DUOLINGO APPLICATION EFFECTIVENESS: IMPROVING ENGLISH LISTENING SKILLS AMONG STUDENTS OF ENGLISH EDUCATION DEPARTMENT

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Abstract

Listening skills are one of the key competencies in English language learning and are crucial to master in the era of globalization. Language learning applications such as Duolingo offer interactive learning methods that have the potential to enhance students' listening abilities, particularly in dealing with variations in accents and speech speed. This study aims to explore the effectiveness of using Duolingo in improving the listening skills of students in the English Education department at Zainul Hasan Genggong Islamic University. The method used is a qualitative case study with data collection techniques including participatory observation, semi-structured interviews, and documentation. The findings indicate that regular use of Duolingo can improve students' sensitivity to pronunciation, recognition of similar-sounding words, and comprehension of varying speech speeds. However, the limited range of accents available in the application poses a significant challenge, leading students to express the need for more diverse features and content. Overall, Duolingo has proven to be an effective technology-based language learning tool that supports independent learning and active engagement, although further innovation is needed to meet the demands of complex global communication.

Keywords: *Duolingo, listening, accents, speech speed, English language learning*

INTRODUCTION

Along with the development of digital technology, language learning applications like Duolingo are becoming increasingly popular due to their ease of access and interactive learning methods. (Haleem et al., 2022). This application offers a fun and flexible learning approach, which is deemed effective in improving various language skills, including listening skills in English. (Solikha, 2023).

However, even though more students are using Duolingo, there are still challenges in evaluating its effectiveness, particularly in helping students understand variations in accent and speaking speed in English. (Vandergrift et al., 2006). This is particularly important as listening skills constitute a core competency in learning English and are greatly influenced by factors such as accent and speech tempo. (Liu, 2009).

At Zainul Hasan Genggong Islamic University, several students in the English Education department face difficulties in understanding English conversations that use a variety of accents and varying speaking speeds. This barrier affects their ability to comprehend spoken material, both in academic contexts and in everyday interactions (Pereira & Rodrigues, 2013). As expressed by (Khamprated, 2012), Listening skills are one of the biggest challenges in learning a foreign language.

In an era of globalization that increasingly demands cross-cultural communication skills, good listening ability becomes very crucial, not only for understanding academic material but also for building effective communication in an international context. (Vandergrift et al., 2006). Unfortunately, many students still struggle to develop these skills due to limited exposure to various accents and variations in speaking speed. (Park, 2022).

Based on the problems presented, this study aims to explore the effectiveness of using the Duolingo application in improving students' English listening skills, particularly in understanding variations in accents and speaking speed.(Muttaqin et al., 2025). This research is expected to contribute to the development of technology-based language learning methods, especially those that are relevant and adaptive to the current challenges faced by students (Vesselinov & Grego, 2012).

Various previous studies have shown diverse results regarding the effectiveness of Duolingo. (Sah, 2015) It was found that this application can help improve listening skills, especially in self-directed learning. However, some research participants still have difficulties in understanding accent variations and fast speech rates.

Similar findings were reported by (Mindog, 2016), which states that the effectiveness of Duolingo is highly dependent on the frequency and duration of its use. Meanwhile, research by (Shadiev & Yang, 2020) shows that technology-based learning applications can improve listening skills, although challenges in understanding foreign accents still remain.

Recent research by (Tuong & Dan, 2024), state that Duolingo has the potential to support the development of listening skills by providing materials that include various accents and speaking speeds. In addition, according to (Anahi & Michelle, 2024), this application supports self-directed learning and encourages familiarity with linguistic variations through its interactive features. Research by (Damayanti et al., 2024) It also shows that students who consistently use Duolingo experience improvement in listening skills.

According to multimedia cognitive theory (Mayer, n.d.), learning is more effective when information is delivered through multiple perceptual channels, specifically visual and auditory. Duolingo utilizes this principle by combining text, images, and audio in every learning session (Muttaqin et al., 2025). This is in line with the dual coding concept that allows information to be processed more deeply and strengthens memory and understanding.

In addition, the cognitive load theory of (Sweller, 1994) suggesting that learning materials should be delivered gradually and not overwhelm students' working memory excessively. Duolingo applies this approach through progressively arranged exercises, allowing students to learn without feeling overwhelmed (Sari & Octaviani, 2022).

According to (Clark & Mayer, 2012), Technology-based learning will be more effective if designed with a high level of interactivity and actively involves students. In this context, Duolingo provides an active and enjoyable learning experience, as well as immediate feedback after each exercise. This aligns with the view. (Skinner, 1950) about the importance of reinforcement or behavior reinforcement through quick and clear feedback.

RESEARCH METHODOLOGY

This research uses a qualitative approach with a case study type. This approach is chosen to provide a deep exploration of students' experiences with using the Duolingo application as a learning medium to enhance their English listening skills. (Pereira & Rodrigues, 2013). The case study focuses on students of the English Education department at Zainul Hasan Genggong Islamic University.

