Exploring Learning Experience with ELSA Speak for Independent Learning: A Case Study

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Abstract. This study explores the learning experiences of senior high school students in SMAN 1 Kepanjen using ELSA Speak, an application developed by ELSA Corporation that uses speech recognition technology and artificial intelligence to help users improve their pronunciation and accuracy. **This study examines the challenges faced by the participants. Additionally, it investigates the lessons learned by participants and the acquisition of new vocabulary as they complete the daily lessons.** This study used the case study design to explore the learning experience of the students in detail. In this study, a total of 20 participants were introduced to the application, provided guidelines for daily lessons, and asked to complete a learning journal through Google Forms which assessed their experiences. The findings indicate that while participants encountered challenges related to the system within ELSA Speak, difficulty in pronunciation, and physical challenges, they also learned a quite number of vocabulary. In addition, the findings suggest potential improvement in pronunciation accuracy among some participants over the course of using ELSA Speak. These findings contribute to the understanding of the effectiveness and challenges of utilizing ELSA Speak in the language learning context, especially in independent learning context. Educators should provide clear guidance, tips, and strategies for using ELSA Speak, monitor student progress, give more feedback, encourage consistent use, and ensure that the students have capable devices. Future researchers should increase the participant's number, compare ELSA Speak with other language learning tools and traditional instruction, and incorporate **more** methods to gain deeper insights.
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Keywords: ELSA Speak, Independent Learning, Experience

1. Introduction

In today's digital age, the pursuit of English language proficiency has become increasingly important as technology transforms traditional learning methods. The integration of digital tools in language learning offers learners new opportunities to engage with the language, providing interactive and personalized experiences that cater to individual needs and preferences (Fakhrurriana, 2023; Derwing et al., 1998). This shift has made language learning more accessible, promoting independent learning, where learners take charge of their educational journey through self-paced study supported by technology (Miladiyenti et al., 2022).

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A key area of focus in language learning is pronunciation, a crucial skill that affects communicative effectiveness and overall language proficiency (Derwing & Munro, 2015). However, achieving accurate pronunciation poses challenges for many learners, particularly those without regular access to native speakers or experienced teachers (Nagle & Sanders, 2016). ELSA Speak, an app developed by ELSA Corporation, addresses this issue by using artificial intelligence and speech recognition technology to provide personalized pronunciation feedback (Becker & Edalatishams, 2019). The app's interactive and gamified features support independent learning and have been shown to improve users' pronunciation skills significantly (Osadcha et al., 2021).

Previous research has highlighted the effectiveness of technology-assisted language learning tools in improving pronunciation accuracy. For example, Smith (2018) found that computer-assisted pronunciation training (CAPT) tools significantly enhance learners' pronunciation skills. Similarly, Garcia-Sanchez & Soler-Crespo (2021) demonstrated that mobile applications focusing on pronunciation positively influence learners' motivation and engagement. However, there is limited research on students' perceptions and experiences with ELSA Speak, **particularly in how it facilitates independent learning for improving pronunciation skills** (Akhmad & Munawir, 2022; Rismawati et al., 2021).

This study aims to bridge the research gap specifically exploring students' experiences with ELSA Speak as a tool for independent learning aimed at improving pronunciation skills. The research focuses on understanding how the app's features support independent learning, examining its impact on pronunciation accuracy, and identifying challenges participants face during its use. Additionally, this study seeks to provide insights into the app's overall effectiveness and recommend improvements to enhance its utility for both learners and educators.

The significance of this research lies in its contribution to language learning and pedagogy, particularly in the realm of pronunciation instruction. By investigating students' perceptions and experiences with ELSA Speak, the study provides valuable insights into the effectiveness and potential benefits of integrating technology into language learning. Understanding how ELSA Speak supports learner autonomy and independent study can inform educators, app developers, and learners about its role in promoting language proficiency.

2. Literature Review

2.1. Independent Learning

Independent learning is an educational strategy that empowers students to take control of their learning journey by selecting course materials, managing their time, and utilizing resources outside traditional classroom settings (Broad, 2006). This approach is vital in higher education as students gradually develop advanced analytical skills over time (Hockings et al., 2018). Independent learning fosters engagement and language proficiency by allowing students to customize their education according to their needs and interests (White, 2008).

