

Implementation of Duolingo Application to Improve English Speaking Skills of Tribakti Islamic University Students: Classroom Action Study

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ABSTRACT

This research explores the implementation of the Duolingo application to enhance English speaking proficiency among female students at Tribakti Lirboyo Islamic University, Kediri. The study employed a Classroom Action Research (CAR) design, conducted through two cycles. The participants involved 10 female students who engaged in learning activities using Duolingo as the primary instructional tool. Data were collected through speaking performance tests (pre- and post-tests), classroom observations, and reflective journal entries. The findings indicated that the integration of Duolingo had a constructive impact on students' speaking abilities, particularly in areas such as pronunciation accuracy, vocabulary development, and self-assurance in oral communication. Moreover, learners demonstrated increased enthusiasm, active participation, and growing confidence in expressing themselves in English. Therefore, Duolingo proved to be an effective digital resource in supporting speaking skill development within a higher education context.

1. Introduction

The ability to speak is a crucial component of language skills, serving as a fundamental tool for communication and information exchange. Harmer (2008) defines speaking as a medium for expressing emotions, thoughts, and ideas to others. This competency encompasses not only the articulation of daily experiences but also the fluent delivery of personal insights. Supporting this view, Hermawan (2014) emphasizes that speaking involves the accurate pronunciation of sounds or words to convey messages such as opinions, emotions, and concepts to listeners. In the context of English language learning, speaking is considered an essential skill that students must develop to effectively deliver verbal messages in ways that are clearly understood by others. As noted by Ananda (2024), students frequently measure their language learning progress by observing how much their speaking abilities have improved.

Language plays a vital role as a tool for human communication. As stated by Puskie (2003), and Salim, M. A., & Masyhudianti, U. K. (2024) English holds the status of a global language because it is widely used as the primary language in numerous countries. Moreover, English is recognized as a crucial foreign language that individuals need to learn and master. Byslina (2016) also highlights the significance of English language instruction in educational settings. She notes that in countries formerly colonized by Britain, English is often taught as a second language following the native language. This pattern is evident in Indonesia, where English is introduced from the elementary level through to higher education. Despite its integration into the national curriculum, English remains a foreign language in Indonesia, and this status presents specific challenges in the teaching and learning process (Akbari, 2015).

The development of language is a fundamental aspect that should receive close attention in a child's overall growth (Novitasari et al., 2023). As part of the broader stages of development, language acquisition requires active involvement from both educators and parents. In today's globalized world, acquiring foreign language skills—especially English—has become increasingly vital (Pertwi et al., 2021). Susfenti (2021) underscores that English plays a central role in global communication and information exchange, making proficiency in the language a key requirement for individuals in modern society. Beyond its function as a global means of communication, English also serves as the primary language in various domains including education, business, technology, and science. Consequently, strong English skills offer the younger generation a considerable advantage in navigating global competition. This underlines why many people are eager to learn English effectively—to gain access to information, succeed in a globalized environment, and provide early exposure to English for their children.

Many learners encounter challenges when studying foreign languages like English. According to interview results conducted in 2023, students often express feelings of embarrassment, anxiety, low self-esteem, and difficulties in pronunciation, particularly due to limited exposure to native speakers. Moreover, a lack of vocabulary and reduced confidence when speaking in English contribute to their disinterest in language learning. Megawati (2016) emphasizes that three essential linguistic components play a critical role in supporting English speaking proficiency: pronunciation, vocabulary, and grammar. Pronunciation is crucial in vocabulary acquisition, as it helps distinguish word sounds. As Sofiyanti (2014) notes, students who habitually mispronounce words may struggle to convey their ideas clearly. Thus, proper pronunciation training becomes essential. Similarly, Herlina (2015) explains that a rich vocabulary facilitates students' ability to speak fluently and expressively in English.

A variety of strategies in English instruction can be employed to enhance students' interest in learning. According to the Indonesian national curriculum, learners are expected to develop their speaking and communication skills in the target language, ideally through interaction with native speakers. Achieving this goal, however, requires the use of effective and adaptive teaching methods. The transition from conventional face-to-face instruction to online learning presents additional challenges, particularly in practicing oral communication (Bazimaziki, 2020). In line with curriculum demands, educators are encouraged to implement innovative and engaging approaches that integrate technological advancements to improve learning effectiveness. Technology has the power to reshape

how individuals work, learn, socialize, and spend their leisure time. As Ariestika et al. (2022) assert, a deeper understanding of technological influence enables the education sector to stay relevant and offer more diverse, efficient, and modernized learning models.

