


# Gamified Vocabulary Learning: EFL Students' Perceptions of Using Duolingo to Enhance English Vocabulary Mastery

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## ABSTRACT

This study investigates EFL students' perceptions of using Duolingo, a gamified mobile application, to enhance English vocabulary mastery. Recognizing vocabulary as a foundational element for effective English communication and acknowledging the limitations of traditional learning methods, this research explores the efficacy of digital, gamified approaches. Adopting a qualitative descriptive research design, data were collected from 20 second-semester English Education Department students at Universitas PGRI Delta Sidoarjo (UNIPDA) through observations, semi-structured interviews, and Likert scale questionnaires. Findings indicate that Duolingo significantly enhances student motivation and engagement due to its gamified features (XP, levels, streaks) and user-friendly, flexible interface. Students reported notable improvements in passive vocabulary knowledge, particularly in word recognition and comprehension, facilitated by the app's repetitive, visual, and audio-text integration. However, a key limitation identified is Duolingo's constrained effectiveness in fostering active vocabulary use and productive language skills, as it offers limited opportunities for real-life conversational application. The study concludes that Duolingo is a highly effective supplementary tool for building receptive vocabulary but should be integrated with interactive communicative methods to achieve comprehensive language proficiency. Future research could quantitatively compare Duolingo's impact on receptive versus productive vocabulary, explore optimal integration strategies into EFL curricula, and investigate long-term retention rates.

**Keywords:** *Gamified Learning; Vocabulary Mastery; Duolingo Perceptions*

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## INTRODUCTION

Vocabulary mastery stands as a cornerstone in the journey of English as a Foreign Language (EFL) acquisition, forming the bedrock upon which effective communication is built. Without a robust vocabulary, learners frequently encounter significant hurdles in comprehending written texts, articulating their thoughts both verbally and in writing, and engaging meaningfully in diverse language learning activities (Alqahtani, 2023; Sari et al., 2021). While the intricacies of grammar and the nuances of pronunciation are undoubtedly vital, it is vocabulary that acts as the essential connective tissue, linking and enabling the full spectrum of language skills (Hamad & Adnan, 2021; Lestari et al., 2022). The breadth and depth of a learner's lexical knowledge directly correlate with their capacity to navigate and master the complexities of a new language (Pratama & Utomo, 2024).

Despite its undeniable importance, many EFL learners globally grapple with enriching their vocabulary through conventional pedagogical approaches. Traditional methods, such as rote memorization, repetitive textbook exercises, and predominantly teacher-centered instruction, are frequently perceived as monotonous, disengaging, and often lacking in contextual relevance (Anwar, 2022; Cahyono & Widiati, 2021). This inherent lack of dynamism not only diminishes students' immediate motivation but also significantly hampers the long-

term retention of new vocabulary, creating a persistent challenge in the EFL learning landscape (Khoiriyah & Alghafari, 2024). The passive nature of these methods often fails to ignite the curiosity and active participation essential for deep lexical encoding.

In response to these persistent challenges, the rapid evolution of digital technology has paved the way for innovative pedagogical alternatives, with gamified learning emerging as a particularly promising avenue. Gamification, defined as the strategic integration of game elements and design principles into non-game contexts, has been consistently shown to significantly enhance learner motivation, engagement, and overall satisfaction by transforming the learning experience into something more enjoyable and interactive (Fitriana et al., 2023; Lestari et al., 2023; Susilawati et al., 2021). Concurrently, Mobile-Assisted Language Learning (MALL) has revolutionized language education, offering a highly flexible, personalized, and universally accessible learning experience through the pervasive use of mobile applications (Adnan & Mahmud, 2022; Al-Ahdal et al., 2023). Among the myriad of applications in this domain, Duolingo stands out as a prominent example, celebrated for its intuitive interface and game-like features, including points, levels, leaderboards, and daily challenges, all designed to foster consistent and enjoyable language practice (Ardiansyah et al., 2021; Syahrizal et al., 2023).

While previous research has highlighted Duolingo's potential in various facets of English language proficiency (e.g., Fatonah et al., 2022 on general proficiency; Wijayanti et al., 2021 on grammar acquisition), a notable gap persists in studies specifically examining the app's direct role and perceived effectiveness in vocabulary development. Furthermore, there is limited empirical research that thoroughly investigates EFL students' perceptions of utilizing Duolingo explicitly for enhancing their vocabulary acquisition (Han et al., 2022). Understanding learners' firsthand experiences, attitudes, and engagement with such gamified tools is paramount for accurately evaluating their real-world efficacy in authentic EFL classroom settings and beyond (Permata & Prastyo, 2023).

