ✓

14). Andini Siregar ————
- /Nice/ ✗ menyebut nise.
- /wish/ ✗ sh tdk seperti aliran udara.
- /hard/ ✗ r terlalu jelas.
- /sik/ ✓
- /'bi·gest/ ✓

15). Bella Safira ————
- /Nais/ ✓
- /wish/ ✗ sh tdk seperti aliran udara
- /har/ ✗ tdk terucap 'd'
- /sik/ ✓
- /'bi·gest/ ✓

16). Callista Zahra ————
- /Nais/ ✓
- /wish/ ✗ sh tdk spt aliran udara.
- /had/ ✗ r tdk terucap samar?
- /sik/ ✓
- /'bi·gest/ ✓

17). Dwi Aulia ————
- /Nais/ ✓
- /wish/ ✗ sh tdk spt aliran udara
- /har/ ✗ tdk terucap 'd'
- /sik/ ✓
- /'bi·gest/ ✓

18). Fatimah   Azzahra   ——
- /ŋaĩs/   ✓
- /wɪʃ/   ✓
- /haɪd/   ✓
- /sɪk/   ✓
- /'bɪ·gest/   ✓

19). Inayah   ——
- /ŋaĩs/   ✓
- /wɪʃ/   ✓
- /Haɪd/   ✓
- /sɪk/   ✓
- /'bɪ·gest/   ✓

20). Kanya Adinda Putri   ——
- /ŋaĩs/   ✓
- /wɪʃ/   ✓
- /had/   ✗   ɪ tdk terucap samar?
- /sɪk/
- /'bigest/   ✓

21). Luna Olivia   ——
- /ŋaĩs/   ✓
- /wɪʃ/   ✗   ʃh tidak terdengar
- /haɪd/   ✓
- /sɪk/   ✓
- /'bɪ·gest/   ✓

22). Melqisya Salsabila   ——
- /Nis/   ✗   'a' tidak terucap
- /wish/   ✗   ʃh tdk seperti aliran udara.
- /had/   ✗   ɪ tdk terucap samar?
- /sɪk/
- /'bɪ·gest/   ✓

23). Nur Ajizah   ——
- /ŋaĩs/   ✓
- /wɪʃ/   ✗   "h" tdk terdengar
- /had/   ✗   "r" tdk terucap samar?
- /sɪk/   ✓
- /'bɪ·gest/   ✓

24). Putri Anbayani   ——
- /ŋaĩs/   ✓
- /wɪs/   ✓
- /haɪd/   ✓
- /sɪk/   ✓
- /'bɪ·gest/   ✓

25) Shintya Adelia —
- /Nais/ ✓
- /wis/ ✗ 'h' tidak terdengar jelas.
- /ha:d/ ✓
- /sik/ ✓
- /'bi·gest/ ✓

26). Siti Nur Argilah —
- /Nais/ ✓
- /wish/ ✗ sh tidak spt aliran udara.
- /hard/ ✗ r terlalu jelas (menonjul)
- /sik/ ✓
- /'bi·gest/ ✓

27). Suci Ramadani Nasution —
- /Nais/ ✓
- /wis/ ✓
- /ha:d/ ✓
- /sek/ ✗ 'i' terganti 'e'
- /biggest/ ✗ 'g' tertekan /ditekan.

28). Syaqila Jaya Anggraini. —
- /Nais/ ✓
- /wish/ ✗ sh tdk seperti aliran udara
- /had/ ✗ r tdk terucap samar?
- /sik/ ✓
- /biges ✗ st tidak terdengar.

29). Tiara Lestari —
- /Nais/ ✓
- /wis/ ✓
- /ha:d/ ✓
- /sik/ ✓
- /biges/ ✗ st tdk terdengar

30). Tria Vika Sari —
- /Nais/ ✓
- /wis/ ✗ sh tdk spt aliran udara
- /ha:t/ ✓
- /sik/
- /biggest/ ✗ st tidak terdengar jelas g ditekan.

Appendix 5. Interview Sheet

1. **How does ELSA Speak help you understand your specific pronunciation mistakes and guide you to correct them?**

Answer 1: ELSA Speak gave me instant feedback on my frequent mispronunciation of "comfortable" by showing exactly which syllable to stress. This made me correct my error faster than traditional methods.

Answer 2: The app pointed out that I often drop the final consonant in words like "asked". After repeated practice, I'm now more aware of how to pronounce the whole word clearly.

2. **How effective is ELSA Speak in helping you differentiate between similar vowel sounds (e.g., "ship" vs. "sheep")?**

Answer 1: I often confused short vowels with long vowels, but ELSA Speak helped me train my ear to catch the differences, especially between "ship" and "sheep." Now, I can hear and pronounce them accurately.

Answer 2: Before ELSA Speak, I didn't know how subtle the differences between short and long vowels were. The app's feedback showed me how important the length of the vowel is in distinguishing words.

3. **What is your experience with ELSA Speak's feature that gives real-time feedback on pronunciation errors?**

Answer 1: The real-time feedback is incredibly helpful. I used to mispronounce "weather," but the app immediately corrected me and showed how to shape my mouth differently.

Answer 2: I found the instant feedback motivating. It allows me to correct mistakes in the moment, like when I said "thank" without properly pronouncing the "th" sound.

4. **What do you think about the accuracy of ELSA Speak's feedback on your pronunciation?**

Answer 1: I think the feedback is very accurate. It consistently highlights the same mistakes, which helps me know exactly where I need to improve.

Answer 2: The feedback is precise and useful. It pointed out subtle errors that I didn't even realize, like my inconsistent pronunciation of the "r" sound in "world."

5. **How has ELSA Speak improved your awareness of connected speech (e.g., how words link together in fluent conversation)?**

Answer 1: I used to separate every word too much when I spoke. ELSA Speak showed me how native speakers connect words, like saying "gonna" instead of "going to," which made my speech sound more natural.

Answer 2: ELSA Speak helped me realize that fluent speakers often link sounds, like the "t" in "don't" almost disappearing in fast speech. Now I try to incorporate this connected speech into my conversations.

6. **What role does the repetition feature in ELSA Speak play in mastering difficult sounds?**

Answer 1: The repetition feature has been crucial for me in learning the /r/ sound, which I found very hard. I would practice it multiple times until I could pronounce it correctly without thinking.

Answer 2: I struggled with the /v/ sound, so I used the repetition feature to keep practicing until I could pronounce words like "very" clearly. Without this feature, it would've taken me longer to improve.

7. **How does ELSA Speak help you manage difficult consonant clusters (e.g., "strength", "twelfth")?**

Answer 1: I found it difficult to pronounce "strength" because of the many consonants, but ELSA Speak guided me through each sound separately, which made it easier to pronounce clearly.

Answer 2: Words like "twelfth" were hard because of the final consonant cluster. ELSA Speak's repetition exercises helped me break down the sounds and pronounce them smoothly.

8. **How does ELSA Speak help you identify and improve weak areas in your pronunciation?**

Answer 1: ELSA Speak provides detailed feedback on specific sounds I struggle with, like /r/ and /l/. This targeted approach helps me focus on my weak points and improve them systematically.

Answer 2: The app tracks my progress over time and highlights areas where I frequently make mistakes. By seeing this data, I know exactly where to concentrate my practice efforts.

9. **What features of ELSA Speak do you believe enhance your overall English pronunciation skills the most?**
Answer 1: One key feature is the **real-time pronunciation feedback**. This feature listens to my speech and immediately tells me if I pronounced a word correctly or not, helping me correct my mistakes on the spot.

Answer 2:: The **daily challenges** feature motivates me to practice every day. These challenges keep the learning process fun and engaging, and I look forward to completing them

10. **What specific pronunciation challenges do you still face, and how does ELSA Speak help you address these challenges?**

Answer 1: I still struggle with the /v/ and /w/ sounds. ELSA Speak provides tailored exercises to practice these sounds repeatedly, which helps me improve gradually.

Answer 2: Pronouncing words with multiple consonants can be tricky for me. ELSA Speak's breakdown of each sound helps me practice until I feel comfortable with them.

11. **In what ways has ELSA Speak changed your perception of learning English pronunciation?**

Answer 1: I used to think pronunciation was something that could only be learned through conversation. ELSA Speak showed me that targeted practice is just as important.

Answer 2: ELSA Speak made me realize that pronunciation is a skill that can be developed through consistent practice. It's not just about speaking; it's about speaking correctly.

12. **How does ELSA Speak provide better pronunciation practice compared to traditional language classes?**

Answer 1: ELSA Speak allows me to practice pronunciation at my own pace, which isn't possible in a traditional classroom where the teacher sets the speed for everyone. This personalized approach helps me focus on my specific weaknesses.

Answer 2: In traditional classes, we often don't get enough individual feedback on our pronunciation. ELSA Speak provides immediate

corrections, which helps me understand and fix my mistakes right away

13. **Do you find using ELSA Speak enjoyable while improving your pronunciation skills? Why or why not?**

Answer 1: Absolutely! ELSA Speak turns learning into a game with its interactive exercises and daily challenges. I love that I can earn points and badges for my progress, which makes me feel accomplished. It's like leveling up in a video game, and that motivates me to practice regularly without it feeling like a chore.

Answer 2: Yes, I find it really enjoyable! The app incorporates fun elements like role-playing scenarios and themed exercises that reflect real-life situations. It feels less like studying and more like having a conversation with a friend. Plus, the instant feedback is exciting; I can hear the improvement in my pronunciation right away, which makes the whole experience rewarding and fun.

