

CHAPTER IV

FINDINGS AND DISCUSSION

A. Findings

Following an exhaustive two-month research period, the necessary data were finally obtained. The data are described in two phases: quantitative and qualitative. The following data were obtained:

1. Quantitative Phase

- a. Identify a Sample of Students with Below-Average Speaking Scores.

In order to identify a sample of students with below-average speaking scores, it is necessary to conduct a pre-test on the entire population. In this study, the researcher selected fifth-semester students from Local A, which amounted to 18 individuals.

From the pre-test, researchers obtained speaking test scores from the entire population. Before finding the average overall score, the researcher calculated the average student score per aspect using the following formula:

$$\text{Average per aspect} = \frac{\text{Total Student Score}}{\text{Number of Assessment Aspects}}$$

The scores are described below:

Table 4. 1 Pre-Test Score

| No | Name | Score | Average Score Per |
|--------------|------|------------|-------------------|
| | | | Aspect |
| 1. | UD | 21 | 4.2 |
| 2. | AS | 19 | 3.8 |
| 3. | MA | 22 | 4.4 |
| 4. | MS | 20 | 4 |
| 5. | JTNA | 18 | 3.6 |
| 6. | HM | 22 | 4.4 |
| 7. | AEA | 20 | 4 |
| 8. | MSR | 6 | 1.2 |
| 9. | HW | 17 | 3.4 |
| 10. | MA | 22 | 4.4 |
| 11. | RA | 17 | 3.4 |
| 12. | ENK | 19 | 3.8 |
| 13. | SN | 24 | 4.8 |
| 14. | FR | 6 | 1.2 |
| 15. | MHN | 20 | 4 |
| 16. | NL | 14 | 2.8 |
| 17. | SNA | 18 | 3.6 |
| 18. | MFS | 20 | 4 |
| Total | | 322 | |

In order to ascertain the mean score of the speaking test that has been conducted, the researcher must first calculate the total score of the participants, the number of participants, and the number of aspects of the assessment. As illustrated in Table 4.1 above, the test was completed by 18 participants, and the total score achieved was 322. The assessment conducted by researchers on participants consists of 5 aspects, with a scale of 1-5.

The researchers employed the following formula to calculate the mean score:

- Total Score: 322
- Number of Participants: 18
- Number of Aspects: 5

$$\begin{aligned}\text{Average Score per Aspect} &= \frac{\text{Total Score}}{\text{Number of Participants} \times \text{Number of Aspects}} \\ &= \frac{322}{18 \times 5} = \frac{322}{90} \approx 3.58\end{aligned}$$

As demonstrated in Table 4.1, approximately five participants obtained a score below the mean average of 3.58. Consequently, these five participants were selected for the study and administered the treatment to ascertain the efficacy of the app in enhancing spoken language ability.

The five participants were administered the app over a period of four weeks. Their progress was monitored on a weekly

basis by the researchers. In the fourth week, the researcher conducted the same test as the pre-test, thus obtaining the final results of the participants' progress over the period of four weeks. The results of the final assessment, otherwise known as the post-test, are as follows:

Table 4. 2 Post-Test Score

| No | Name | Pre-Test | Post-Test |
|----|------|----------|-----------|
| 1. | RA | 3.4 | 4 |
| 2. | HW | 3.4 | 3.8 |
| 3. | FR | 1.2 | 3.6 |
| 4. | MSR | 1.2 | 3.4 |
| 5. | NL | 2.8 | 4 |

Following the collection of post-test scores, which are listed in Table 4.2, the researchers subjected these to statistical analysis in order to test the results and prove the hypothesis. In order to do this, it was necessary to test the normality of the data obtained.

- Normality test hypothesis:

H1: Data is normally distributed

H0: Data is not normally distributed

- The acceptance criteria for this hypothesis are as follows:

If $\text{sig} > 0.05$ then the data has normal distribution or H1 is accepted H0 is rejected.

If $\text{sig} < 0.05$ then the data is not normally distributed or H0 is accepted H1 is rejected.

Table 4. 3 Test of Normality

| Tests of Normality | | | | | | |
|--|---------------------------------|----|-------|--------------|----|-------|
| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | Statistic | df | Sig. | Statistic | df | Sig. |
| pretest | 0,257 | 5 | .200* | 0,788 | 5 | 0,065 |
| posttest | 0,221 | 5 | .200* | 0,902 | 5 | 0,421 |
| *. This is a lower bound of the true significance. | | | | | | |
| a. Lilliefors Significance Correction | | | | | | |

Based on the results of the normality test in Table 4.3, it is known that the Sig value is $0.065 > 0.05$, which means that H1 is accepted (pre-test and post-test data have a normal distribution). Then the statistical analysis used is a parametric statistical analysis, namely the paired samples t-test (parametric paired t-test).

b. Paired Sample T-Test

As the data was normally distributed, the researchers used the paired sample t-test to statistically determine whether or not the ELSA Speak application was effective.