This study, therefore, endeavors to bridge this critical research gap by rigorously exploring EFL students' perceptions of Duolingo as a gamified learning tool specifically for vocabulary improvement. The novelty of this research lies in its dedicated focus on vocabulary acquisition, rather than broader language skills, thereby providing more granular insights into this crucial area. The research also aims to meticulously identify students' motivations, perceived advantages, and inherent limitations when employing Duolingo for their vocabulary learning journey. By thoroughly examining students' perspectives, this study is poised to offer invaluable practical implications for educators, curriculum designers, and educational technology developers, fostering the creation of more effective, engaging, and contextually relevant vocabulary learning strategies within the dynamic EFL environment (Dwi et al., 2021).

## METHOD

### Research Design and Approach

This study adopted a qualitative descriptive research approach to thoroughly investigate and understand students' perceptions of using the Duolingo application for enhancing English vocabulary mastery. This methodological choice was intentional, as it allows for an in-depth exploration of naturally occurring phenomena without the manipulation of variables, thereby capturing the rich complexities of students' experiences (Creswell & Poth, 2018; Yin, 2018). A descriptive qualitative approach is particularly suitable for exploring subjective experiences and perceptions within a specific context, providing nuanced insights into how participants interact with and perceive a particular tool or intervention (Given, 2008; Lincoln & Guba, 1985).

### Population, Sample, and Sampling Technique

The population for this study comprised students enrolled in the English Education Department (PBI) at Universitas PGRI Delta Sidoarjo (UNIPDA). From this population, the sample consisted of 20 second-semester students from the English Education Department

(PBI) at Universitas PGRI Delta Sidoarjo (UNIPDA). A purposive sampling technique was employed to select these participants, ensuring that the chosen students had some familiarity with technology and were actively engaged in English language learning, thus providing relevant insights into the study's focus (Patton, 2015; Etikan et al., 2016). This method allowed for the selection of participants who could offer rich, relevant data regarding their perceptions of Duolingo for vocabulary acquisition.

### **Research Setting and Time**

The research was conducted at Universitas PGRI Delta Sidoarjo, located at Jl. Raya Kemiri, Kemiri, Sidoarjo, East Java. Data collection took place during the second semester of the 2024/2025 academic year, ensuring that the study captured contemporary student experiences with Duolingo within the specified academic period.

### **Data Collection Instruments**

To ensure a comprehensive understanding of student perceptions, data in this study were collected using a triangulation of instruments.

Observation was conducted to monitor and identify students' engagement patterns and operational behaviors while using the Duolingo application. This focused on how they navigated the app, interacted with its features, and whether they demonstrated active participation during vocabulary learning sessions (Angrosino, 2007; Kawulich, 2005).

Semi-structured interviews were employed to delve deeper into each student's perception of using Duolingo for vocabulary learning. The interviews explored various facets, including students' motivation for using the app, their overall learning experience, and the extent to which Duolingo provided an engaging and enjoyable learning environment. Specific attention was paid to how the app's gamified features influenced students' attitudes and potentially mitigated feelings of boredom during the learning process (Kvale & Brinkmann, 2009; Seidman, 2013).

A Likert scale questionnaire was utilized to systematically collect quantitative data on students' attitudes towards gamification-based learning and their perceptions regarding the enhancement of vocabulary mastery through Duolingo. The questionnaire comprised a series of statements designed to measure the level of agreement or disagreement, providing a broad overview of general trends among the participants (Dillman et al., 2014; Fink, 2017).

### **Data Collection Procedures**

The data collection process was structured in a multi-stage approach to ensure systematic gathering of information.

Participants were instructed to use the Duolingo application regularly over a predefined period of 1 to 2 weeks. The focus of their usage was specifically directed towards vocabulary-related lessons within the application, ensuring consistent exposure to the app's vocabulary-building features.

Following the designated Duolingo usage period, all participating students were administered the questionnaire. This allowed for the assessment of their attitudes, motivation, and initial perceptions of learning outcomes after a period of direct engagement with the application.

After the questionnaire completion, semi-structured interviews were conducted with selected participants. This final stage provided an opportunity to gain deeper, more nuanced insights into individual experiences, perceptions, and detailed feedback regarding the specific aspects and overall utility of Duolingo for vocabulary enhancement.

### **Data Analysis Techniques**

The collected data were rigorously analyzed using two complementary techniques.