14. **In what ways does ELSA Speak motivate you to improve your pronunciation while keeping the learning process fun?**

Answer 1: The app tracks my progress and gives me scores, which motivates me to improve each time. The competitive element makes me want to practice more.

Answer 2: ELSA Speak's daily challenges and fun exercises keep me engaged. I look forward to completing them, which makes practicing my pronunciation enjoyable.

15. **After using ELSA Speak, how do you feel about your progress in English pronunciation, and what's your strategy for continued improvement?**

Answer 1: ELSA Speak has completely transformed my pronunciation. I'm now much more confident, especially with tricky sounds. I plan to keep using the app daily and also practice with native speakers whenever I can to push my fluency even further.

Answer 2: I,m thrilled with the progress I've made! ELSA Speak helped me correct mistakes I didn't even know I was making. Moving forward, I'll use it as part of my daily routine, but I also want to challenge myself by joining conversation clubs or practicing with friends.

Appendix 6. Questionnaires

Salwa Nabila

Vanisah Fadillah

Virly Aulya

Yola Artika Sari

Andini Siregar

Bella Safira

Callista Zahra

Dwi Aulia

Fatimah Azzahra

Inayah

Kanya Adinda Putri

Luna Olivia

Melqisya Salsabila

Nur Ajizah

Putri Andayani

Shintya Adelia

Siti Nur Aisyah

Suci Ramadani Nasution

Syaqila Jaya Anggraini

Tiara Lestari

Tria Vika Sari
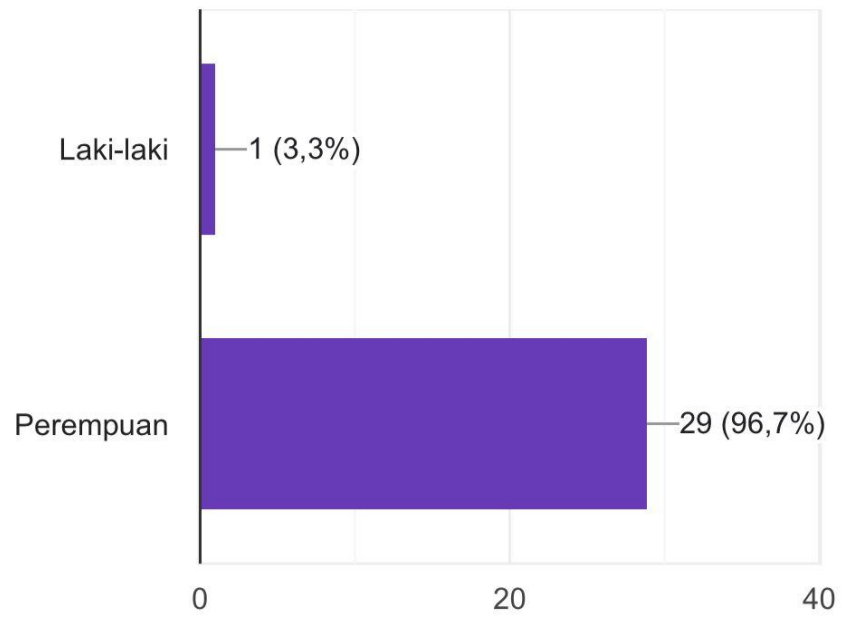
Berapa lama anda telah belajar Bahasa Inggris?

Salin diagram

30 jawaban
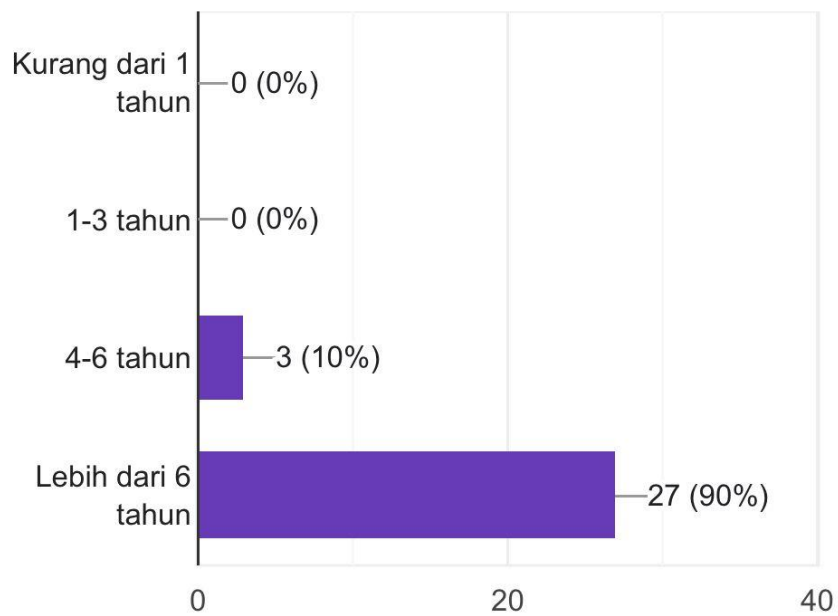
Bagaimana Anda menilai kemampuan pengucapan Bahasa Inggris Anda sebelum menggunakan ELSA Speak?

⟦ Salin diagram
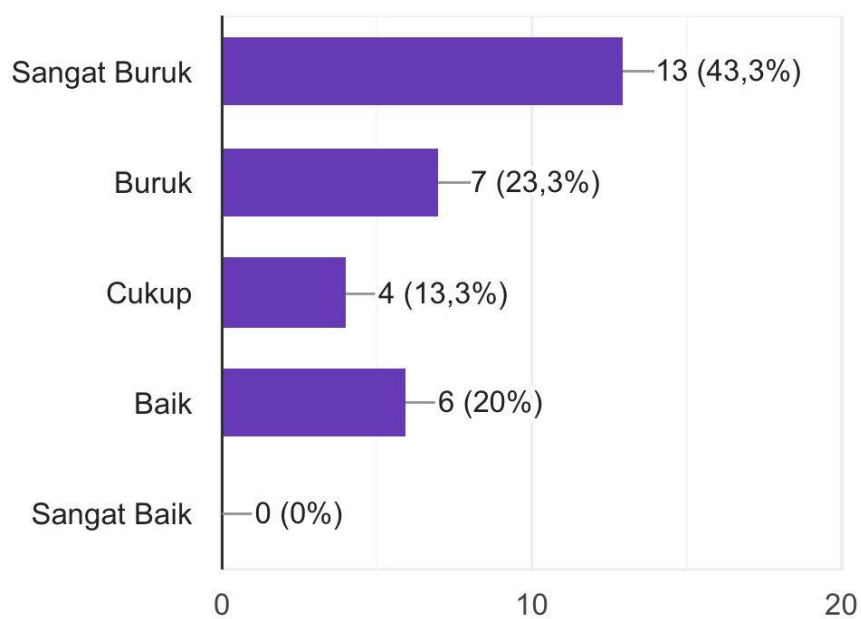
30 jawaban

Seberapa sering Anda merasa kesulitan dalam mengucapkan kata-kata dalam Bahasa Inggris secara jelas dan tepat?

📋 Salin diagram

30 jawaban

Kategori	Jumlah
Sangat Sering	14 (46,7%)
Sering	5 (16,7%)
Kadang-kadang	6 (20%)
Jarang	5 (16,7%)
Tidak Pernah	0 (0%)
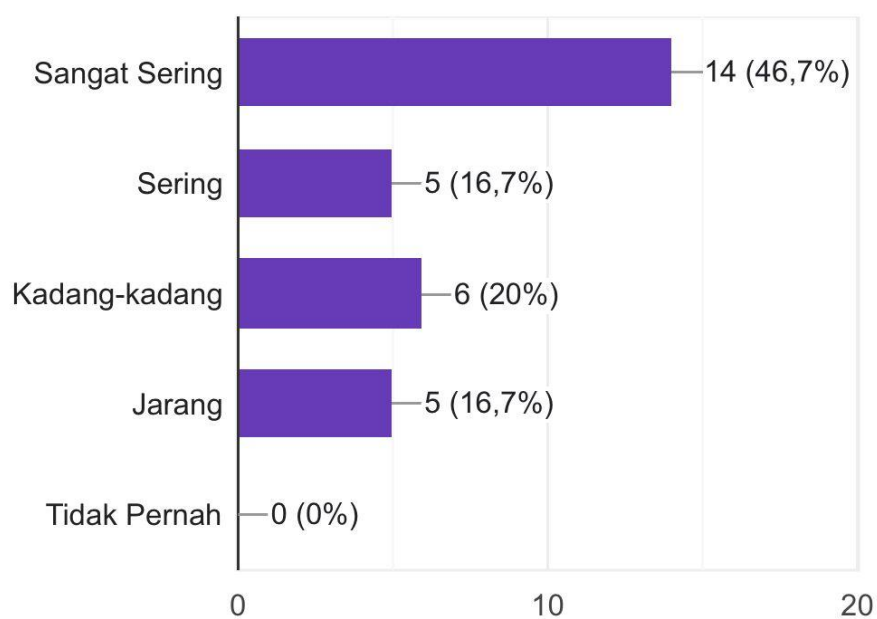
Apa tantangan utama yang Anda hadapi dalam memperbaiki pengucapan Bahasa Inggris sebelum menggunakan ELSA Speak?

Salin diagram

30 jawaban

Apakah anda pernah menggunakan metode lain untuk memperbaiki pengucapan Bahasa Inggris sebelum ELSA Speak? Metode apa yang anda gunakan sebelumnya?