- Hypothesis:

H0: The effectiveness of ELSA Speak as a tool to improve speaking skills is not statistically significant.

H1: ELSA Speak significantly enhances speaking skills when used as a tool for improvement.

- The acceptance criteria for this hypothesis are as follows:

If $\text{sig} > 0.05$ then the data has normal distribution or H1 is accepted H0 is rejected.

If $\text{sig} < 0.05$ then the data is not normally distributed or H0 is accepted H1 is rejected.

Table 4. 4 Paired Samples Test

| Paired Samples Test | | | | | | | | | |
|---------------------|-----------------------|--------------------|-----------|---------|-------------------|--------|----|-----------------|--|
| Pair | | Paired Differences | | | | t | df | Sig. (2-tailed) | |
| | | Mean | Std. | Std. | 95% Confidence | | | | |
| | | | Deviation | Error | Interval of the | | | | |
| | | | | Mean | Difference | | | | |
| | | | | | Lower Upper | | | | |
| 1 | pretest - posttest | -1,36000 | 0,90995 | 0,40694 | -2,48985 -0,23015 | -3,342 | 4 | 0,029 | |

The findings of the paired sample test demonstrate that the Sig value is $0.029 < 0.05$ at t-count -3.342, thereby supporting the acceptance of H1 (i.e., the ELSA Speak application is effective in significantly enhancing spoken skills).

2. Qualitative Phase

After a one-month usage period of the ELSA Speak application, the researcher conducted an inquiry into participants' perceptions of the application. Due to the students being on vacation, the interviews were conducted online. The findings from these interviews are categorized as follows:

a. The Benefits Perceived or Gained by the Participants.

a) Self-Confidence Level

Based on the quantitative analysis, the findings indicate that the ELSA Speak application contributes to the improvement of participants' speaking skills. The researcher directly inquired about students' self-confidence levels before and after using the application. The interview results revealed that participants perceived a noticeable difference in their confidence levels following the use of the application.

Several participants expressed improvements in their speaking skills after using the ELSA Speak app. RA (personal communication, 2025) stated that although still a bit shy to speak English, they noticed significant progress in pronunciation, with their speaking rating increasing from 3 out of 10 to 7 out of 10. Similarly, HW (personal communication, 2025) shared that prior to using ELSA

Speak, they often felt hesitant when speaking English, particularly in terms of pronunciation and intonation. However, after using the app regularly, they felt much more confident. The app helped them recognize their pronunciation errors and provided clear feedback for immediate correction, which made them more comfortable speaking English.

Other students shared similar experiences. FR (personal communication, 2025) mentioned that they initially lacked confidence in speaking due to concerns about pronunciation and fluency. After using ELSA Speak, however, they felt a slight improvement in pronunciation and became more aware of their mistakes, which made them feel more at ease. NL (personal communication, 2025) rated their speaking confidence as 4 out of 10 before using the app, explaining that they had to write sentences down before speaking. After using ELSA Speak, their confidence increased to 7 out of 10. MSR (personal communication, 2025) also noted that their lack of confidence stemmed from concerns about accent and pronunciation, but after using the app, they became more confident as they noticed improvements in both areas.

b) Benefits

Researchers have examined participants' responses to understand the benefits of using the ELSA Speak app in comparison to other language learning applications. Their findings highlight various advantages that set ELSA Speak apart from its counterparts. Compared to other apps, ELSA Speak offers more detailed pronunciation assessments, helping users refine their speaking skills with greater accuracy.

Several participants highlighted the practical advantages and features of the ELSA Speak app that contributed to their learning experience. RA (personal communication, 2025) shared that the app is easy to use because it is accessible anytime and anywhere, with short sessions that take less than 10 minutes. Similarly, HW (personal communication, 2025) emphasized the benefit of immediate and accurate feedback provided by the AI technology in ELSA Speak—something not available in books or videos. HW also appreciated the personalized exercises tailored to their individual learning needs and the overall flexibility of the app, which allows for practice at any time and place.

