Students' Perception of the Effectiveness of Using Duolingo Application as a Foreign Language Learning Platform

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ABSTRACT

This study aims to explore students' perceptions of the effectiveness of using Duolingo as a foreign language learning platform for first semester English education students. The researcher identified the extent to which Duolingo app is effective in assisting foreign language learning and evaluated how effective the app is in assisting students in foreign language learning. A descriptive qualitative approach was used, and data were collected through observation, questionnaires, and interviews with second-semester students of the English Education Study Program at Universitas Muhammadiyah Sidenreng Rappang. The findings show that most students have a positive perception of Duolingo. They found the app easy to use, interesting, and helpful in understanding and memorizing vocabulary. Features such as repetition, daily reminders, and interactive design were found to increase learning motivation and student engagement. However, Duolingo's effectiveness in a structured classroom setting was considered neutral due to limitations in its integration into formal teaching methods. Overall, Duolingo is considered an effective tool for self-directed English vocabulary learning.
Keywords: Perception; Duolingo; Foreign Language; Vocabulary; Media

INTRODUCTION

The advancement of technology in the modern era has revolutionized various aspects of life, including education. In the context of communication and daily activities, technology provides accessible platforms for people to exchange information and learn independently. The increasing use of smartphones and internet-based applications has contributed significantly to educational transformation, particularly in language learning. Among the many platforms available, Duolingo stands out as a widely recognized language learning application that offers interactive features designed to assist learners in acquiring new

languages effectively. Technology plays a pivotal role in enhancing educational media. The rise of internet-based learning tools has allowed learners to study at their own pace and convenience. These tools, often referred to as digital learning platforms, support formal and informal education by integrating engaging features such as gamification, instant feedback, and real-time progress tracking. As education increasingly embraces digital transformation, understanding the effectiveness of such platforms in language acquisition becomes essential.

Learning a foreign language, especially English, is increasingly perceived as a necessary skill in the globalized world. English is recognized as a global lingua franca, and its mastery is fundamental for international communication, academic advancement, and career opportunities. In Indonesia, English is taught as a foreign language in formal education, but challenges remain, particularly in vocabulary acquisition—a core component for achieving communicative competence. Duolingo is an application that utilizes game-based mechanics to facilitate foreign language learning. With its free accessibility via mobile devices and the web, Duolingo offers users an engaging platform to practice language skills, especially vocabulary. According to Huynh et al. (2018), Duolingo incorporates game elements to enhance user motivation without compromising the structure of traditional learning. Despite its popularity—with over 300 million users—the application's effectiveness in structured academic settings remains debatable.

Previous studies (Smith, 2018; Jones, 2017) have shown that consistent use of Duolingo can significantly improve learners' language skills, especially vocabulary and reading comprehension. However, other researchers, such as Brown (2019), argue that the application lacks depth and does not fully support comprehensive language development due to its general and non-contextualized content. Therefore, it is essential to investigate how Duolingo performs in real educational contexts, especially from the perspective of the learners themselves.

The motivation for this study emerged from the researcher's personal experience in searching for effective and engaging platforms for learning English. Among various options, Duolingo stood out due to its popularity and high user ratings. Nevertheless, anecdotal evidence alone is insufficient to justify its effectiveness. There is a need for empirical research that explores students' perceptions and evaluates whether Duolingo meets the pedagogical standards necessary for vocabulary development in formal education. Given the growing demand for autonomous and digital language learning tools, investigating the impact of Duolingo in improving students' vocabulary knowledge is both relevant and timely. Understanding students' perceptions provides insight into user engagement, motivation, and the application's strengths and weaknesses in educational practice. These insights are valuable for educators, curriculum designers, and developers aiming to enhance the quality of language learning. This study aims to explore students' perceptions regarding the effectiveness of using Duolingo as a foreign language learning platform. The research focuses on students enrolled in the English Education Study Program at Universitas Muhammadiyah Sidenreng

Rappang. By analyzing students' experiences, this research seeks to determine the extent to which Duolingo supports vocabulary acquisition and provides recommendations for integrating such applications into formal language instruction.