Salin diagram

30 jawaban
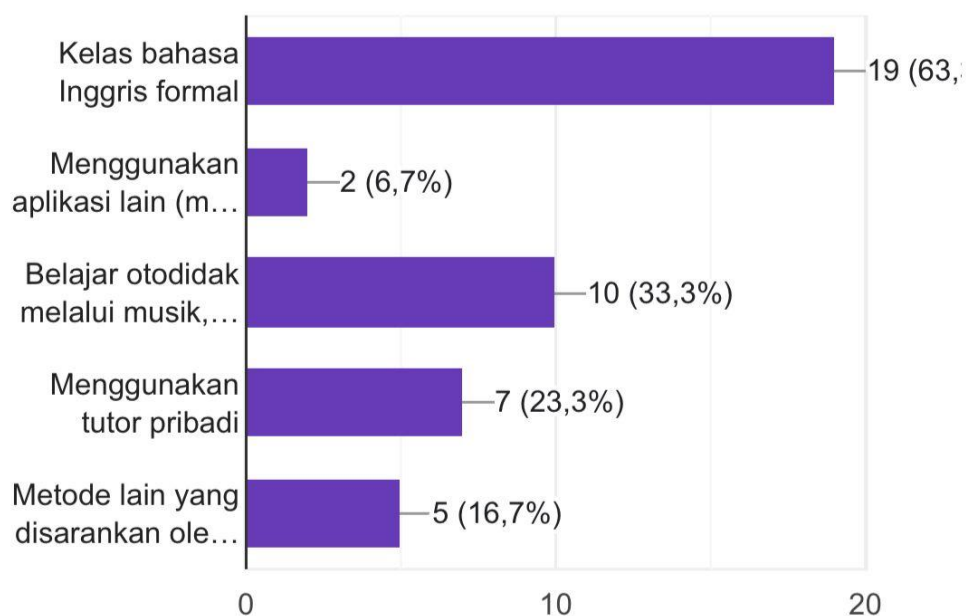
Seberapa percaya diri Anda berbicara Bahasa Inggris di depan umum sebelum menggunakan ELSA Speak?

⬜ **Salin diagram**
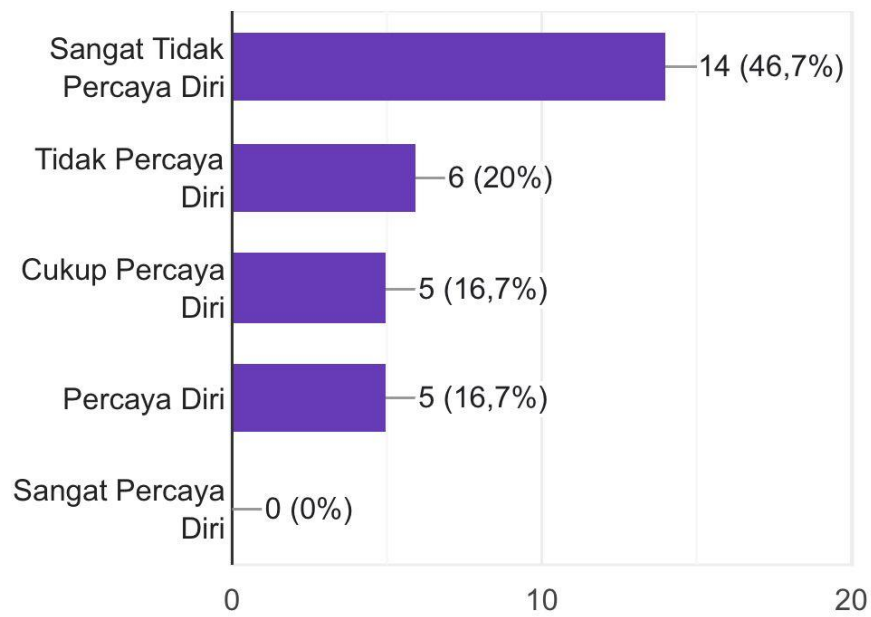
30 jawaban

Pengalaman Selama Menggunakan ELSA Speak, Berapa lama Anda telah menggunakan aplikasi ELSA Speak?

Salin diagram
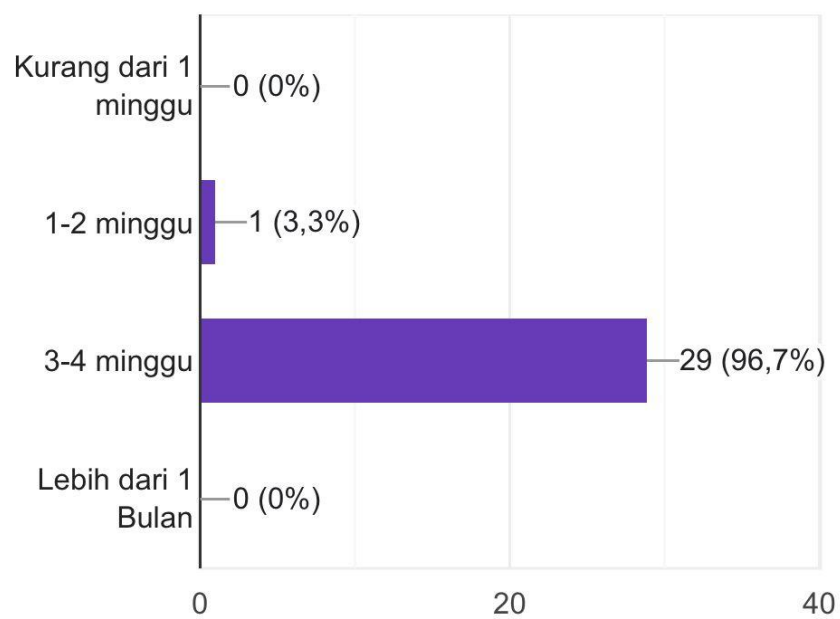
30 jawaban

Berapa lama rata-rata setiap sesi Anda menggunakan ELSA Speak?

Salin diagram
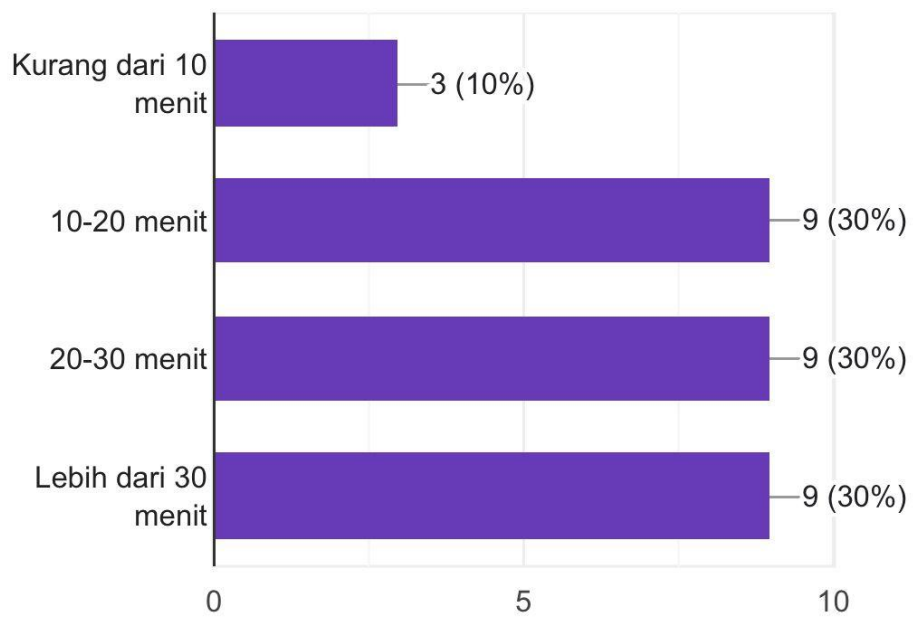
30 jawaban

Fitur apa yang paling sering Anda gunakan dalam ELSA Speak?

📋 **Salin diagram**
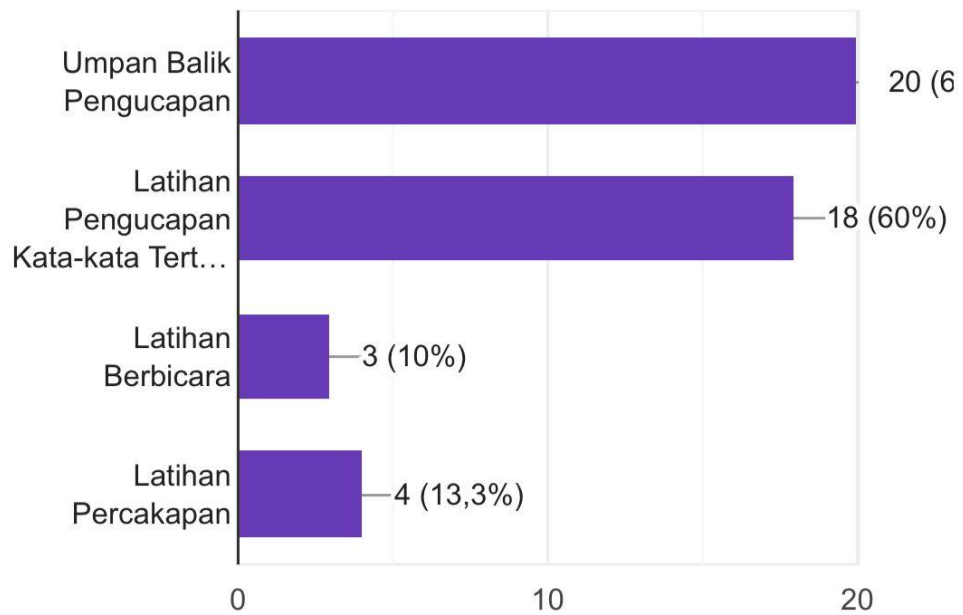
30 jawaban

Bagaimana Anda menilai kemampuan Anda dalam mengucapkan connected speech (misalnya, 'going to' menjadi 'gonna') sebelum menggunakan ELSA Speak?