Research by Rahayu et al. (2022) and Wege et al. (2022) highlights the flexibility and adaptability of independent learning during the COVID-19 pandemic, with findings indicating that it fosters creativity and maintains educational continuity. Rufaidah et al. (2021) also demonstrate the positive impact of technology-enhanced learning environments on students' independent learning abilities, showing improvements in learning outcomes through pre-test and post-test comparisons.

2.2. Technology in Language Learning

Technology has revolutionized language learning, especially in pronunciation training, by offering increased accessibility and personalized learning experiences (Burston, 2013; Gimenez, 2020). Language learners can access interactive and engaging activities through mobile apps and online platforms, allowing for flexible, self-paced learning. These tools provide adaptive algorithms that offer tailored feedback, fostering a learner-centered approach and increasing motivation (Derwing et al., 1998).

Immediate feedback is another advantage of technology-assisted pronunciation training, as it allows learners to identify and correct pronunciation errors in real time (Mompean, 2013). This approach aligns with communicative language teaching principles, enhancing overall language proficiency by facilitating authentic communication opportunities (Lee & VanPatten, 2003).

While apps like Duolingo and Babbel improve language proficiency through gamified experiences, they face challenges like technical issues and outdated pedagogies (Lotherington, 2018; Karjo & Andreani, 2018). It is crucial to evaluate the effectiveness of specific tools and consider individual learner differences when implementing technology-assisted pronunciation instruction.

2.3. ELSA Speak

ELSA Speak is a pronunciation app using AI and speech recognition to provide learners with real-time feedback (Becker & Edalatishams, 2019). It offers over 800 lessons and focuses on a neutral American accent, using phonetic symbols to assist users (Fatimah, 2021). While ELSA Speak emphasizes vowel sounds, diphthongs, consonants, stress, and intonation, it may pose challenges for users interested in learning other accents, like British English (Darsih et al., 2021).

The app's free version limits lesson access, often requiring users to wait 24 hours before proceeding to the next lesson. Subscribing to the premium version removes these restrictions but can be costly. Despite these limitations, ELSA Speak provides an interactive learning experience that enables learners to improve pronunciation independently and at their own pace.

Research has explored ELSA Speak's effectiveness in pronunciation improvement, although the number of studies remains limited. Samad & Aminullah (2019) found that students perceived ELSA Speak as beneficial for learning pronunciation, highlighting its role in enhancing communication and reducing misunderstandings. Their study suggests that integrating technology like ELSA Speak can effectively address common pronunciation challenges faced by EFL learners.

Similarly, Rismawati et al. (2021) demonstrated that ELSA Speak significantly improved students' pronunciation skills, with learners showing positive attitudes toward the app's engaging and effective practice methods. Akhmad & Munawir (2022) confirmed these findings, noting significant improvements in students' pronunciation skills and positive perceptions of ELSA Speak's effectiveness.

Overall, these studies indicate that ELSA Speak is a valuable tool for improving pronunciation skills among EFL learners, highlighting the potential of technology-assisted language learning to enhance learning outcomes and student motivation.

3. Research Method

This study employed a case study approach to explore how high school students experience independent learning using the ELSA Speak application. The case study method was chosen for its ability to provide in-depth insights into complex, real-world issues by incorporating multiple data sources and perspectives. The research focused on 20 students from the XI-7 class at SMAN 1 Kepanjen, consisting of 18 females and 2 males. These participants were selected due to their previous interaction with the researcher and the researcher's observation of their pronunciation needs. Importantly, none had prior experience with ELSA Speak, making them suitable for an unbiased exploration of the app's impact.

The study involved a structured process starting with a briefing session on the app, study objectives, and consent procedures. Participants were instructed to use ELSA Speak for 7 days, complete daily lessons, and document their progress through screenshots and a Google Forms learning journal. The journal included questions about lessons learned, vocabulary acquisition, and challenges faced, aligning with the research questions.

Data collection involved participants filling out the learning journal daily and uploading screenshots of their progress. This was followed by a thorough analysis of the data, focusing on identifying challenges, learning outcomes, and patterns of engagement. The analysis aimed to provide a comprehensive understanding of the participants' experiences with ELSA Speak, including the obstacles encountered and the progress made

4. Findings and Discussion

4.1. Findings

The data collected from the learning journals over the seven-day period revealed several key insights about participants' experiences with the ELSA Speak app. Each day focused on specific aspects of pronunciation and vocabulary, with participants reporting both learning outcomes and challenges.