LITERATURE REVIEW

The integration of technology in education has redefined the way students learn languages. Language learning is no longer confined to textbooks and classrooms. With the emergence of mobile-assisted language learning (MALL), applications like Duolingo offer interactive and user-centered learning experiences. According to Shelly (2010), digital media that combine text, audio, and visuals support learners by enhancing their engagement and comprehension. The accessibility of mobile applications enables learners to practice language skills flexibly, making them a vital part of modern language pedagogy.

Duolingo is a free language learning application launched in 2012 by Luis von Ahn and Severin Hacker. It offers short, gamified lessons that focus on vocabulary, grammar, pronunciation, and listening comprehension. Each language course is organized into a skill tree where users must master basic levels before progressing. The application's core features—such as instant feedback, repetition, and daily progress tracking—are designed to support learner autonomy and motivation (Huynh et al., 2018). These features are aligned with cognitive learning principles that emphasize spaced repetition and active recall.

Duolingo has several pedagogical benefits. First, its gamified structure increases motivation and user retention. According to Munday (2016), Duolingo significantly enhances vocabulary acquisition when used consistently, both in and outside the classroom. Second, it is user-friendly and accessible at any time, which supports learners with different schedules and learning styles. Moreover, Duolingo enables personalized learning by allowing users to choose lesson topics and practice areas based on their individual needs, enhancing learner engagement.

Despite its advantages, Duolingo is not without limitations. The platform is more effective for individual practice than classroom integration. Brown (2019) highlights that Duolingo's content lacks contextual depth and communicative interaction, which are crucial for comprehensive language acquisition. In classroom settings, its reliance on internet connectivity and lack of teacher-led scaffolding may limit its effectiveness. Furthermore, some pronunciation models in the app do not accurately reflect native speech, which may hinder listening and speaking development.

Vocabulary plays a foundational role in mastering any language. Without sufficient vocabulary, learners struggle to comprehend and produce language effectively. According to Hatch and Brown (1995), effective vocabulary learning involves exposure, understanding of meaning, memorization, and practical use. Duolingo

addresses several of these stages through repeated exposure and contextual examples. However, it lacks explicit instruction in word usage and morphological variations, which are essential for deeper vocabulary competence. Student perception is a critical factor in evaluating the effectiveness of educational technology. Perception involves cognitive and emotional responses shaped by prior experiences, motivation, and usability. Buchanan and Huczynski (2019) divide perception into bottom-up and top-down processes. In the Duolingo context, bottom-up processing occurs when students react to the app's visual and interactive stimuli, while top-down processing is shaped by their expectations and learning goals. Positive perception typically leads to higher engagement and persistence in language learning.

A learning platform refers to an integrated environment that supports learning processes, such as managing content, tracking progress, and facilitating communication. Duolingo functions as an asynchronous platform that provides self-directed learning outside the classroom. According to Weller (2007), such platforms can support blended learning models and offer flexibility for diverse learners. However, to maximize their impact, these platforms must be aligned with curricular objectives and supported by appropriate instructional strategies. Several empirical studies have examined the use of Duolingo in language learning. Astarilla (2018) found that students had a positive perception of Duolingo due to its motivational design and vocabulary support. Similarly, Jaelani and Sutari (2020) reported that Duolingo is effective in vocabulary development for junior high school students. Meanwhile, Aulia et al. (2020) demonstrated that Duolingo significantly improved students' vocabulary test scores compared to traditional methods. These studies underscore the relevance of investigating learners' perceptions to understand the nuanced effectiveness of language learning apps like Duolingo.

METHOD

Design and Sample

This study employed a descriptive qualitative approach to explore students' perceptions of the effectiveness of using the Duolingo application as a foreign language learning platform. This approach was chosen because it allows the researcher to gain a deep understanding of the students' experiences, opinions, and perceptions within their natural learning context. As Moleong (2010) notes, qualitative research aims to understand phenomena experienced by research subjects holistically and describe them using words and interpretive analysis. The participants in this study were second-semester students from the English Education Study Program at Universitas Muhammadiyah Sidenreng Rappang. A total of 37 students took part in the study. Among them, four students were purposively selected for in-depth interviews based on their experience using Duolingo and their potential to provide rich, relevant information related to the research objectives.