Salin diagram
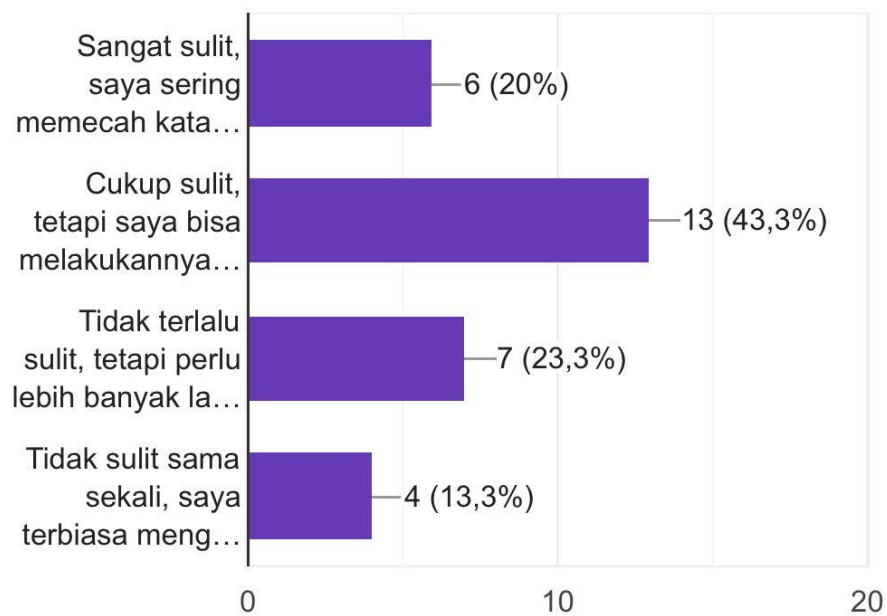
30 jawaban

Seberapa penting menurut Anda pemahaman dan penggunaan minimal pairs (kata-kata yang berbeda hanya oleh satu suara, seperti 'ship' dan 'sheep') dalam meningkatkan pengucapan sebelum menggunakan ELSA Speak?

Salin diagram

29 jawaban
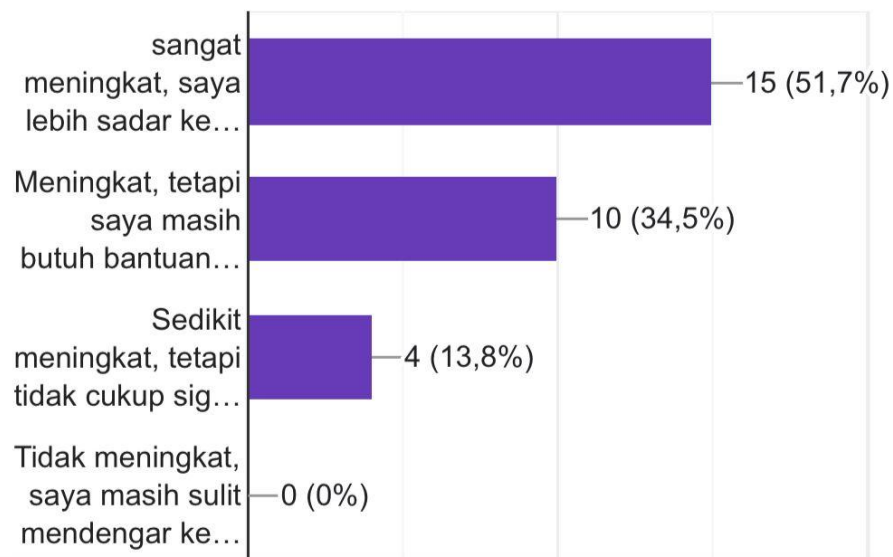
Apakah Anda merasa lebih percaya diri berbicara Bahasa Inggris setelah menggunakan ELSA Speak?

Salin diagram
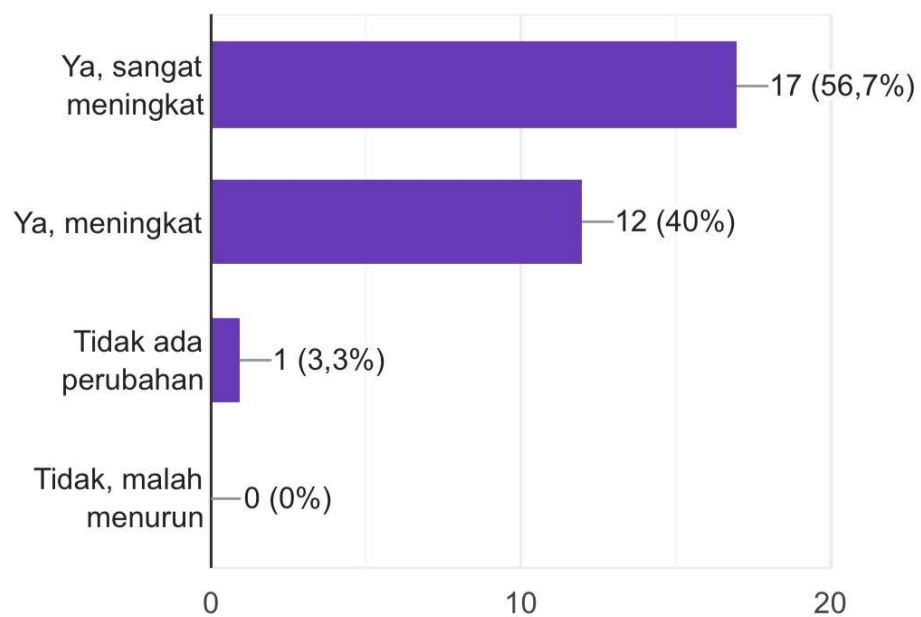
30 jawaban

kesalahan pengucapan apa yang berhasil Anda perbaiki?

🔲 **Salin diagram**

30 jawaban
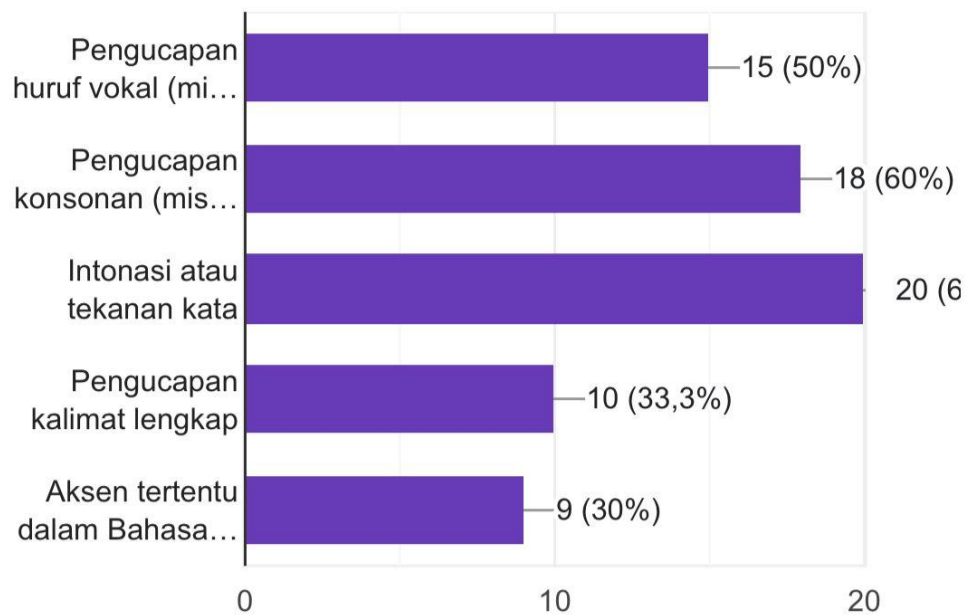
Seberapa signifikan perbedaan dalam hal peningkatan pengucapan antara penggunaan ELSA Speak dan metode konvensional (misalnya, kelas tatap muka atau belajar mandiri menggunakan buku)?
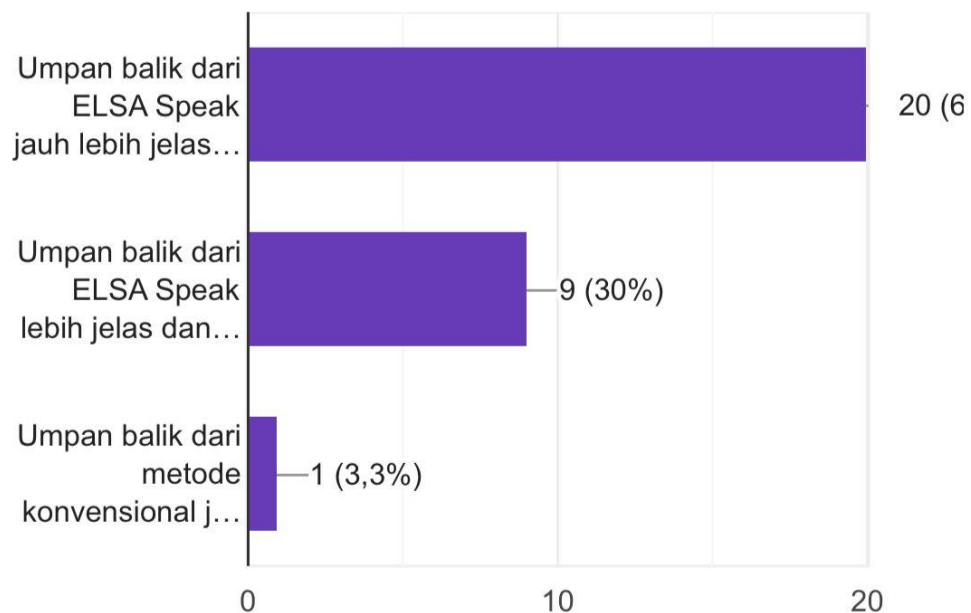
Salin diagram

