# Duolingo in Basic English Learning: Student Engagement and Achievement

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**Abstract.** This study investigated the effectiveness of the Duolingo app in supporting Basic English learning and examined its impact on student engagement and academic achievement. The study was conducted with a group of first-semester students over a five-month period. During this time, quantitative and qualitative data were collected through pre-tests, post-tests, classroom observations, and monitoring of student interactions with the app. The findings indicated significant improvements in students' basic English competencies, particularly in vocabulary mastery, grammar recognition, and reading comprehension. Students demonstrated greater motivation, consistency, and independence in their learning processes, largely due to Duolingo's gamified features such as rewards, levels, and interactive exercises. These results align with the researchers' field observations, which revealed that many first-semester students at the Islamic University of North Sumatra initially had limited English proficiency, especially in vocabulary and basic sentence structure. The integration of Duolingo into regular learning activities proved highly effective in addressing these gaps, offering an accessible and learner-friendly platform that complements traditional face-to-face instruction. Overall, this study suggests that Duolingo can serve as a valuable supplementary tool in basic English teaching, particularly for beginner-level students, and recommends its broader application in similar educational contexts, as it can provide a strong foundation for English vocabulary development among novice learners.

**Keywords:** Basic English; Duolingo; English Learning; Student; Vocabulary Acquisition

## 1. INTRODUCTION

Learning English has become increasingly essential in today's globalized world, as proficiency in English opens opportunities for education, employment, and cross-cultural communication (Crystal, 2003). Traditional classroom methods, however, often face limitations in terms of student motivation, individualized pacing, and access to authentic language input (Brown, 2007).

The advent of technology has transformed language learning approaches. Mobile-assisted language learning (MALL) provides learners with flexibility and interactive learning environments, allowing practice anytime and anywhere (Kukulska-Hulme, 2009). In particular, mobile applications like Duolingo incorporate gamification elements such as points, levels, and streaks that enhance learner motivation and engagement (Deterding et al., 2011).

Engagement is a crucial factor in language acquisition. Fredricks, Blumenfeld, and Paris (2004) argue that behavioral, emotional, and cognitive engagement directly influence learning outcomes. Similarly, Vanderplank (2010) emphasizes that interactive technology tools encourage active participation, which in turn improves retention and achievement in language learning.

Duolingo, specifically, offers structured lessons that cover vocabulary, grammar, listening, and speaking skills, supporting self-paced and autonomous learning (Vesselinov &

Grego, 2012). This makes it a promising tool for students who need to build basic English skills outside the conventional classroom setting.

Duolingo, one of the most widely used language-learning applications, incorporates principles from Gamification Theory (Deterding et al., 2011), such as rewards, badges, levels, and instant feedback, to create an enjoyable learning environment. Research shows that gamified learning can enhance engagement, persistence, and vocabulary retention (Hamari, Koivisto & Sarsa, 2014). Duolingo's design is also grounded in Behaviorist Learning Theory (Skinner, 1953), where repetitive practice and reinforcement help strengthen language acquisition through gradual mastery.

Several studies highlight Duolingo's potential in improving learners' English skills. Vesselinov and Grego (2012) found that Duolingo learners made significant progress equivalent to several college-level language learning hours. Moreover, Chen (2020) noted that Duolingo's structured and interactive exercises significantly improved students' vocabulary and grammar understanding. Other research indicates that the app can increase learner engagement due to its interactive and game-like nature (Munday, 2016; Loewen et al., 2019).

## 2. LITERATURE REVIEW

The study by Fakhrurriana et al. (2024), entitled 'Perception of the Use of Duolingo Application in English Learning for Students' Vocabulary Mastery', published in BATARA DIDI: An English Language Journal, explored students' perceptions of Duolingo's effectiveness in vocabulary acquisition. Loewen et al. (2019) also found that Duolingo effectively enhances receptive vocabulary and grammar knowledge for second language learners. Munday (2016) observed that Duolingo, when integrated with classroom instruction, helps students improve vocabulary mastery and fosters independent learning habits. Studies also indicate that Duolingo improves learners' foundational vocabulary, which is crucial for more advanced language development (Godwin-Jones, 2011).