Instruments and Procedures

To collect data, the study employed four types of instruments: an observation sheet, a questionnaire, structured interviews, and documentation. The observation sheet was used to examine student engagement with the Duolingo application, including how often and how long they had been using it. The questionnaire was designed using a five-point Likert scale and aimed to measure students' perceptions of the application's ease of use, usefulness, and motivational aspects in vocabulary learning. Structured interviews were conducted with four selected students to gather more detailed insights into their views on Duolingo's advantages, challenges, and influence on vocabulary acquisition. Interview questions covered aspects such as effectiveness, motivation, usability, and application of learned vocabulary in real-life contexts. All interviews were recorded and later transcribed for analysis. Additionally, documentation was used to support and validate the data collected from other instruments. To enhance the credibility of the findings, the study used triangulation by combining data from multiple sources—observation, questionnaires, interviews, and documentation—as suggested by Sugiyono (2015).

Data Analysis

Data analysis followed the interactive model proposed by Miles and Huberman (1992), which includes four stages: data reduction, data display, conclusion drawing, and verification. In the data reduction stage, irrelevant data were filtered out to highlight the core findings. The data were then displayed through descriptive narratives and visual forms such as charts or tables. Conclusions were drawn by identifying recurring patterns and themes across the data sources. Verification was carried out by cross-referencing the interview transcripts with questionnaire results and observation notes to ensure the accuracy and consistency of the findings. The questionnaire responses were analyzed descriptively to determine the dominant perceptions among students. This multi-step analysis process aimed to provide a thorough and credible understanding of students' experiences and perceptions regarding the use of Duolingo as a digital learning tool for English vocabulary development.

RESULT AND DISCUSSION

This section presents the findings of the study based on data collected through observation sheets, questionnaires, and interviews. The purpose of the data collection was to explore second-semester students' perceptions of the effectiveness of the Duolingo application as a tool for learning a foreign language, specifically English. The participants were students from the English Education Study Program at Universitas Muhammadiyah Sidenreng Rappang. Data from the observation sheets, completed by 34 students, revealed that 58.8% (20 students) had experience using the Duolingo application, while 41.2% (14 students) reported never using it. Among the users, the duration of use varied: 35.3% of them had only recently started using the application, 20.6% had used it for approximately one year, and just

2.9% had been using Duolingo for more than a year. These findings suggest a broad range of familiarity and exposure to the application, which may influence individual perceptions of its effectiveness.

The questionnaire, designed with 10 statements measured on a five-point Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree), was used to evaluate students' perceptions of Duolingo in terms of usability, motivational value, and its support for vocabulary learning. The responses were analyzed descriptively to identify general trends and dominant attitudes. This analysis helped to categorize students' experiences and views, contributing to a clearer understanding of how Duolingo is perceived as a language learning tool in the university context. Further qualitative insights gathered through interviews are presented in the following section to enrich the quantitative data and provide deeper exploration of individual student experiences with the application.

Table 1. Summary of Students' Perception on Duolingo

No	Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)
1	Duolingo is easy to use in learning English	15.04	46.02.00	30.08.00	07.07	0
2	Duolingo is easy to use to learn vocabulary	15.04	42.03.00	34.06.00	07.07	0
3	Duolingo is boring	0	03.08	38.05.00	42.03.00	15.04
4	Duolingo is useful in classroom settings	0	11.05	73.01.00	11.05	03.08
5	Duolingo makes vocabulary learning difficult	0	03.08	46.02.00	34.06.00	15.04
6	Duolingo helps understanding vocabulary meaning	03.08	46.02.00	42.03.00	07.07	0
7	Duolingo facilitates learning vocabulary at home	07.07	50.00.00	38.05.00	03.08	0

8	Duolingo aids in memorizing vocabulary	07.07	50.00.00	34.06.00	07.07	0
9	Duolingo supports application of English in daily life	03.08	30.08.00	57.07.00	07.07	0
10	Duolingo increases enthusiasm for memorizing English vocabulary	0	26.09.00	69.02.00	03.08	0

The quantitative data show that most students perceive Duolingo as easy to use and helpful in understanding and memorizing vocabulary. Statements 1 and 2 received over 57% agreement. On the contrary, most students responded neutrally regarding the application's usefulness in classroom contexts (73.1%) and its impact on daily language use (57.7%).In terms of motivation and enthusiasm, 50% of students agreed that Duolingo helps them memorize vocabulary, while only 26.9% agreed it increases enthusiasm, suggesting its motivational power is moderate but positive.