30 jawaban
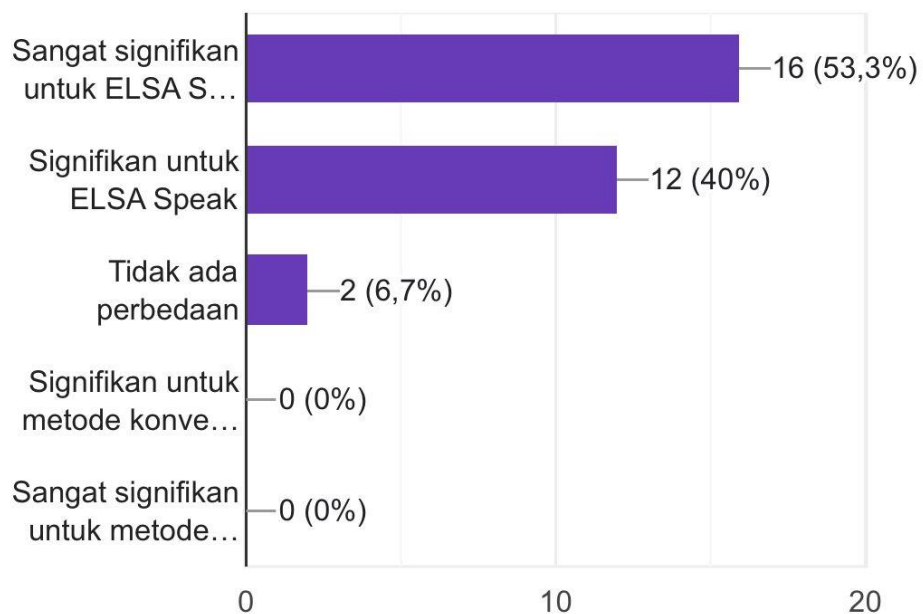
Bagaimana Anda menilai kualitas umpan balik yang diberikan oleh ELSA Speak dibandingkan dengan metode konvensional (misalnya, umpan balik dari guru atau tutor)?
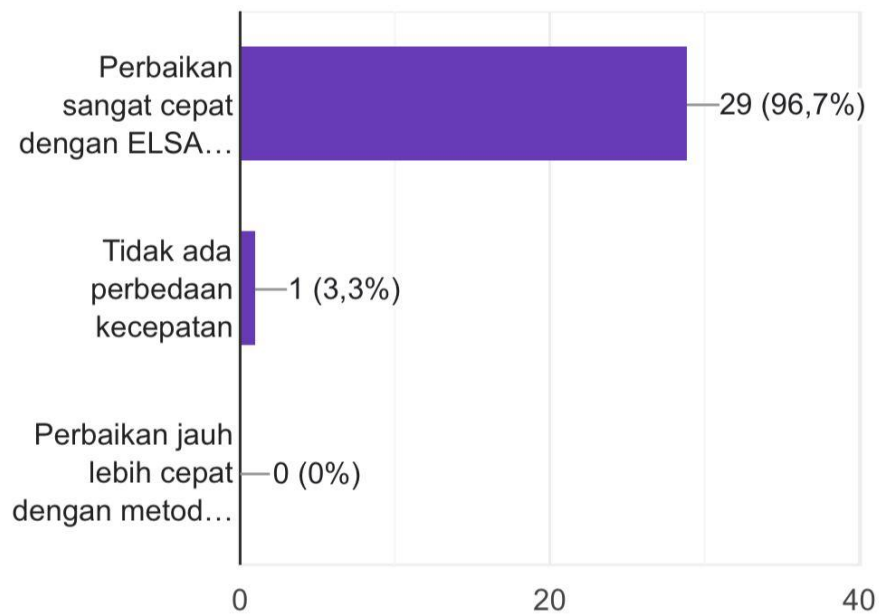
30 jawaban

Dalam aspek kecepatan peningkatan pengucapan, seberapa cepat Anda melihat perbaikan setelah menggunakan ELSA Speak dibandingkan dengan metode konvensional?
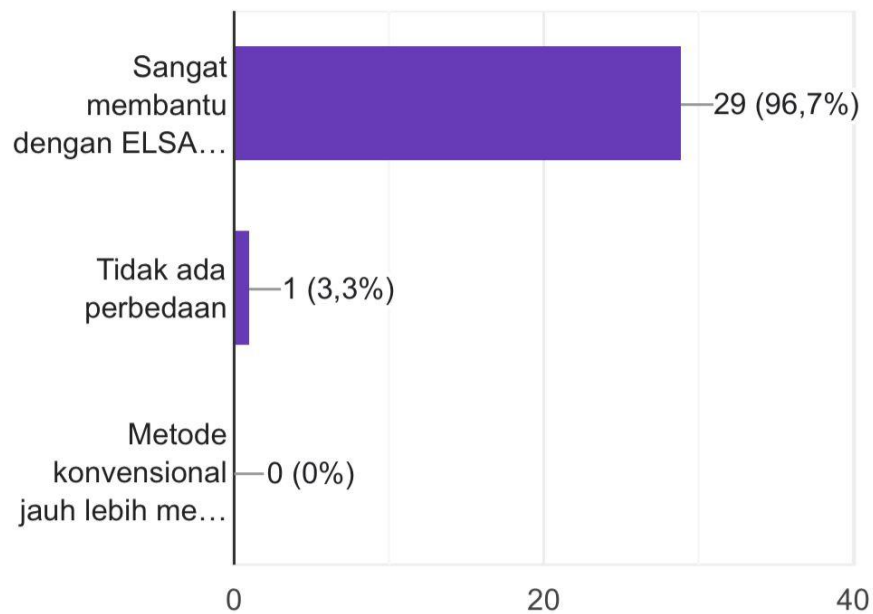
Salin diagram

30 jawaban

Apakah Anda merasa penggunaan ELSA Speak membantu Anda lebih siap menghadapi situasi nyata dalam berkomunikasi menggunakan Bahasa Inggris dibandingkan metode konvensional?
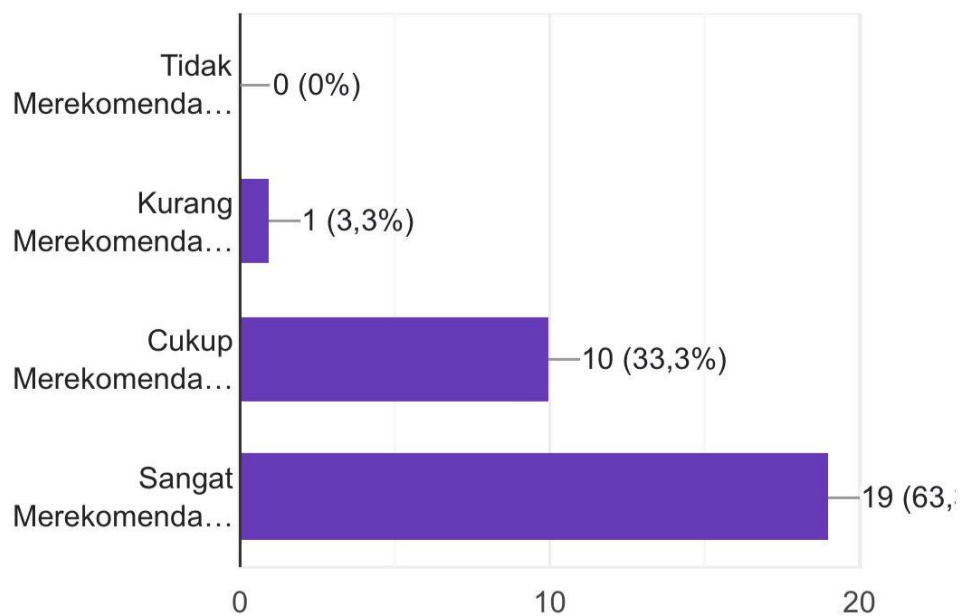
Salin diagram