With the rapid progression of technology, digital learning tools have emerged as valuable alternatives for enhancing language proficiency. According to De Castro (2016), technological innovations offer flexible and adaptable learning environments, allowing students to engage with content at their own pace. Alwiyah and Sayyida (2020) further highlight that features such as automatic correction in digital applications assist learners in refining their pronunciation and mastering grammatical structures. Educational platforms and interactive games can contribute meaningfully to the language learning process by increasing student motivation and creating a more engaging experience. As noted by Meuthia (2021), these technological innovations have significantly transformed English language instruction, making it more accessible, relevant, and appealing to modern learners. Today, language acquisition is no longer confined to traditional classrooms; it can occur anytime and anywhere. One widely used tool for language learning is the Duolingo application.

Duolingo is an interactive language-learning platform that integrates gamification elements with engaging instructional methods. Research by Grego and Vessel Inov (2012) indicates that students often report feeling satisfied and enthusiastic when learning through Duolingo. The platform offers instruction in multiple languages, including English, and supports the development of key language skills such as speaking, listening, reading, and writing. Gracia (2013) describes Duolingo as a free web-based and mobile application that provides structured language exercises aimed at helping learners achieve linguistic competence. Munday (2016) highlights that the app's innovative and playful learning approach enhances students' comprehension, interest, and motivation by framing learning as an enjoyable game-like experience. Duolingo is also recognized for its user-friendly interface, making it accessible across different age groups. Its intuitive design and ease of navigation contribute to its popularity as a tool for online language instruction. Furthermore, the app features a speech recognition function, allowing learners to practice pronunciation and speaking skills independently. This functionality is particularly beneficial for students who lack access to formal tutoring or native-speaking environments, providing them with a practical and flexible way to improve their speaking abilities.

Based on the background, this study aims to describe the application of the Duolingo application in improving English speaking skills in female students of Tribakti Islamic University. This study focuses on the learning process using Duolingo, changes in participants' speaking skills, and their responses to the use of this application in learning.

2. Research Methodology

This study uses a Classroom Action Research (CAR) approach that aims to improve female students' English speaking skills through the application of the Duolingo application as a learning medium. CAR was chosen because this approach allows researchers to directly observe the learning process in the classroom, intervene systematically, and reflect on the results for continuous improvement. The CAR model used in this study refers to the theory of Kemmis and McTaggart, which consists of four stages in

each cycle, namely: planning, implementing actions (acting), observation (observing), and reflection (reflecting).

This research was conducted over two cycles, each cycle consisting of two meetings. Each cycle involved the implementation of learning actions using the Duolingo application which were carried out directly or independently under the supervision of the researcher. The purpose of the first cycle was to introduce the application, understand its basic features, and familiarize participants with speaking practice patterns. In the second cycle, learning focused on improving aspects of speaking such as pronunciation, vocabulary selection, and speaking courage.

The subjects in this study were 10 female students of Tribakti Lirboyo Islamic University, Kediri who took the basic English course in the even semester of the 2024/2025 academic year. The selection of subjects was carried out using a purposive sampling technique, based on the participants' willingness to follow all stages of the study and actively use the Duolingo application during the learning process. The characteristics of the participants who were homogeneous in terms of language ability and academic environment were taken into consideration to minimize external variables.

The instruments used in this study include:

Speaking test (pre-test and post-test): This test is used to measure the initial ability and development of the participants' speaking skills. The assessment is based on several indicators, such as speaking fluency, pronunciation, sentence structure, vocabulary, and self-confidence.

Observation sheet : Used to record participants' activities during learning, their engagement when using the application, and changes in attitudes and abilities over time.

Reflection notes : Used by researchers to evaluate the learning process in each cycle, record successes and obstacles found, and determine improvement strategies for the next cycle.

Participant response questionnaire (optional): To find out female students' responses to the use of the Duolingo application as a learning medium and how it affects their learning motivation.