Other students shared comparable perspectives. FR (personal communication, 2025) pointed out the advantages of real-time, accurate feedback, personalized learning, and the flexibility to practice speaking skills anytime. According to FR, the app also helps with contextual exercises and effective progress tracking. NL (personal communication, 2025) explained that the main benefit of ELSA Speak is its ability to correct pronunciation errors and demonstrate how closely a user's pronunciation matches that of native speakers, allowing users to listen and compare their own pronunciation to the correct version. MSR (personal communication, 2025) added that ELSA Speak improves pronunciation and accent effectively using advanced speech recognition technology. They also highlighted that the app provides relevant exercises and materials that support the improvement of speaking skills.

c) Impact

The participants were invited to articulate the impact that they had experienced as a result of utilising the application, extending beyond the domain of pronunciation. The researcher identified numerous impacts that the participants exhibited during their engagement with the application.

Participants also highlighted how ELSA Speak contributes to broader aspects of English language development beyond pronunciation. RA (personal communication, 2025) explained that the app helps users develop their own accent, noting the usefulness of features that display both the pronunciation and phonetic transcription of every word and sentence. HW (personal communication, 2025) noted that, in addition to improving pronunciation, ELSA Speak also enhances confidence in speaking by training intonation, rhythm, and fluency—making conversations sound more natural. Furthermore, HW appreciated the context-based exercises that helped expand vocabulary and improve understanding of everyday language use.

Other participants echoed similar sentiments. FR (personal communication, 2025) stated that ELSA Speak enhances listening skills, speaking confidence, and fluency by offering real-life conversation practice. The app also increases vocabulary and intonation awareness, making communication more natural and effective. NL (personal communication, 2025) shared that the app improved not only their pronunciation but also their overall English learning, including listening skills, vocabulary acquisition,

and fluency. NL also valued the feedback feature, which helped identify and correct mistakes for more natural speech. Similarly, MSR (personal communication, 2025) emphasized that ELSA Speak significantly contributed to their language learning journey by improving pronunciation, listening and speaking skills, expanding vocabulary, and helping them understand more complex sentence structures. As a result, MSR felt more confident and better prepared to use English in various real-life situations.

b. Experience in Using the ELSA Speak Application

a) Experience

Following a period of four weeks during which the ELSA Speak application was utilised by the participants, a number of experiences were reported. The present study sought to ascertain the nature of these experiences by posing the question to the participants.

Participants shared their personal experiences using the ELSA Speak app, emphasizing both its benefits and challenges. RA (personal communication, 2025) admitted that while their pronunciation had improved and become more similar to that of native English speakers, they still felt shy when speaking in front of others. HW (personal

communication, 2025) reflected positively on the app, noting that the instant feedback on pronunciation helped with immediate correction. They also highlighted the interactive and personalized exercises, which effectively addressed their weaknesses and gradually improved their fluency and naturalness in speaking.

Similarly, FR (personal communication, 2025) described the learning process as both fun and helpful. They appreciated the personalized feedback, which allowed them to identify mistakes and enhance pronunciation, resulting in increased confidence and fluency through real-life practice. NL (personal communication, 2025) shared that the app helped improve various aspects of speaking, such as pronunciation, vocabulary, and fluency. They also noted the flexibility and simplicity of the app, which made learning enjoyable and effective. Finally, MSR (personal communication, 2025) stated that ELSA Speak was easy and interesting to use, especially because it allowed them to practice speaking through topic-based exercises provided by the app.

b) Usage Frequency

The researcher has documented the treatment time for a period of one month, and it has been established that

there are discrepancies in the frequency of application usage amongst the participants. The application is utilised on a daily basis by some, several days per week by others, and on a more sporadic basis depending on their availability.

Participants demonstrated varying levels of consistency in using the ELSA Speak app. RA (personal communication, 2025) showed a high level of dedication, stating that they used the app every day, five times a day, for an entire month. In contrast, HW (personal communication, 2025) described a more balanced routine, explaining that they typically used the app for 15–30 minutes during free time, with more intensive use on weekends, ranging from 30–45 minutes. Although not using it daily, HW made an effort to access the app as often as possible.

Other participants reported more flexible and less frequent usage. FR (personal communication, 2025) mentioned using the app once or twice a week, depending on their availability. Similarly, NL (personal communication, 2025) admitted that they did not use ELSA Speak regularly, but would open it during free time. MSR (personal communication, 2025) stated that their typical usage lasted 10–15 minutes and that they only used the app occasionally, whenever they had spare time. These varied

responses indicate that while some users integrated ELSA Speak into their daily routine, others used it more casually based on their schedules.

c) Pronunciation Correction

At this juncture, the researcher inquired with the participants regarding the particulars of ELSA Speak's efficacy in enhancing their pronunciation. It was ascertained that there exist features which are instrumental in aiding participants in refining their pronunciation.