Qualitative data derived from observation notes and interview transcripts were analyzed using thematic coding. This involved systematically identifying, categorizing, and interpreting recurring themes, patterns, and salient ideas within the data. This process allowed the researchers to understand underlying trends in student behavior, motivation, and perceptions concerning Duolingo's role in vocabulary learning (Braun & Clarke, 2006; Guest et al., 2012).

Quantitative data obtained from the questionnaire were analyzed using descriptive statistics, specifically frequency analysis. Responses were tabulated to show frequencies and percentages for each statement. This allowed the researchers to summarize general trends among participants regarding their engagement with Duolingo and their perceived progress in vocabulary learning, providing a statistical overview of the findings (Pallant, 2016; Field, 2018).

## FINDINGS AND DISCUSSION

This section presents the findings derived from observations, interviews, and questionnaires, offering an in-depth analysis of EFL students' perceptions regarding the use of Duolingo for enhancing English vocabulary mastery. The discussion integrates these findings with relevant contemporary literature, addressing the study's aim to identify students' motivations, perceived advantages, and inherent limitations when employing Duolingo for vocabulary learning.

### Initial Engagement and Digital Literacy Landscape

The interview results revealed a notable variance in students' prior knowledge and experience with the Duolingo application. A segment of the student population demonstrated familiarity with Duolingo, actively integrating it into their independent learning routines, typically engaging 3 to 5 times per week for sessions lasting between 10 to 20 minutes. These students consistently articulated that Duolingo offered a flexible and enjoyable pathway to English vocabulary acquisition. This aligns with recent research highlighting the increasing trend of autonomous language learning facilitated by digital tools among digitally native students (Al-Ahdal et al., 2023; Syahrizal et al., 2023).

Conversely, a significant proportion of students reported being unfamiliar with Duolingo or having never actively utilized it. These individuals predominantly relied on more conventional vocabulary learning strategies, such as manual note-taking and rote memorization. This disparity can be attributed to several factors, including a lack of comprehensive information regarding digital learning tools, limited access to necessary digital devices, or varying levels of digital literacy concerning educational technology. This phenomenon resonates strongly with the observations by Wahyuni and Ramadani (2021), who posited that "The adoption level of digital learning applications is highly influenced by students' initial perceptions and their level of technological literacy" (Wahyuni & Ramadani, 2021, *JTPP* Vol. 4, No. 2, p. 115). These findings underscore the critical importance of fostering greater awareness and strategically integrating digital learning technologies like Duolingo within educational environments to ensure their benefits are more equitably distributed across the student demographic (Adnan & Mahmud, 2022).

### Perceptions of Duolingo's Gamified Features for Vocabulary Learning

A predominant sentiment among students who had experience with Duolingo was its highly engaging and interactive nature. Key features such as repetition-based practice, robust visual reinforcements, dynamic quick quizzes, and seamless audio-text integration were consistently identified as highly effective mechanisms for aiding vocabulary memorization and contextual understanding. As one participant, A.B., succinctly articulated, "The repetition feature is really helpful. If I forget something, it shows up again. Eventually, I memorized it." This testimonial highlights the efficacy of spaced repetition and multimodal input, which are well-established principles in effective vocabulary acquisition (Alqahtani, 2023; Sari et al., 2021).

Furthermore, the app's sophisticated reward system, encompassing XP (experience points), progressive level advancement, and daily streaks, was universally perceived as a powerful motivator. Students reported that these gamified elements significantly contributed to a heightened sense of accomplishment and sustained engagement (Fitriana et al., 2023). The integration of game mechanics transformed vocabulary learning from a potentially arduous task into an enjoyable and intrinsically rewarding activity, making it considerably more appealing than traditional, often monotonous, vocabulary learning methods (Lestari et al.,

2023). This aligns with the principles of gamification, which leverage intrinsic motivation through elements like progress tracking and immediate feedback to enhance learning outcomes (Susilawati et al., 2021).

### **Perceptions of Ease of Use and Learning Motivation**

Students consistently praised Duolingo for its remarkable ease of access, intuitive user-friendliness, and inherent flexibility. A significant number of participants expressed appreciation for the app's ubiquitous accessibility, enabling them to engage in vocabulary learning anytime and anywhere, particularly during leisure periods or outside conventional classroom hours. This flexibility strongly supports the tenets of Mobile-Assisted Language Learning (MALL), which emphasizes personalized and accessible learning experiences (Al-Ahdal et al., 2023).