Day 1 centered on pronunciation, particularly ending sounds like /s/ and /z/, with new vocabulary such as "leisure" and "excursions." Challenges included pronunciation

of specific sounds and technical issues with the app's speech recognition. Day 2 introduced the schwa sound and word stress patterns. Participants learned vocabulary like "advanced" and "confident" but faced challenges with pronunciation clarity and physical aspects of speech, such as relaxation. Day 3 involved advanced pronunciation practice, focusing on ending sounds and more schwa sounds. Vocabulary acquisition was minimal, and challenges included system detection issues and difficulties in achieving clear pronunciation. Day 4 emphasized the schwa sound, syllable emphasis, and tonal fractions. Vocabulary learned was limited to words like "specifically," with pronunciation issues and system detection problems being common challenges. Day 5 focused on vocabulary and pronunciation related to urban life, introducing words such as "commute" and "cosmopolitan." Participants struggled with new vocabulary pronunciation and maintaining focus during lessons. Day 6 addressed vocabulary related to family descriptions. Participants learned terms like "extended family" and "cousin," encountering minimal difficulties but still struggling with certain ending sounds. Day 7 continued with family-related vocabulary, such as "forgive" and "encourage," with challenges primarily in pronunciation.

Participants encountered several challenges when using ELSA Speak for independent learning, which can be grouped into technical difficulties, pronunciation issues, and physical articulation challenges. A significant issue reported was the inconsistency between participants' pronunciation attempts and the feedback provided by ELSA Speak. Despite believing they replicated the AI's pronunciation accurately, participants received low scores, highlighting a flaw in the app's feedback mechanism. This inconsistency, coupled with technical errors like the system's failure to detect speech accurately, negatively affected participants' learning experiences and motivation.

Pronunciation difficulties were also prominent, with participants struggling with certain English phonemes and words, particularly consonant sounds like "sh" and "st" and distinguishing between "s" and "z." Words such as "wish," "improve," and "communication" were notably challenging. These difficulties reflect the phonetic challenges Indonesian learners face due to differences between their native language and English, including substitution errors and struggles with fricative consonants and clusters.

In addition to technical and pronunciation challenges, participants reported physical difficulties in articulation, such as maintaining a relaxed jaw and tongue while speaking. This aspect highlights the need for exercises addressing the physical challenges of pronunciation, which are often overlooked. Despite these challenges, participants recognized the importance of continuous practice to improve pronunciation. They acknowledged that while understanding pronunciation rules was important, applying these rules to new vocabulary was difficult, suggesting a need for clearer guidance and more practice opportunities. The response trend showed a gradual decrease in participation over the week. On the first day, 19 students participated, reflecting high initial engagement and motivation, but only 10 out of the initial participants completed the final test and received a certificate.

Time spent on lessons varied significantly, ranging from 44 to 165 minutes. Participants who invested more time, such as Participant 1 (165 minutes) and Participant 2 (130 minutes), likely displayed deep engagement and a thorough approach to learning. Conversely, those spending less time may have faced time constraints, technical issues,

or difficulties with lesson content. These variations underscore the need for personalized learning support and strategies to enhance engagement throughout the learning process.

4.2. Discussions

The challenges participants encountered while using ELSA Speak highlight significant issues with the system's usability and its ability to provide effective feedback. One major concern was the inconsistency between users' pronunciation attempts and the feedback generated by the app. Despite believing they replicated the AI's pronunciation accurately, participants received low scores, highlighting a flaw in the app's feedback mechanism. This inconsistency suggests that the feedback lacked the detail necessary for learners to identify and correct pronunciation errors, a problem also noted in previous studies on automated speech recognition (Dai & Wu, 2021; Alsanousi et al., 2023). Moreover, technical errors, such as the system's failure to detect speech accurately, further hindered participants' learning experiences, negatively affecting their motivation and engagement.

Pronunciation difficulties emerged as a key challenge for the participants as well, particularly with English phonemes that differ from their native language. Specific sounds, such as those found in words like "wish" and "improve", caused notable difficulties, in which showed the complexities of learning English pronunciation. These difficulties reflect the phonetic challenges Indonesian learners face due to differences between their native language and English, as shown in studies by Rahman et al. (2020) and Situmorang et al. (2023), which highlight common substitution errors and struggles with fricative consonants and clusters. Addressing these specific phonetic challenges in language learning could significantly enhance pronunciation proficiency among learners.