Participants noted specific features of ELSA Speak that helped them recognize and correct pronunciation errors effectively. RA (personal communication, 2025) explained that the application provides a pronunciation feature that includes an audio guide for each vocabulary word, enabling users to hear and follow the correct pronunciation. Similarly, MSR (personal communication, 2025) highlighted the benefit of this real-time audio feedback, which helped enhance their pronunciation accuracy through consistent listening and repetition. NL (personal communication, 2025) shared a detailed experience involving the "Improve Pronunciation Test" feature, where users read and record sentences, then receive a score indicating how closely their pronunciation matches that of a native speaker. If the

pronunciation is inaccurate, the score is lower, prompting them to re-record and improve their pronunciation based on the feedback.

Other participants gave specific examples of how the app helped them correct individual errors. HW (personal communication, 2025) reflected on their mispronunciation of the word "business," admitting they used to pronounce every letter, including the "i." With help from ELSA Speak's AI feedback, they learned the correct pronunciation and improved through repeated practice. FR (personal communication, 2025) shared difficulties with distinguishing "R" and "L" sounds. They found the app's visual feedback—such as color-coded indicators showing correct (green) and incorrect (red) pronunciations—extremely helpful. The app also provided tips on how to fix these errors, and after several attempts, FR noticed a more natural-sounding pronunciation.

c. Difficulties Encountered During the Use of ELSA Speak

a) Challenges

It is an inevitable aspect of any given process that participants will encounter difficulties. This is also the case when utilising the application under discussion, and the

researcher has taken care to document the difficulties experienced by the participants.

Some participants expressed challenges related to the voice recognition accuracy and feature limitations in the ELSA Speak app. RA (personal communication, 2025) shared their difficulty with the app's voice recognition, noting that their voice was sometimes not recognized, requiring them to repeat words several times for accurate feedback. They also mentioned the limitation of non-premium access, which restricted usage to only five times a day. Similarly, MSR (personal communication, 2025) mentioned that the voice recognition feature occasionally failed to detect their pronunciation, forcing them to repeat the same word multiple times to achieve better results.

HW (personal communication, 2025) explained that the app did not always accurately assess pronunciation, particularly for words with specific accents or variations. Although they sometimes felt they had pronounced a word correctly, the app still marked it as incorrect. HW overcame this by listening more closely to the audio samples and repeating the exercises. FR (personal communication, 2025) echoed similar frustrations, stating that the app's pronunciation recognition was occasionally inaccurate and

could be discouraging. Additionally, they noted that many useful features were locked behind a subscription, limiting access to all available exercises. In contrast, NL (personal communication, 2025) reported no challenges or difficulties while using the app, indicating a smoother user experience.

b) Challenges and Less Intuitive Aspects

This point is analogous to the previous one insofar as it also enquires about any difficulties encountered. Specifically, it solicits information regarding aspects that are less readily understandable or that participants find somewhat challenging.

Several participants identified interface complexity and limitations of the free version as notable challenges when using the ELSA Speak app. RA (personal communication, 2025) pointed out that the menu navigation contains too many options, which can be confusing for new users—especially without proper guidance. They also noted a lack of clear instructions and example sentences, which made it harder to understand pronunciation errors. Similarly, MSR (personal communication, 2025) observed that the wide array of features was overwhelming due to the absence of clear guidance on which ones were accessible without a subscription. FR (personal communication, 2025)

added that the menu layout was not always intuitive, requiring extra time to understand how to navigate the app efficiently.

Concerns about feedback accuracy and accessibility were also highlighted. HW (personal communication, 2025) remarked that ELSA Speak sometimes failed to recognize pronunciation variations or accents accurately, marking correct attempts as wrong without clear explanations. They also expressed that many of the app's most helpful features were locked behind a paywall, limiting the effectiveness for free users. FR echoed this concern by stating that pronunciation scores were inconsistent, even when repeating the same word, which made progress difficult to gauge. Meanwhile, NL (personal communication, 2025) described the daily "Improve Pronunciation" test as both challenging and enjoyable, suggesting that while some features may be demanding, they still provide valuable learning experiences.

B. Discussion

1. Quantitative Phase

The quantitative findings of this study demonstrate the effectiveness of the ELSA Speak application in enhancing students' speaking proficiency. A pre-test and post-test were conducted using

a standardized speaking rating scale by Muhsin (2016), which assessed five key aspects: pronunciation, grammar, vocabulary, fluency, and comprehension. Among the 18 participants tested, the average speaking score was determined by calculating the total score of all participants and dividing it by the total number of participants. The resulting mean score was 3.58, and five students were identified as having scores below this threshold. These five students were selected as the research sample and underwent a four-week treatment period using the ELSA Speak application.