The game-like interface of Duolingo emerged as a pivotal factor in fostering increased motivation for vocabulary learning. Students reported that this design significantly reduced the perceived burden and stress often associated with language acquisition, transforming the process into a more enjoyable endeavor. Participant I.G. encapsulated this sentiment, stating, "I like using Duolingo because the interface looks like a game. So learning doesn't feel like a burden." This finding underscores how gamified design can positively influence learner affect and reduce anxiety, leading to more enthusiastic and sustained engagement compared to conventional rote memorization techniques (Dwi et al., 2021; Fatonah et al., 2022).

#### **Perceptions of Duolingo's Impact on Vocabulary Acquisition**

The overwhelming majority of students indicated that consistent engagement with Duolingo yielded a positive impact on their vocabulary development. Specifically, they observed marked improvements in their ability to recognize and comprehend new English words within various contexts. The app's systematic repetition, combined with its audio-visual elements, was widely believed to facilitate more effective vocabulary retention. As participant C.W. noted, "After using Duolingo regularly, I can recognize words more quickly when reading English articles." This suggests Duolingo is highly effective in developing receptive vocabulary knowledge, which is crucial for reading comprehension and listening skills (Pratama & Utomo, 2024).

However, a critical nuance emerged regarding the scope of vocabulary development. While students acknowledged significant progress in their passive vocabulary knowledge (recognition and comprehension), several participants pointed out that the application provided limited opportunities for developing active vocabulary use, particularly in productive skills such as speaking or writing. This indicates that while Duolingo excels at building a foundational receptive lexicon, it may not sufficiently bridge the gap to spontaneous, active language production (Han et al., 2022; Permata & Prastyo, 2023).

### **Critical Discussion and Limitations**

The findings of this study corroborate existing literature on the effectiveness of Duolingo as a supplementary language learning tool. The app's gamification elements, such as points, levels, and streaks, are indeed instrumental in enhancing student motivation, aligning with broader theories of gamification in education (Fitriana et al., 2023; Lestari et al., 2023). Furthermore, Duolingo's mobile accessibility supports flexible learning anytime and anywhere, a core advantage of Mobile-Assisted Language Learning (Adnan & Mahmud, 2022; Al-Ahdal et al., 2023).

Despite these significant advantages, the study's findings also highlight critical limitations, particularly concerning the development of active speaking skills. While Duolingo demonstrably aids in passive vocabulary acquisition, it offers limited exposure to authentic, real-life language use scenarios. Students are not adequately trained to spontaneously apply newly acquired vocabulary in dynamic conversations or complex communicative situations. This observation is consistent with research indicating that app-based instruction, including Duolingo, is often more effective for receptive linguistic knowledge than for developing oral communicative ability (Loewen, Isbell, & Sporn, 2020). The absence of genuine interactive discourse within the app restricts opportunities for learners to practice and internalize vocabulary for productive use, a crucial aspect emphasized by scholars advocating for real

interaction in language learning to enhance productive language abilities (Kukulska-Hulme & Shield, 2008).

### Practical Implications

Based on these findings, Duolingo is highly effective as a supplementary tool for enhancing vocabulary knowledge, primarily due to its repetitive, interactive, and user-friendly features. Its design makes it particularly suitable for independent student use to expand their receptive vocabulary. However, to foster comprehensive language proficiency, especially in improving active speaking fluency, Duolingo should be strategically combined with other interactive and communicative learning methods. These could include structured group discussions, formal presentations, or engaging role-play activities, all of which provide invaluable opportunities for students to actively and contextually utilize the vocabulary they have acquired, moving beyond passive recognition to confident and spontaneous production. This integrated approach ensures a more holistic development of language skills, addressing the limitations inherent in app-centric learning.

### CONCLUSIONS

This study demonstrates that the Duolingo application is an effective supplementary tool for enhancing EFL students' English vocabulary mastery, particularly in developing passive vocabulary knowledge through its gamified, accessible, and user-friendly platform. Students reported increased motivation and engagement, highlighting Duolingo's value in making vocabulary learning enjoyable and consistent. However, its limited capacity to support active vocabulary use and productive language skills, especially speaking, underscores a critical gap in fostering communicative competence. Therefore, while Duolingo contributes significantly to building a receptive lexical foundation, it should be complemented with pedagogical strategies and activities that promote active language use. Future research should further explore its long-term impact, effectiveness in productive vocabulary development, and integration into formal EFL instruction to maximize its educational potential.

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