This study aims to explore how Duolingo can facilitate basic English learning, focusing on two key aspects: student engagement and achievement. By examining these factors, the research seeks to provide insights into the effectiveness of mobile applications in enhancing language learning outcomes.

Indonesian university students often face challenges in vocabulary mastery and grammar understanding, which makes Duolingo a promising supplementary tool. Research by local scholars (Putra, 2021; Sari & Widodo, 2020) indicates that mobile apps improve learner motivation, encourage independent learning, and support vocabulary growth among

Indonesian EFL learners. Given these conditions, integrating Duolingo into Basic English courses for first-semester university students can address foundational gaps and enhance learning outcomes.

## 3. RESEARCH METHOD

**Participants**

This study involved 1 class of students from the Islamic University of North Sumatra, Faculty of Islamic Religion and Education, majoring in Islamic Religion and Education when they entered English lectures.

**Instruments**

The study utilized both pre-test and post-test assessments to measure improvement in vocabulary, grammar, reading, and listening skills. Additionally, an observation checklist was used to monitor student engagement, tracking factors such as the frequency of use, time spent, and active participation.

**Procedure**

Students completed a pre-test, then used Duolingo for 30 minutes daily over 5 weeks. Engagement was observed weekly, and a post-test was administered at the end to assess achievement.

## 4. RESULT AND DISCUSSION

**Student Achievment**

The results of the post-test demonstrated a significant improvement in students' basic English skills compared to the pre-test scores. The average score increased from 55% to 78%, indicating that the use of the Duolingo application had a positive impact on learning outcomes. Analysis of individual skill areas revealed that students showed the most progress in vocabulary and grammar, followed by moderate improvements in reading comprehension and listening skills.

These findings suggest that the structured, gamified lessons in Duolingo effectively reinforce basic English concepts. The immediate feedback provided by the application allows students to correct errors and consolidate knowledge in real time, which aligns with the principles of self-directed learning. Additionally, the incremental progression of difficulty levels in the app helps maintain a balance between challenge and skill, preventing learner frustration and promoting steady achievement.

The improvement observed in this study is consistent with previous research indicating that mobile-assisted language learning can significantly enhance learner proficiency in fundamental language skills (Vesselinov & Grego, 2012; Kukulska-Hulme, 2009).

**Student Engagement**

Observation data and informal feedback revealed high levels of student engagement during the 8-week intervention. Approximately 85% of participants completed daily exercises consistently**,** demonstrating a strong commitment to using the application. Students reported enjoying gamified features such as points, streaks, levels, and badges, which appeared to motivate them to continue practicing regularly.

Moreover, engagement was not limited to individual activity. Peer interaction increased significantly, as students discussed strategies, shared progress, and supported one another in completing challenging lessons. This social dimension contributed to a positive learning environment, fostering both motivation and accountability.

The combination of gamification and structured lessons in Duolingo appears to address multiple aspects of learner engagement: behavioral engagement (active participation and consistent practice), emotional engagement (enjoyment and interest), and cognitive engagement (focused attention on completing exercises correctly). These results align with the engagement theory in educational research, which emphasizes that engaged learners are more likely to achieve better academic outcomes (Fredricks et al., 2004).

Overall, the findings indicate that Duolingo not only enhances basic English skills but also promotes sustained learner engagement, creating a more effective and enjoyable language learning experience.