The main instrument in this research is the researcher (human instrument) who is responsible for designing the observation and interview guidelines, collecting data, as well as analyzing and interpreting the data directly(Pereira & Rodrigues, 2013). Supporting instruments include semi-structured interview guidelines, observation sheets, and documentation in the form of field notes.

The data source for this research consists of 5 final-semester students from the English Education Study Program who actively use the Duolingo application in their learning process. The selection of participants was conducted using a purposive sampling technique, which involves choosing students who have regularly used the application for at least one month and have varying levels of English proficiency (Vandergrift et al., 2006).

Data was collected using three techniques, namely:
- Non-interventional participatory observation was conducted to observe students' behaviors while using Duolingo, including usage frequency and level of engagement. (Murphy, 1950).
- Semi-structured interviews were conducted face-to-face for 30-40 minutes to explore the experiences, benefits, and challenges of students in understanding variations in accent and speaking speed through the application.
- The documentation obtained includes notes, archives, or written or visual documents used to support the research results. These documents reflect students' engagement with Duolingo.

The collected data is analyzed using thematic analysis with stages:
- Data reduction: selecting and filtering relevant data from observations, interviews, and documentation.
- Data presentation: organizing data narratively and thematically based on categories such as effectiveness, challenges, and engagement.
- Concluding: inferring meaning based on patterns and relationships between the data found.

The validity of the data is maintained using several techniques, namely:

- Source triangulation: comparing data from observations, interviews, and documentation to ensure consistency of information.
- Member checking: confirming the results of data interpretation with participants to align with their experiences and intentions.
- Audit trail: systematically documenting the entire research process to maintain transparency and accountability.
- Self-reflection: Researchers continuously engage in reflection to anticipate and minimize subjective bias during data analysis.

FINDING AND DISCUSSIONS

FINDINGS

Experience using the Duolingo app to improve English listening skills. Based on the observations conducted on five respondents, all participants regularly used the Duolingo application, generally for 15–20 minutes each day, as part of their independent learning activities. During the observation process, the students showed consistency in choosing listening exercises as their main focus, particularly features like 'Listen and Type' and 'Stories'. For example, Respondents 1 and 2 actively repeated the audio several times until they fully understood its meaning. This observation indicates that students are using a deep learning approach in training their listening skills(Mir, 2023).

The findings of the observation were reinforced by interviews, where Respondent 1 stated that: *"I often repeat the audio until I fully understand its meaning, and over time I become more sensitive to the pronunciation of words in English."*

The improvement in listening skills is also significantly felt by Respondent 2, who stated that: *"After regularly using Duolingo, he started to understand conversations in English videos more quickly. Even common phrases like 'What time is the meeting?' became easy to recognize because they are often encountered in the exercises."*

In addition, observations found that respondents are accustomed to using Duolingo at certain times, both in the morning and at night. This indicates that students have developed a structured learning habit. The presence of the streak feature in the app is also noted as a strong motivator in maintaining learning consistency. This finding generally indicates that the use of Duolingo not only supports the enhancement of listening skills but also helps create a consistent and directed study routine.

How the Duolingo app helps students understand variations in accents and speaking speeds in their learning routines.
Observations show that students often use the audio repetition feature at various speeds. Some respondents, such as Respondents 3 and 4, were seen utilizing the slow audio version before listening to the normal

version. In addition, respondents paid attention to similar sounding details, such as three and tree, as well as can and can't. This habit indicates a process of adaptation to speech speed and pronunciation variations.

In-depth interviews confirmed this. Respondent 4 conveyed: *"I can start to distinguish between similar words, like 'three' and 'tree', because I often hear and practice them on Duolingo."*

Respondent 5 also explained: *"In the past, I always had to use the slow version, but now I can understand the normal version right away because my ears have gotten used to it."*

However, all respondents agreed that the variety of accents available on Duolingo is still limited to the American accent. They suggested the addition of other accent variations such as British, Australian, and Indian English to be more representative of the global accent diversity they encounter in academic and social contexts.

In addition, the respondents also suggested the development of an interactive two-way feature that allows users to respond to conversations in real time. Respondent 2 stated: *"It would be better if there was a feature to record voice and compare it directly with a native speaker, so you can immediately know where the mistakes are."*

These findings suggest that although Duolingo has been effective in training sensitivity to pronunciation and intonation, further development is still needed to meet more complex and realistic learning needs.

Discussions

This research aims to explore the effectiveness of using the Duolingo app in improving students' English listening skills, particularly in understanding accent variations and speaking speed. Based on the results of observations and interviews, it was found that students experienced significant improvement in their listening abilities after regularly using this app. These findings directly relate to the formulated problem, while also reinforcing the theoretical argument regarding the benefits of technology in language learning.

One of the main aspects observed from the results is the consistent use of the "Listen and Type" and "Stories" features by the students. This habit indicates active involvement in listening and learning, which is according to multimedia cognitive learning theory. (Mayer, n.d.) can enhance understanding because it involves two perceptual channels simultaneously: auditory and visual. Audio repetition by students, as demonstrated by Respondents 1 and 2, reflects a deep learning strategy, which strengthens memory and increases sensitivity to the pronunciation of words in English.