30 jawaban

Seberapa besar kemungkinan Anda merekomendasikan ELSA Speak kepada orang lain yang ingin memperbaiki pengucapan Bahasa Inggris mereka?
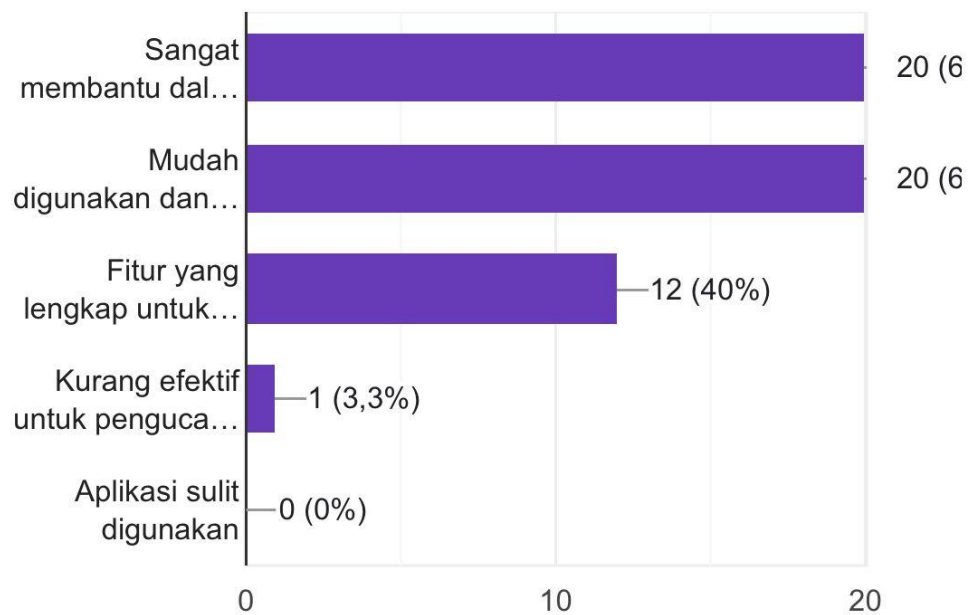
☐ **Salin diagram**

30 jawaban

Apa alasan utama Anda merekomendasikan atau tidak merekomendasikan ELSA Speak?
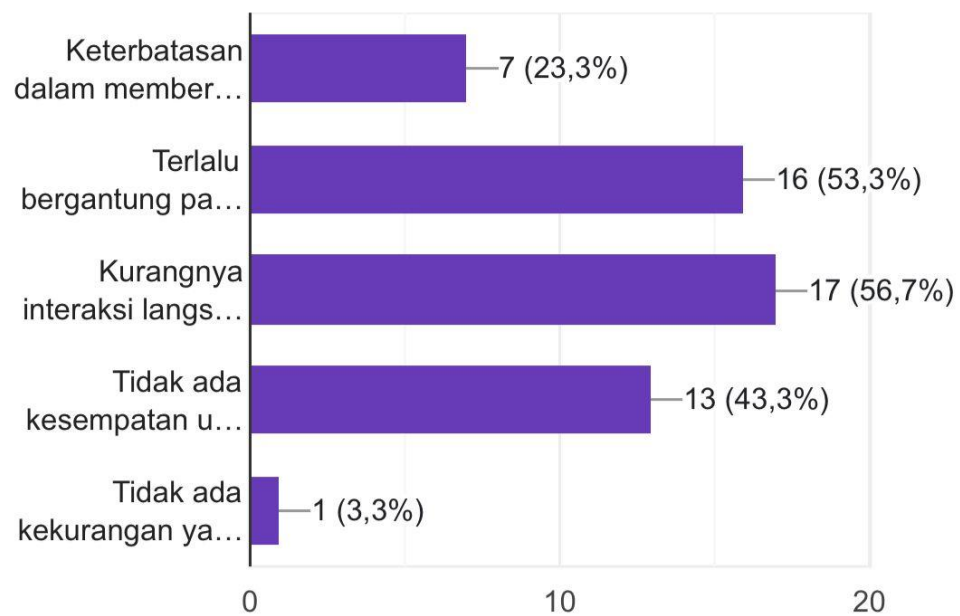
Salin diagram

30 jawaban

Menurut Anda, apakah ada kekurangan dalam penggunaan aplikasi ELSA Speak untuk meningkatkan keterampilan pengucapan Bahasa Inggris?
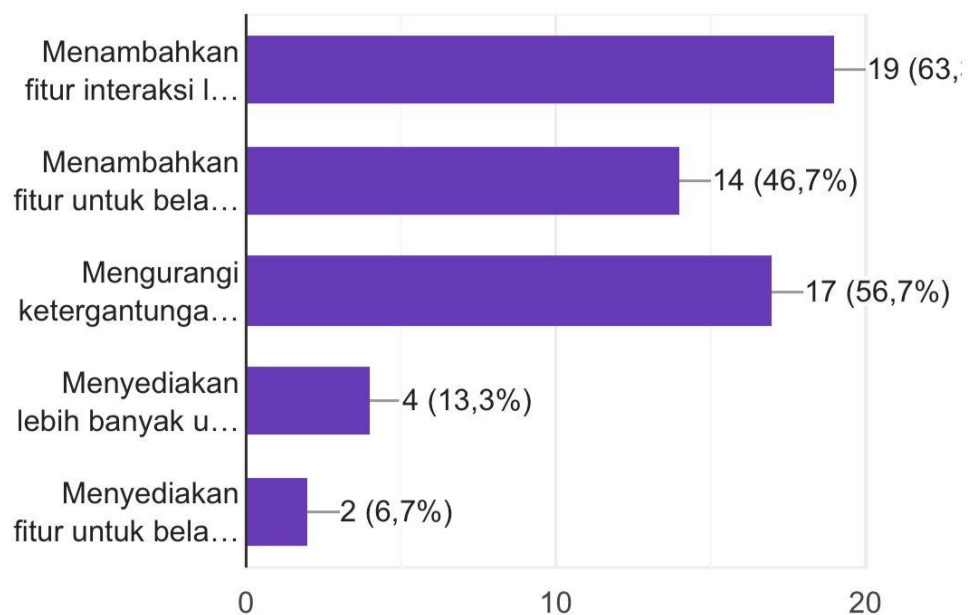
30 jawaban

Apakah ada saran Anda untuk pengembangan aplikasi ELSA Speak agar lebih efektif dalam membantu meningkatkan keterampilan pengucapan Bahasa Inggris di masa depan?

📋 **Salin diagram**

30 jawaban

Appendix 7. SPSS Outputs

Descriptives

```
[DataSet1]
```

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test	30	0	40	17.33	14.606
Post-Test	30	40	100	65.33	17.367
Valid N (listwise)	30				

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Y
  /METHOD=ENTER X
  /SAVE RESID.
```

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Pre-Test[b]	.	Enter

a. Dependent Variable: Post-Test

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.004[a]	.000	-.036	17.674

a. Predictors: (Constant), Pre-Test

b. Dependent Variable: Post-Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		30
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	17.36678531
Most Extreme Differences	Absolute	.286
	Positive	.286
	Negative	-.211
Test Statistic		.286
Asymp. Sig. (2-tailed)		.000[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