The qualitative results from interviews further enriched the quantitative findings. Interviewees confirmed that Duolingo's repetition features, daily targets, and gamified lessons helped them stay active in vocabulary learning. They also noted that while the app was highly effective for self-study, it lacked integration in classroom settings. The results highlight that students generally have a positive perception of Duolingo in terms of accessibility and support for vocabulary learning. However, its limited use in formal academic environments and minor challenges in applying vocabulary to real-life communication suggest areas for further improvement and research.

The findings reveal that most students perceive Duolingo as an effective and easy-to-use application for English vocabulary learning. This supports previous research by Astarilla (2018) and Jaelani & Sutari (2020), who found that learners had positive attitudes towards Duolingo due to its user-friendly interface and motivational features.The high percentage of agreement with statements regarding ease of use aligns with Chapelle's (2001) theory on usability in computer-assisted language learning (CALL), which emphasizes that the learner interface must be intuitive and accessible to support successful engagement. Despite its advantages, the app's perceived limitations in classroom integration echo findings from Brown (2019), who criticized Duolingo's general content and lack of alignment with formal instructional objectives. Most students in this study remained neutral regarding Duolingo's usefulness in class.

The motivational features—such as gamification, levels, badges, and reminders—positively impacted learners' engagement, as reflected in the interviews. This corresponds with Deci and Ryan's (1985) Self-Determination Theory, which states that autonomy and rewards can enhance intrinsic motivation in learning contexts. Nevertheless, the neutrality in statements concerning enthusiasm and daily application implies that while Duolingo supports vocabulary acquisition, it may not strongly facilitate the transition from passive learning to active usage. This gap highlights a common limitation of app-based learning tools lacking real-time interaction and communicative practice. Interview results showed that students could recall and understand vocabulary better due to Duolingo's repetition and feedback systems. This finding supports Thornbury's (2002) principle of "spaced repetition" in vocabulary retention. However, some students reported low self-confidence when using English in real contexts, indicating a disconnect between receptive knowledge and productive skills.

The triangulation of methods observation, questionnaire, and interviews—provides strong validity to the conclusion that Duolingo is a supportive tool for self-directed learning, especially outside the classroom. However, its impact would likely increase with curricular integration and teacher facilitation. In summary, while Duolingo proves effective for independent vocabulary learning, its full potential in academic settings can only be realized through structured implementation. Further studies should examine the effect of combining Duolingo with communicative and collaborative classroom tasks to bridge the gap between knowledge acquisition and language use.

CONCLUSION

Based on the findings derived from observation, questionnaires, and interviews, it can be concluded that the majority of students hold a positive perception regarding the effectiveness of the Duolingo application as a platform for learning English vocabulary. The application's accessibility, interactive design, and gamified elements significantly contribute to its perceived ease of use and engagement. The majority of students indicated that Duolingo facilitated vocabulary acquisition through repetition, immediate feedback, and self-paced learning mechanisms, which are consistent with established principles in language pedagogy and cognitive retention theory.

However, while Duolingo was found to be effective as a self-directed learning tool, its integration into formal classroom instruction remains limited. Most students responded neutrally when asked about Duolingo's effectiveness in structured academic contexts, citing a lack of alignment with classroom materials and instructional strategies. Moreover, although learners reported improved vocabulary comprehension, the application's influence on students' confidence in using English in real-life situations appeared moderate, with some students expressing uncertainty about transferring knowledge into active use. Duolingo offers considerable value as a supplementary digital platform for vocabulary enhancement in foreign language

learning. Its functionality aligns well with the needs of autonomous learners, but its impact could be significantly enhanced through pedagogical integration, contextual enrichment, and opportunities for active language use. Future implementations should consider these aspects to maximize the app's educational potential within both formal and informal learning environments.

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