Furthermore, having a structured study routine, such as a specific time to use Duolingo every day, shows that this app not only enhances listening skills cognitively, but also facilitates the reinforcement of positive study habits, as suggested by (Clark & Mayer, 2012) that active involvement

and internal motivation are key to success in technology-based learning. The streak feature and instant feedback in Duolingo also support the theory of reinforcement from (Skinner, 1950), which emphasizes the importance of strengthening behavior through direct feedback.

From the perspective of the ability to understand variations in accent and speech speed, the research results indicate that students have made progress in recognizing similar words and in understanding rapid pronunciation. This is in accordance with the view (Vandergrift et al., 2006), which states that listening skills are a complex process involving adaptation to various factors of the popularization of language learning applications. phonological factors, including accent and speech tempo. The adaptation of students to normal speed after being accustomed to a slow version, as expressed by Respondent 5, demonstrates a gradual improvement in competence that aligns with the low cognitive load principle in theory. (Sweller, 1994), where the presentation of material in layers will encourage more optimal information processing.

However, the findings also indicate the limitations of Duolingo, particularly in providing a wider variety of accents. All respondents stated that the majority of the exercises only use American accents. This is an important weakness, considering that in a global context, students are required to understand various accents such as British, Australian, or even Indian English. The absence of such variation underscores the importance of improving content features in the app, as also emphasized by (Tuong & Dan, 2024) that the linguistic coverage in learning media must be more representative of real-world diversity.

The demand for interactive two-way features, such as the ability to record and compare voice with native speakers, also indicates the students' need for adaptive learning that is more responsive to verbal feedback. This finding is in line with the multimedia cognitive theory proposed by (Mayer, n.d.), which states that learning will be more effective when information is delivered through a combination of visual and auditory channels. In this context, students' interaction with the audio-visual features on Duolingo helps to enhance overall language understanding through dual information processing.

Overall, the results of this study support various previous findings. (Sah, 2015)(Mindog, 2016)(Shadiev & Yang, 2020), which states that Duolingo is effective in improving listening skills, but still has room for further development, especially in the aspect of linguistic realism. This research also provides empirical support for modern educational theories that emphasize the importance of technology, interactivity, and multimodal approaches in foreign language learning.

CONCLUSION AND SUGGESTION

CONCLUSION

This study shows that the use of the Duolingo application can contribute positively to the development of students' listening skills, particularly in the aspects of sound recognition, pronunciation, and speaking speed. By combining text, audio, and visual elements in a single learning session, Duolingo helps students absorb information through

various perceptual channels simultaneously, thereby strengthening their understanding and memory of the material presented.

Students' ability to distinguish similar-sounding words and understand sentences at a faster speech tempo gradually improves with the frequency and consistency of using the application. However, the limited variation of accents in Duolingo's content remains a challenge in preparing students to face more complex and global communication situations. Therefore, the development of content with a wider range of accents and the addition of interactive two-way features become very important.

In conclusion, Duolingo is a potential learning medium in the context of technology-based language learning. With effective multimedia design and gradual exercises that encourage active engagement, this application can facilitate a more enjoyable, flexible, and in-depth language learning experience. However, to create a truly comprehensive learning experience, continuous innovation is needed to tailor the content to the real needs of users in a diverse global world.

SUGGESTION

Based on the findings of this study, several suggestions are proposed for future development, both in pedagogical practice and in the further improvement of the Duolingo application:

1. Incorporating a Wider Range of Accents

It is recommended that Duolingo expand its range of accent options beyond the predominantly American accent. Including British, Australian, and non-native English accents would provide users with richer linguistic exposure and better prepare them for the diverse communicative contexts encountered in global interactions.

2. Development of Responsive Interactive Features

Duolingo could enhance its learning effectiveness by introducing two-way interactive features, such as the ability for users to record their speech and compare it directly with native speakers. Such features would support phonetic learning and improve learners' phonological awareness more concretely and immediately.

3. Integration into Formal Learning Curricula

The use of Duolingo can be systematically integrated into formal language learning curricula, particularly in courses focused on listening skills. With the support and guidance of instructors, technology-assisted learning can become more targeted and aligned with educational objectives.

4. Adaptive Content Based on Learner Proficiency

It is suggested that Duolingo implement an adaptive learning system that adjusts the difficulty level of content based on users' performance. This personalized learning approach can increase engagement and prevent learners from experiencing boredom or frustration due to content that is too easy or too difficult.

5. *Expansion of Contextual and Authentic Materials*

Duolingo is encouraged to include more authentic and context-rich listening materials, such as academic dialogues, formal discussions, and professional interactions. Authentic content helps learners develop listening skills that are relevant and applicable to real-world communication scenarios.

6. *Further Research Recommendations*

Future research involving a larger and more diverse sample, as well as the use of quantitative or mixed-methods approaches, is recommended to gain a more generalizable understanding of Duolingo's effectiveness. Longitudinal studies would also be beneficial to examine the long-term impact of Duolingo on listening skill development.

By incorporating these suggestions, it is hoped that Duolingo can continue to evolve as a comprehensive and adaptive language learning platform, capable of meeting the increasingly complex needs of learners in a globalized world.

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