In addition to technical issues and pronunciation errors, participants also reported physical challenges related to articulation. These challenges involved difficulty in maintaining the necessary physical relaxation in the mouth, which can impact the clarity and accuracy of speech. This aspect of language learning is often overlooked, but it highlights the need for exercises addressing the physical challenges of pronunciation. Studies like Diekhoff & Lulich (2018) emphasize the importance of teaching articulation techniques, including understanding tongue positions, to improve learners' ability to produce specific sounds. Incorporating these physical aspects into language learning platforms like ELSA Speak could provide a more comprehensive approach to pronunciation training.

Despite these various obstacles, participants demonstrated an understanding of the importance of continuous practice in improving their pronunciation skills. Their reflections revealed a need for clearer guidance and more opportunities to apply pronunciation rules to new vocabulary effectively. This issue of skill transfer aligns with findings by Stativa et al. (2021), which highlights the importance of practical application in language learning. Participants' determination to persist, despite obstacles, indicates a positive attitude toward learning and highlights the role of resilience in language acquisition. Research by Kusz (2022) demonstrates that consistent practice

and self-imitation significantly improve language skills over time, underscoring the need for ongoing engagement in the learning process.

The students' level of engagement and progress in the independent learning process showed a noticeable decrease over the course of the seven days. The initial high engagement observed on Day 1 gradually declined, a trend that aligns with common patterns of motivation and persistence in long-term learning activities. This aligns with studies suggesting that novelty and perceived benefits boost initial learner enthusiasm and engagement (Cho & Castaneda, 2019; Chua et al., 2021). However, from the second day onward, a gradual decrease in responses was observed, with only 14 participants responding by the seventh day. This decline is consistent with the "motivation curve" theory described by Ryan & Deci (2000), where initial enthusiasm wanes over time as learners face the reality of sustained effort.

Despite declining engagement, a core group of students persisted, highlighting their resilience and dedication. Their ongoing participation underscores their understanding of the importance of persistence in learning, even when faced with challenges. Li (2020) emphasizes that resilience and self-efficacy are crucial for learners to cope with difficulties and continue learning. The time students spent on lessons varied significantly, ranging from 44 to 165 minutes, providing insights into their engagement and learning approaches. This variation reflects individual differences in learning pace, strategies, and external factors, such as daily schedules and commitments.

Participants who invested more time in the lessons, such as Participant 1 (165 minutes) and Participant 2 (130 minutes), likely displayed deep engagement and a thorough approach to learning. Their time investment suggests a focus on mastering the material through repeated practice and exploration. Conversely, participants spending less time (44 to 66 minutes) may have learned quickly due to prior knowledge or efficient strategies, although time constraints or technical issues might have also limited their engagement. These findings align with previous research indicating variations in engagement and time spent using mobile language learning apps, influenced by motivation, learning strategies, and personal circumstances (Chua et al., 2021; Dincer, 2020).

The variation in time spent on lessons underscores the need for personalized learning support. Learners who spend significant time on lessons may benefit from additional resources and advanced exercises to challenge them further, aligning with studies like Kulik and Kulik (1992), which found that enriched instruction improves learning outcomes. Providing strategies to enhance learning efficiency and prevent fatigue, such as time management and breaks, is also essential for maintaining motivation and engagement (Zimmerman & Schunk, 2001). Conversely, learners spending less time may require support to overcome challenges and optimize learning efficiency. Identifying and addressing obstacles through personalized support can enhance their learning outcomes, as shown by Azevedo et al. (2005), which demonstrated the benefits of tailored instruction for addressing individual learning challenges.

5. Conclusion

The study investigated students' experiences with the ELSA Speak app for independent learning, highlighting both the app's benefits and challenges. Over a 7-day period, data from 20 students revealed that while there were difficulties with system detection, pronunciation feedback, and physical articulation, the app led to notable improvements in vocabulary acquisition and pronunciation accuracy. Participants experienced varied engagement levels, indicating a need for personalized learning approaches to address diverse learning styles and needs. Despite the challenges, such as issues with specific sounds and voice recognition, ELSA Speak proved effective in enhancing students' pronunciation skills, boosting their confidence, and fostering an understanding of detailed pronunciation aspects. The findings emphasize the value of consistent practice and the potential of ELSA Speak as a beneficial tool for independent English learning.

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