```
NEW FILE.
DATASET NAME DataSet2 WINDOW=FRONT.
NPAR TESTS
  /M-W= Results BY Group(1 2)
  /MISSING ANALYSIS.
```

NPar Tests

[DataSet2]

Mann-Whitney Test

Ranks

	Group	N	Mean Rank	Sum of Ranks
Test Results	Pre-Test	30	16.00	480.00
	Post-Test	30	45.00	1350.00
	Total	60		

Test Statistics^a

	Test Results
Mann-Whitney U	15.000
Wilcoxon W	480.000
Z	-6.566
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: Group

Appendix 8. Documentation for Downloading and viewing Elsa Speak

Appendix 9. Documentation of Interviws

Appendix 10. Documenting of Answering Questionnaires

Appendix 11. Documenting for Inducting Pre and Post-Test

1. Pre Test

2. Post Test

Appendix 12. K1 Form

MAJELIS PENDIDIKAN TINGGI
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
Jl. Kapten Mukhtar Basri No. 3 Telp. (061) 6619056 Medan 20238
Website: http://www.fkip.umsu.ac.id E-mail: fkip@umsu.ac.id

Form : K – 1

Kepada Yth: Bapak Ketua & Sekretaris
Program Studi Pendidikan Bahasa Inggris
FKIP UMSU

Perihal : **PERMOHONAN PERSETUJUAN JUDUL SKRIPSI**

Dengan hormat yang bertanda tangan di bawah ini:

Nama Mahasiswa   : **Nadya Azrani Siahaan**
NPM   : 2002050048
Prog. Studi   : Pendidikan Bahasa Inggris
Kredit Kumulatif   : 115 SKS   IPK= 3.65

Persetujuan Ket./Sekret. Prog. Studi	Judul yang Diajukan	Disahkan Oleh Dekan Fakultas
22/01/2024	Assesing the Efficacy of AI-Driven ELSA in Enhancing Pronunciation Skills through EFL (English Foreign Language) Learners in Vocational High School	
	Integrating Artificial Intelligence Mondly in English Language Teaching: A Comparative Analysis of Students Engagement and Learning Outcomes	
	Enhancing English Language Proficiency through FluentU Application Video-Based Learning in Vocational High School	

Demikianlah permohonan ini saya sampaikan untuk dapat pemeriksaan dan persetujuan serta pengesahan, atas kesediaan Bapak saya ucapkan terima kasih.

Medan, 22 Januari 2024
Hormat Pemohon,

Nadya Azrani Siahaan

Keterangan:

Dibuat rangkap 3   : -   Untuk Dekan/Fakultas
                     -   Untuk Ketua/Sekretaris Program Studi
                     -   Untuk Mahasiswa yang bersangkutan

Appendix 13. K2 Form

MAJELIS PENDIDIKAN TINGGI
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
Jl. Kapten Mukhtar Basri No. 3 Telp. (061) 6619056 Medan 20238
Website: http://www.fkip.umsu.ac.id E-mail: fkip@umsu.ac.id

Form K-2

Kepada : Yth. Bapak Ketua/Sekretaris
Program Studi Pendidikan Bahasa Inggris
FKIP UMSU

Assalamu'alaikum Wr, Wb

Dengan hormat, yang bertanda tangan dibawah ini:

Nama Mahasiswa	: **Nadya Azrani Siahaan**
NPM	: 2002050048
Prog. Studi	: Pendidikan Bahasa Inggris

Mengajukan permohonan persetujuan proyek proposal/risalah/makalah/skripsi sebagai tercantum di bawah ini dengan judul sebagai berikut:

Assesing the Efficacy of AI-Driven ELSA in Enhancing Pronunciation Skills through EFL (English Foreign Language) Learners in Vocational High School

Sekaligus saya mengusulkan/menunjuk Bapak/Ibu:

Dra. Diani Syahputri, M.Hum.

Sebagai Dosen Pembimbing Proposal/Risalah/Makalah/Skripsi saya.

Demikianlah permohonan ini saya sampaikan untuk dapat pengurusan selanjutnya. Akhirnya atas perhatian dan kesediaan Bapak/ Ibu saya ucapkan terima kasih.

Medan, 22 Januari 2024
Hormat Pemohon,

Nadya Azrani Siahaan

Keterangan
Dibuat rangkap 3 :
- Untuk Dekan / Fakultas
- Untuk Ketua / Sekretaris Prog. Studi
- Untuk Mahasiswa yang Bersangkutan

Appendix 14. K3 Form

FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
Jln. Mukthar Basri BA No. 3 Telp. 6622400   Medan 20217   Form : K3

Nomor   : 0233/II.3/UMSU-02/F/2024
Lamp   : ---
H a l   : **Pengesahan Proyek Proposal**
                 Dan Dosen Pembimbing

Bismillahirahmanirrahim
Assalamu'alaikum Wr. Wb

Dekan Fakultas Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Sumatera Utara menetapkan Perpanjangan proposal/risalah/makalah/skripsi dan dosen pembimbing bagi mahasiswa yang tersebut di bawah ini :.

Nama   : **Nadya Azrani Siahaan**
N P M   : 2002050048
Program Studi   : Pendidikan Bahasa Inggris
Judul Penelitian : **Assesing The Efficacy Of AI-Driven ELSA in Enhancing**
                    Pronunciation Skills Through EFL (English Foreign Language)
                    Learners in Vocational High School.

Pembimbing   : **Dr. Diani Syahputri, M. Hum.**

Dengan demikian mahasiswa tersebut di atas diizinkan menulis proposal/risalah/makalah/skripsi dengan ketentuan sebagai berikut :

    1.Penulis berpedoman kepada ketentuan yang telah ditetapkan oleh Dekan
    2.Proyek proposal/risalah/makalah/skripsi dinyatakan **BATAL** apabila tidak selesai pada waktu yang telah ditentukan.
    3.Masa kadaluwarsa tanggal : **23 Januari 2025**

Medan 11 Rajab   1445 H
      23 Januari   2024 M

Wassalam
Dekan

Dra. Hj. Syamsuyurnita,MPd.
NIDN : 0004066701

Dibuat rangkap 5 (lima) :
1.Fakultas (Dekan)
2.Ketua Program Studi
3.Pembimbing Materi dan Teknis
4.Pembimbing Riset
5.Mahasiswa yang bersangkutan :
    WAJIBMENGIKUTISEMINAR

Appendix 15. Berita Acara Bimbingan Proposal

MAJELIS PENDIDIKAN TINGGI
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
UMSU Jl. Kapten Mukhtar Basri No. 3 Telp. (061) 6619056 Medan 20238
Website: http://www.fkip.umsu.ac.id E-mail: fkip@umsu.ac.id

BERITA ACARA BIMBINGAN PROPOSAL

Perguruan Tinggi	: Universitas Muhammadiyah Sumatera Utara
Fakultas	: Keguruan dan Ilmu Pendidikan
Jurusan/Prog. Studi	: Pendidikan Bahasa Inggris
Nama	: Nadya Azrani Siahaan
NPM	: 2002050048
Program Studi	: Pendidikan Bahasa Inggris
Judul Skripsi	: Assessing the Efficacy of AI-Driven Elsa in Enhancing Pronunciation Skills Through EFL (English Foreign Language) Learners in Vocational High School

Tanggal	Deskripsi Hasil Bimbingan Proposal	Tanda Tangan
7-7-2024	Table of contents, chapter I, II, III	
10-7-2024	Previous research references	
30-7-2024	Background of the study, scope and limititin	
	Review of literatur, Research Design, References	
31-7-2024	Conceptual frame work.	
1-8-2024	Technich for typing	
2-8-2024	Acc untuk diseminarkan	

Diketahui/Disetujui,
Ketua Prodi Pendidikan Bahasa Inggris

Medan,   Agustus 2024

Dosen Pembimbing

(Dr. Pirman Ginting, S.Pd., M.Hum.)

(Dra. Diani Syahputri, M.Hum.)

Appendix 16. Berita Acara Seminar Proposal

MAJELIS PENDIDIKAN TINGGI
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
Jl. Kapten Mukhtar Basri No. 3 Medan 20238 Telp. 061-6622400 Ext, 22, 23, 30
Website: http://www.fkip.umsu.ac.id E-mail: fkip@umsu.ac.id

BERITA ACARA SEMINAR PROPOSAL

Pada hari ini Kamis tanggal 08 Bulan Agustus Tahun 2024 diselenggarakan seminar prodi Pendidikan Bahasa Inggris menerangkan bahwa :

Nama Lengkap	: Nadya Azrani Siahaan
NPM	: 2002050048
Program Studi	: Pendidikan Bahasa Inggris
Judul Skripsi	: Assessing the Efficacy of AI-Driven Elsa in Enhancing Pronunciation Skills through EFL (English Foreign Language) Learners in Vocational High School

No	Masukan dan Saran
Judul	
Bab I	explain the current study, what is AI-Driven Elsa, How, why and what is about AI-Driven Elsa, limit the topic. How to apply Elsa.
Bab II	
Bab III	Why do choose the location? I am table. (what, How, why). Technique for collecting data (what is the feature for collecting, why use the technique, what do you analyze.
Lainnya	
Kesimpulan	[ ] Disetujui [ ] Ditolak [✓] Disetujui Dengan Adanya Perbaikan

Dosen Pembahas

(Dr. Pirman Ginting, S.Pd., M.Hum.)

Dosen Pembimbing

(Dra. Diani Syahputri, M.Hum.)

Panitia Pelaksana
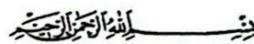
Ketua

(Dr. Pirman Ginting, S.Pd., M.Hum.)

Sekretaris

(Rita Harisma, S.Pd., M.Hum.)

Appendix 17. Lembar Pengesahan Hasil Seminar Proposal

MAJELIS PENDIDIKAN TINGGI
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
Jl. Kapten Mukhtar Basri No. 3 Medan 20238 Telp. 061-6622400 Ext, 22, 23, 30
Website: http://www.fkip.umsu.ac.id E-mail: fkip@umsu.ac.id

LEMBAR PENGESAHAN HASIL SEMINAR PROPOSAL

Proposal yang sudah diseminar oleh mahasiswa di bawah ini:

Nama Lengkap	: Nadya Azrani Siahaan
NPM	: 2002050048
Program Studi	: Pendidikan Bahasa Inggris
Judul Skripsi	: Assessing the Efficacy of AI-Driven Elsa in Enhancing Pronunciation Skills through EFL (English Foreign Language) Learners in Vocational High School

Pada hari Kamis tanggal 08, bulan Agustus tahun 2024 sudah layak menjadi proposal skripsi.

Medan, 8 Agustus 2024

Disetujui oleh:

Dosen Pembahas   Dosen Pembimbing

(Dr. Pirman Ginting, S.Pd., M.Hum.)   (Dra. Diani Syahputri, M.Hum.)

Diketahui oleh
Ketua Program Studi,

(Dr. Pirman Ginting, S.Pd., M.Hum.)