Data was collected using several techniques, namely:

1. Carrying out oral tests before and after the action (pre-test and post-test),
2. Direct observation of the learning process and participant behavior, and
3. Written reflections conducted by researchers after each learning cycle.

Data analysis was conducted using simple qualitative and quantitative descriptive methods. Qualitative analysis was used to describe the learning process and changes in student behavior, while quantitative analysis was used to compare the results of the pre-test and post-test as an indicator of the success of the action. The data obtained were analyzed to determine the extent to which the use of Duolingo contributed to improving students' English speaking skills, both in terms of technical abilities and affective aspects such as self-confidence and learning motivation.

3. Findings

This study was conducted in two cycles to evaluate the implementation of the Duolingo application in improving English speaking skills. Data were obtained through speaking tests (pre-test and post-test), direct observation, and reflection notes during the learning process. Each cycle reflects the development of participants in aspects of speaking skills, including pronunciation, vocabulary mastery, fluency, and self-confidence.

1. Pre-Test Results

Before the action was given, a pre-test was conducted to measure the initial abilities of the participants. Based on the results of the initial test and observations, it was found that the majority of participants had difficulty in:

- Pronounce the words correctly,
- Using appropriate vocabulary in the context of the sentence,
- Composing sentences verbally with simple structures,
- Show courage to speak in front of classmates.

This condition shows that participants are still very dependent on passive learning methods and minimal active speaking practice. The courage of participants is also still low due to the lack of direct exposure to English.

2. Implementation of Cycle I

In the first cycle, participants were introduced to and began using the Duolingo application as a self-learning medium. Usage focused on vocabulary, pronunciation, and basic sentence exercises. Observations during the first cycle showed an increase in enthusiasm for learning because participants felt that learning was more interesting and interactive. Some findings during the first cycle include:

- Participants begin to become familiar with new vocabulary,
- Although pronunciation is still not very accurate, there is an increase in confidence,
- Participants showed high interest because the learning approach resembled a game (gamification).

Reflection at the end of the cycle showed the need for emphasis on pronunciation aspects and repetition of speaking exercises in the context of dialogue.

3. Implementation of Cycle II

The second cycle is more focused and focused on improving the quality of participants' speaking. Activities include speaking exercises with the voice recognition feature in the application, as well as small group discussions to practice the ability to respond verbally.

The results of observations and reflection notes show:

- Participants' pronunciation becomes clearer and more precise,
- The vocabulary used is more varied and appropriate to the context,
- Participants are able to construct sentences with simple structures spontaneously,

- The courage to speak increased significantly.

In discussions, participants are able to answer oral questions more confidently, as well as actively participate in task-based oral communication exercises.

4. Post-Test Results

After the second cycle, participants took the speaking test again (post-test). The results showed a significant improvement compared to the pre-test. The average post-test score was higher, and the improvement can be seen from:

- Better speaking fluency,
- Accuracy in pronunciation of common vocabulary,
- Ability to use oral expressions in simple sentences,
- Increased courage to speak without being bothered by shame or hesitation.

This increase is also reinforced by observation data, where participants appear more active, no longer passive in learning, and show positive expressions towards the use of the application.

4. Discussion

The results of this study support the opinions of Gracia (2013) and Munday (2016) that Duolingo is an effective language learning medium because it combines visual, audio, and fun interaction elements. The use of technology-based applications such as Duolingo not only helps participants understand the material, but also creates a comfortable and enjoyable learning atmosphere. This is very important in foreign language learning, where active participant involvement is the main key to mastering speaking skills.

Duolingo has unique features such as pronunciation exercises with voice recognition, instant feedback systems, and vocabulary reinforcement that indirectly train participants in speaking. This is clearly seen in the improvement of participants' speaking skills from the first cycle to the second cycle. Participants not only master the material theoretically, but also show changes in affective aspects such as increased self-confidence and interest in learning. In addition, the application-based learning approach helps meet the learning style of the digital generation (digital native), which is more responsive to technology than conventional lecture methods. This study shows that the use of digital media can be a very potential alternative in learning speaking skills, especially in distance learning or blended learning situations.