By the end of the fourth week, a post-test was administered using the same speaking rating scale to measure any improvements. The statistical analysis was conducted using a paired sample test, revealing a significant difference between the pre-test and post-test scores. The sig. value of $0.029 < 0.05$ and a t-count of -3.342 confirmed the acceptance of H1, indicating that the ELSA Speak application significantly improved the participants' speaking skills. This result aligns with prior research on technology-assisted language learning, which suggests that digital tools can enhance language acquisition through customized learning, tailored feedback, precise pronunciation instruction, and effective language evaluation (Kumar Betal, 2023).

The statistical findings support the Cognitive Load Theory (Sweller, 2020), which posits that learning effectiveness increases

when cognitive overload is minimized through structured, engaging, and personalized learning experiences. The structured learning pathways in ELSA Speak allowed participants to progress gradually, reinforcing their speaking skills in an effective and measurable manner.

2. Qualitative Phase

The qualitative analysis was conducted through interviews with participants, revealing valuable insights into their experiences using the ELSA Speak application. The interview findings were categorized into three main themes: Perceived Benefits, Experience in Using the Application, and Difficulties Encountered.

a. The Benefits Perceived or Gained by the Participants

a) Self-Confidence Level

Participants initially struggled with self-confidence when speaking English. Many expressed feelings of shyness, discomfort, and anxiety when using the language. However, after four weeks of using ELSA Speak, they reported a noticeable boost in confidence, feeling more comfortable and less anxious when speaking English. This aligns with Csizér (2019) L2 Motivational Self System, which suggests that increased exposure and structured practice reduce anxiety and enhance self-confidence in second language learners.

b) Benefits of Using ELSA Speak

Participants found ELSA Speak more effective than other language-learning applications due to its feedback system, speech recognition technology, and flexibility. They appreciated the instant pronunciation corrections, which allowed them to improve their speaking accuracy in real time. This supports Chapelle's (2001) theory on Computer-Assisted Language Learning (CALL), which states that personalized feedback plays a crucial role in language acquisition.

c) Impact of the Application

The overall impact of ELSA Speak was highly positive. Participants reported improvements in pronunciation, intonation, listening skills, and confidence. They also noted that their accents improved, making their speech sound more natural. These findings are consistent with Newton & Nation (2009), who emphasize that frequent exposure to spoken language, coupled with feedback, significantly enhances speaking proficiency.

b. Experience in Using the ELSA Speak Application

a) Learning Experience

Participants highlighted the interactive exercises, instant feedback, and real-life practice scenarios as

engaging and effective. They found the application both fun and helpful, making learning feel less like a task and more like an enjoyable experience. This connects to Krashen in Nor & Rashid (2018), when learners experience less anxiety and less resistance to language learning, they become more open to language acquisition, creating an ideal learning environment that promotes successful language development.

b) Usage Frequency

The participants exhibited diverse usage habits, with some engaging in daily practice while others accessed the app only a few times per week or during their free time. Regardless of these variations, all participants experienced improvement, highlighting the adaptability of digital tools in enabling flexible learning schedules and fostering ongoing language development beyond traditional classroom settings (Vardhini, 2023).

c) Pronunciation Correction Feature

The pronunciation correction feature was highly valued by participants. They reported that receiving immediate corrections helped them recognize their pronunciation mistakes and improve more efficiently. As stated by Paramita (2023), the pronunciation correction

feature in e-learning applications plays a vital role in helping students promptly rectify their mistakes. Real-time feedback enables them to recognize and adjust their pronunciation, ultimately enhancing their English-speaking abilities. Additionally, this automated correction aids in mastering proper pronunciation, a key component of acquiring a foreign language.

c. Difficulties Encountered During the Use of ELSA Speak

a) Challenges in Using the Application

Some participants struggled with the voice recognition system, reporting that it occasionally failed to recognize their pronunciation accurately. As a result, they had to repeat words multiple times to receive correct feedback. Additionally, since none of the participants had a premium subscription, they faced usage limitations, restricting their access to full learning materials. This highlights a key challenge in AI-powered language learning applications, where technological constraints and accessibility issues can impact learning outcomes (Golonka et al., 2014).

b) Challenges and Less Intuitive Aspects

Some participants found the initial interface overwhelming, as too many options were presented

without clear guidance. Others reported that ELSA Speak's assessment system sometimes provided inconsistent scoring, especially when the voice recognition feature failed to detect pronunciation accurately. As highlighted by Alsanousi et al. (2023), overcoming usability challenges regarding functionality, performance, bias, clarity, and ineffective features is vital for enhancing user satisfaction, effectiveness, and efficiency.