Appendix 18. Pernyataan Keaslian Skripsi

MAJELIS PENDIDIKAN TINGGI
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
Jl. Kapten Mukhtar Basri No.3 Telp.(061)6619056 Medan 20238
Website : ww.fkip.umsu.ac.id E-mail : fkip@umsu.ac.id

PERNYATAAN KEASLIAN SKRIPSI

بِسْــــــــــــــــمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Saya yang bertanda tangan dibawah in:

Nama Lengkap   : Nadya Azrani Siahaan
NPM   : 2002050048
Program Studi   : Pendidikan Bahasa Inggris
Judul Skripsi   : Assessing the Efficacy of Ai-Driven Elsa in Enhancing
                      Pronunciation Skills through EFL (English Foreign
                      Language) Learners in Vocational High School

Dengan ini menyatakan bahwa skripsi saya yang berjudul "Assessing the Efficacy of Ai-Driven Elsa in Enhancing Pronunciation Skills through EFL (English Foreign Language) Learners in Vocational High School . Adalah benar bersifat asli (original), bukan hasil menyadur mutlak dari karya orang lain.
Bilamana dikemudian hari ditemukan ketidaksesuaian dengan pernyataan ini, maka saya bersedia dituntut dan diproses sesuai dengan ketentuan yang berlaku di Universitas Muhamamdiyah Sumatera Utara

Demikian pernyataan ini dengan sesungguhnya dan dengan sebenar-benarnya.

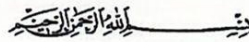Medan,   Oktober 2024
Hormat saya
Yang membuat pernyataan,

Nadya Azrani Siahaan

Appendix 19. Berita Acara Skripsi

MAJELIS PENDIDIKAN TINGGI
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
Jl. Kapten Mukhtar Basri No. 3 Telp. (061) 6619056 Medan 20238
Website: http://www.fkip.umsu.ac.id E-mail: fkip@umsu.ac.id

BERITA ACARA BIMBINGAN SKRIPSI

Perguruan Tinggi	: Universitas Muhammadiyah Sumatera Utara
Fakultas	: Keguruan dan Ilmu Pendidikan
Jurusan/Prog. Studi	: Pendidikan Bahasa Inggris
Nama	: Nadya Azrani Siahaan
NPM	: 2002050048
Program Studi	: Pendidikan Bahasa Inggris
Judul Skripsi	: Assessing the Efficacy of Ai-Driven Elsa in Enhancing Pronunciation Skills Through EFL (English Foreign Language) Learners in Vocational High School

Tanggal	Deskripsi Hasil Bimbingan Skripsi	Tanda Tangan
1-10-2024	Abstract, Acknowledgements, Table of Contents	
	Introduction, Review of Literature, Research Method, Data collection, Data Analysis, references	
10-10-2024	Abstract, Acknowledgements, Introduction formulation of the problem, significance of the ss	
11-10-2024	Review of Literature, Previous study.	
12-10-2024	Acknowledgement, Research method, data collection, References.	
13-10-2024	Tables	
14-10-2024	Acc untuk di sidang kan.	

Medan, 18 Oktober 2024

Diketahui oleh:
Ketua Prodi

Dosen Pembimbing

(Dr. Pirman Ginting, S.Pd., M.Hum.)

(Dra. Hj. Diani Syahputri, M.Hum.)

Appendix 20. Lembar Pengesahan Skripsi

MAJELIS PENDIDIKAN TINGGI
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
Jl. Kapten Mukhtar Basri No. 3 Telp. (061) 6619056 Medan 20238
Website: http://www.fkip.umsu.ac.id E-mail: fkip@umsu.ac.id

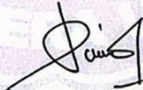**LEMBAR PENGESAHAN SKRIPSI**

Skripsi ini diajukan oleh mahasiswa di bawah ini:

Nama   : Nadya Azrani Siahaan
NPM   : 2002050048
Program Studi : Pendidikan Bahasa Inggris
Judul Skripsi : Assessing the Efficacy of Ai-Driven Elsa in Enhancing Pronunciation Skills Through EFL (English Foreign Language) Learners in Vocational High School

sudah layak disidangkan.

Medan, 18 Oktober 2024
Disetujui oleh:
Pembimbing

Dra. Hj. Diani Syahputri, M.Hum.

Diketahui oleh:

Dekan   Ketua Program Studi

Dra. Hj. Syamsuyurnita, M.Pd.   Dr. Pirman Ginting, S.Pd, M.Hum.

Appendix 21. Keterangan Bebas Pustaka

MAJELIS PENDIDIKAN TINGGI PENELITIAN & PENGEMBANGAN PIMPINAN PUSAT MUHAMMADIYAH
UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
PERPUSTAKAAN

Terakreditasi A Berdasarkan Ketetapan Perpustakaan Nasional Republik Indonesia No. 00059/LAP.PT/IX.2018
Pusat Administrasi : Jalan Kapten Mukhtar Basri No. 3 Medan 20238 Telp. (061) 66224567
NPP. 1271302D1000003 ☎ http://perpustakaan.umsu.ac.id ✉ perpustakaan@umsu.ac.id 🌐 perpustakaan_umsu

SURAT KETERANGAN
Nomor: 03202/KET/II.10-AU/UMSU-P/M/2024

Berdasarkan hasil pemeriksaan data pada Sistem Perpustakaan, maka Kepala Perpustakaan Universitas Muhammadiyah Sumatera Utara dengan ini menerangkan :

Nama	:	Nadya Azrani Siahaan
NPM	:	2002050048
Fakultas	:	Keguruan dan Ilmu Pendidikan
Jurusan/ P.Studi	:	Pendidikan Bahasa Inggris

telah menyelesaikan segala urusan yang berhubungan dengan Perpustakaan Universitas Muhammadiyah Sumatera Utara Medan.

Demikian surat keterangan ini diperbuat untuk dapat dipergunakan sebagaimana mestinya.

Medan, *8 Rabiul Akhir 1446 H*
12 Oktober 2024 M
Kepala Perpustakaan,

Dr. Muhammad Arifin, M.Pd.

Appendix 22. Hasil Pemeriksaan Plagiasi

FILE ASSESSING THE EFFICACY OF AI-DRIVEN ELSA IN ENHANCING PRONUNCIATION SKILLS THROUGH EFL (ENGLISH FOREIGN LANGUAGE) LEARNERS IN VOCATIONAL HIGH SCHOOL.docx

ORIGINALITY REPORT

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4	Emilia Elsani, Runi Salsabila, Muhammad Fikri Indika Putra, Naba Khilma Nabila, Desi Nahartini. "The Effect of Using Elsa Speak App for First-Semester Students' English Speaking Proficiency", EDUKATIF : JURNAL ILMU PENDIDIKAN, 2023 Publication	<1%
5	core.ac.uk Internet Source	<1%
6	oink.elrellano.com Internet Source	<1%

Appendix 23. Surat Izin Riset

MAJELIS PENDIDIKAN TINGGI PENELITIAN & PENGEMBANGAN PIMPINAN PUSAT MUHAMMADIYAH

UNIVERSITAS MUHAMMADIYAH SUMATERA UTARA
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN

UMSU Terakreditasi Unggul Berdasarkan Keputusan Badan Akreditasi Nasional Perguruan Tinggi No. 1913/SK/BAN-PT/Ak.KP/PT/XI/2022

Pusat Administrasi: Jalan Mukhtar Basri No. 3 Medan 20238 Telp. (061) 6622400 - 66224567 Fax. (061) 6625474 - 6631003

🌐 https://fkip.umsu.ac.id ✉ fkip@umsu.ac.id   📘 umsumedan   📷 umsumedan   🐦 umsumedan   ▶ umsumedan

Bila menjawab surat ini agar disebutkan nomor dan tanggalnya

Nomor	:2161 /II.3/UMSU-02/F/2024	Medan, 17 Shafar 1446 H
Lamp	: ---	22 Agustus 2024 M

H a l   : **Izin Riset**

Kepada : Yth. Bapak/Ibu Kepala
SMK Yaspend Gema Buana
Di
Tempat.

Bismillahirahmanirrahim
Assalamu'alaikum Wr. Wb

Wa ba'du semoga kita semua sehat wal'afiat dalam melaksanakan tugas sehari-hari sehubungan dengan semester akhir bagi mahasiswa wajib melakukan penelitian/riset untuk penulisan Skripsi sebagai salah satu syarat penyelesaian Sarjana Pendidikan, maka kami mohon kepada Bapak/ibu memberikan izin kepada mahasiswa kami dalam melakukan penelitian /riset ditempat Bapak/ibu pimpin. Adapun data mahasiswa tersebut di bawah ini :

Nama	:	**Nadya Azrani Siahaan**
N P M	:	2002050048
Program Studi	:	Pendidikan Bahasa Inggris
Judul Penelitian	:	**Assessing the Efficacy of AI-Driven Elsa in Enhancing Pronunciation Skills Through EFL (English Foreign Language) Learners in Vocational High School.**

Demikian hal ini kami sampaikan, atas perhatian dan kesediaan serta kerjasama yang baik dari Bapak/ibu kami ucapkan banyak terima kasih, Akhirnya selamat sejahteralah kita semuanya. Amin.

Wassalam
Dekan

Dra. Hj. Syamsuyurnita, M.Pd.
NIDN : 0004066701

Appendix 24. Surat Keterangan Selesai Riset

SEKOLAH MENENGAH KEJURUAN

SMK SWASTA "GEMA BUWANA"

NSS : 532070106088   NPSN : 69857921

Jln. Gambir Pasar VIII Gg. Adil Desa Sei Rotan
Kec. Percut Sei Tuan Kab. Deli Serdang
e-mail : smkgemabuwana@gmail.com

Nomor	: 498 / SMA-GB / IX / 2024	Deli Serdang, 07 September 2024
Lampiran	: -	Kepada Yth :
Hal	: Balasan Izin Riset	Dekan Fakultas Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Sumatera Utara Medan

Di

Tempat

Sehubungan dengan surat dari Fakultas Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Sumatera Utara, Nomor : 2161 / II.3 / UMSU-02 / F / 2024 Hal : Izin Mengadakan Penelitian / Izin Riset, maka Kepala SMK Swasta Gema Buwana menerangkan dengan ini nama mahasiswa di bawah ini :

Nama   : NADYA AZRANI SIAHAAN
NIM   : 2002050048
Program Studi   : S-1 Pendidikan Bahasa Inggris

Benar telah mengadakan Penelitian / Riset di SMK Swasta Gema Buwana dan telah selesai melaksanakan penelitian di SMK Swasta Gema Buwana dalam memperoleh informasi / keterangan data – data yang berhubungan dengan Skripsi (karya ilmiah) yang berjudul :
Assesing the Efficacy of Al-Driven Elsa in Enhancing Pronunciation Skills Through EFL (English Foreign Languange) Learners in Vacational High School.

Demikian kami sampaikan untuk dapat dimaklumi, atas perhatiannya kami ucapkan terima kasih.

Kepala SMKS Gema Buwana

GENDRO YUDO BUWONO, SE., MM
NRKS. 19023L0120701241069713