The improvements that have occurred also show that the use of technology is not just a trend, but has become a necessity in modern education. Applications such as Duolingo are able to facilitate independent practice and provide a learning experience that is not limited by time and place. This is in line with the findings of Alwiyah & Sayyida (2020), and Rasyidah, U. I. (2024) which state that digital learning provides flexibility and encourages learning autonomy. Thus, the implementation of the Duolingo application has been proven to be able to improve female students' English speaking skills through a fun, independent, and sustainable learning process. The improvements that occur are not only technical (such

as pronunciation and vocabulary), but also emotional and psychological, such as increased self-confidence, motivation, and comfort in speaking.

These findings are further reinforced by Soegoto (2024), who noted that Duolingo's integration of automatic speech recognition (ASR) effectively enhances learners' pronunciation accuracy through real-time feedback and repetition. This feature, along with its gamified design, plays a crucial role in reducing learners' speaking anxiety—an issue often faced in conventional classroom environments.

Research by Ahmed et al. (2022) also supports this conclusion, demonstrating that EFL learners using Duolingo outperformed their peers in both speaking fluency and accuracy tests after a short intervention period. Their study emphasized that digital platforms like Duolingo can substitute certain aspects of traditional instruction while promoting independent learning habits.

Furthermore, a large-scale survey conducted by Olimat (2024) among Jordanian university students revealed that Duolingo was perceived as highly effective for developing speaking skills. Students valued the flexible, interactive nature of the app, which allowed them to practice at their own pace—mirroring the findings of Alwiyah & Sayyida (2020) on learner autonomy.

The positive emotional response of students in this study—such as enjoyment, self-confidence, and motivation—aligns with the findings of Zolfaghari et al. (2025), who argue that gamified digital applications significantly enhance learner engagement by creating immersive and rewarding environments. As digital-native learners increasingly prefer flexible and interactive modes of study, the integration of mobile-assisted language learning (MALL) platforms like Duolingo becomes not only relevant but essential.

Therefore, these results support the idea that digital platforms are not merely supplemental tools, but central components of a modern language learning ecosystem. In line with 21st-century educational needs, this study affirms that applications like Duolingo can be strategically utilized to develop speaking competence through a blend of autonomy, interactivity, and learner-centered technology.

5. Conclusion

Based on the results of the research that has been conducted in two cycles of classroom action, it can be concluded that the implementation of the Duolingo application as a learning medium provides a significant contribution to improving English speaking skills in female students of Tribakti Lirboyo Islamic University, Kediri. This improvement is seen in various aspects of speaking skills, including pronunciation, vocabulary mastery, speaking fluency, and student confidence.

At the beginning of the study, the students' speaking ability was relatively low. This was shown through the results of the pre-test and initial observations, where many participants had difficulty in constructing sentences, pronouncing words correctly, and showing courage in public speaking. Through two learning cycles with the help of the Duolingo application, quite significant changes were seen. The participants became more accustomed to using vocabulary in the context of sentences, more precise in pronunciation, and more fluent in expressing ideas verbally.

In addition to the technical aspects of speaking, the application of Duolingo also has a positive impact on the affective aspects of participants. The enthusiasm, activeness, and self-confidence of participants in participating in learning increased along with the use of interactive and fun applications. This shows that digital learning media such as Duolingo not only support cognitive mastery of the material, but also encourage motivation and learning comfort for participants.

The results of observations and reflections in each cycle show that the use of Duolingo enriches the practical English learning experience. The features offered in the application, such as pronunciation exercises, voice recognition, and sentence construction, indirectly provide repetitive training that helps participants form speaking habits. In addition, the game-based approach (gamification) makes participants more interested in continuing to learn, even outside of class hours.

Overall, this study shows that the integration of technology in language learning, especially through the Duolingo application, can be an effective alternative solution in overcoming obstacles that are often faced in teaching speaking skills. This success indicates that Duolingo is worthy of being used as a supporting media in the English learning process, especially in the context of higher education in Indonesia.

Thus, it can be concluded that the use of the Duolingo application in English learning provides real benefits and can be used as an innovative strategy to improve students' speaking skills, both in terms of linguistic mastery and from the learner's affective side. This study also provides a strong basis for the development of other digital learning methods that are more interesting, adaptive, and learner-centered.

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