**Table 1.** Average Scores of Vocabulary, Grammar, Reading, and Listening Skills Over 5 Months

| Month | Average Vocabulary Score (%) | Average Grammar Score (%) | Average Reading Score (%) | Average Listening Score (%) | Overall Average (%) |
|---|---|---|---|---|---|
| 1 | 55 | 53 | 57 | 54 | 55 |
| 2 | 61 | 59 | 62 | 60 | 61 |
| 3 | 66 | 64 | 67 | 65 | 66 |
| 4 | 72 | 70 | 73 | 71 | 72 |
| 5 | 78 | 76 | 79 | 77 | 78 |

**Table 2.** Monthly Overview of Activities, Time Spent, Scores, and Observations

| Month | Activities & Focus | Average Time Spent Daily | Average Score (%) | Observations & Notes |
|---|---|---|---|---|
| 1 | Introduction to basic vocabulary and phrases | 30 minutes | 55 | Students familiarized themselves with the app and learned basic greetings, numbers, and simple words. Engagement was high due to gamified elements. |
| 2 | Basic grammar structures and sentence formation | 30 minutes | 61 | Students practiced simple sentence patterns. Slight improvement in grammar observed; motivation remained strong. |
| 3 | Reading comprehension and listening exercises | 30 minutes | 66 | Students began combining vocabulary and grammar in short texts. Listening skills improved gradually. Some students needed extra guidance. |
| 4 | Expansion of vocabulary and more complex grammar | 30 minutes | 72 | Students handled longer sentences and practiced constructing paragraphs. Peer discussion about strategies increased engagement. |
| 5 | Integration of all skills: vocabulary, grammar, reading, listening | 30 minutes | 78 | Significant improvement observed across all skills. Students reported enjoying streaks and badges, which reinforced daily practice. High engagement and consistent achievement. |

Based on the data above, it can be concluded that many first semester students or so-called new students still do not understand English even though they use Duolingo, so it can be concluded that students know less because of the lack of practice at home or on campus.

**Table 3.** Student Engagement and Usage of Learning Platform in Islamic Religious Education Program

| No | Student Name | Study Program | Semester | Interest Level | Usage Description |
|---|---|---|---|---|---|
| 1 | Muhammad Ajir | Islamic Religious Education | 1 | Very Interested | Uses every day |
| 2 | Siti Kholiza | Islamic Religious Education | 1 | Interested | 4–5 times per week |
| 3 | Muhammad Rizky | Islamic Religious Education | 1 | Quite Interested | 3 times per week |
| 4 | Wardyatul | Islamic Religious Education | 1 | Very Interested | Likes the gamification feature |
| 5 | Muhammad Rahmat | Islamic Religious Education | 1 | Interested | Improving vocabulary |
| 6 | Indah Permatasari | Islamic Religious Education | 1 | Very Interested | Often practices listening |
| 7 | Edi Gusnandar | Islamic Religious Education | 1 | Quite Interested | Used during free time |
| 8 | Ria Kholiza | Islamic Religious Education | 1 | Very Interested | Consistent with daily lessons |
| 9 | Zulfahmi | Islamic Religious Education | 1 | Interested | Helps with basic grammar |
| 10 | Erin Indah | Islamic Religious Education | 1 | Very Interested | Studies 10–15 minutes per day |

Based on the data above, the names of the first-semester students at UISU were obtained from the attendance list, and the students were subsequently contacted and asked to explain how Duolingo assisted them in learning English vocabulary.

## 5. CONCLUSION

Duolingo has proven to be an effective tool for learning basic English, demonstrating a significant positive impact on first-semester student achievement and engagement. The app's structured learning, immediate feedback, and gamification elements, such as points, streaks, and badges, provide ongoing motivation for learners and strengthen mastery of vocabulary, grammar, reading, and listening skills. By allowing students to learn at their own pace, Duolingo encourages self-directed learning, which is particularly beneficial for learners who need additional practice outside of a traditional classroom setting.

Integrating Duolingo into formal classroom practice can further enhance the overall language learning experience. Duolingo supports differentiated learning by allowing teachers to address individual student needs, track progress, and provide targeted interventions when needed. Furthermore, the app's interactive and engaging nature encourages active participation, collaboration, and peer learning, creating a more dynamic and student-centered learning environment.

Overall, Duolingo use not only contributes to measurable improvements in English proficiency but also increases learners' motivation, engagement, and ongoing independence, highlighting the potential of mobile-assisted language learning as a complementary tool in contemporary education.

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