

Duolingo's Effectiveness in Enhancing English Reading Skills through Reflective Feedback

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ABSTRACT

Digital technology has reshaped English language learning by offering learners more personalized, interactive, and accessible practice, with Duolingo emerging as one of the most widely used gamified applications for developing reading skills. This study examined the effectiveness of Duolingo in enhancing English reading skills among seventh-grade students, with particular attention to reflective learning and feedback. A qualitative descriptive design was used, involving 35 students and one English teacher at SMP Muhammadiyah 01 Medan. Data were collected through a Likert-scale questionnaire, semi-structured interviews, observation, and documentation, then analyzed using the interactive model of data reduction, data display, and conclusion drawing proposed by Miles, Huberman, and Saldana. Results suggest that students and the teacher perceived Duolingo positively, especially with its contribution to reading comprehension, vocabulary acquisition and learning motivation, and also in relation to the fostering of more autonomous and introspective study practices. The application's rapid feedback function allowed students to detect and self-correct their own reading errors, which further fostered a more thoughtful attitude to practice. This study implies Duolingo may serve as a beneficial supplemental tool for reading teaching, so long as teachers continue to push students toward deeper and more critical engagement with text.

Keywords: Duolingo, English reading skills, reflective learning, feedback

ABSTRAK

Teknologi digital telah mengubah pembelajaran bahasa Inggris dengan menawarkan latihan yang lebih dipersonalisasi, interaktif, dan mudah diakses kepada para pelajar. Duolingo muncul sebagai salah satu aplikasi berbasis permainan yang paling banyak digunakan untuk mengembangkan keterampilan membaca. Penelitian ini mengkaji keefektifan Duolingo dalam meningkatkan keterampilan membaca bahasa Inggris di kalangan siswa kelas VII, dengan fokus khusus pada pembelajaran reflektif dan umpan balik. Desain penelitian yang digunakan adalah deskriptif kualitatif, yang melibatkan 35 siswa dan seorang guru bahasa Inggris di SMP Muhammadiyah 01 Medan. Data dikumpulkan melalui kuesioner skala Likert, wawancara semi-terstruktur, observasi, dan dokumentasi, kemudian dianalisis menggunakan model interaktif reduksi data, penyajian data, dan penarikan kesimpulan yang diusulkan oleh Miles, Huberman, dan Saldana. Hasil penelitian menunjukkan bahwa siswa dan guru memandang Duolingo secara positif, terutama terkait kontribusinya terhadap pemahaman bacaan, penguasaan kosakata, dan motivasi belajar, serta dalam hal pembinaan praktik belajar yang lebih mandiri dan reflektif. Fungsi umpan balik cepat pada aplikasi tersebut memungkinkan siswa untuk mendeteksi dan mengoreksi sendiri kesalahan membaca mereka, yang selanjutnya menumbuhkan sikap yang lebih reflektif dalam berlatih. Penelitian ini menyimpulkan bahwa Duolingo dapat berfungsi sebagai alat bantu yang bermanfaat untuk pengajaran membaca, selama guru terus mendorong siswa untuk terlibat lebih dalam dan kritis dengan teks.

Kata kunci: Duolingo, keterampilan membaca bahasa Inggris, pembelajaran reflektif, umpan balik

A. Introduction

With the emergence of digital technology, the environment of English learning has been transformed to personalized, interactive and accessible (Wang, (2022); Jones (2019)). The rise of artificial intelligence in language teaching is a more generic response to the need for learners to interact with language in an ever more digitally connected world. This idea underlies Duolingo, a platform that utilizes adaptive exercises, real-time feedback and a game-like approach. Today it is one of the most popular language learning apps with tens of millions of users around the world. (Curry, 2025).

This sort of platform stresses some skills include reading which is in a central position because it is the base for the evolution of vocabulary, knowledge of grammar and the ability to understand the meaning in different contexts (Manisah, 2015). Reading is not simply the decoding of the words but the reader must also think about the meaning of the text (Santi Istiqomah, 2023). Reading is a practical skill to communicate and a tool for understanding that kids must deliberately cultivate (Chaniago & Yunaspi, 2021). More generally, the injection of generative and adaptive artificial intelligence into the educational content has been acknowledged as a technique to better the design and delivery of linguistic content (Tafazoli, 2024). Independent reading: Duolingo is an example of this.

In fact, many junior high school pupils still have difficulty with English reading comprehension. Based on classroom observation at SMP Muhammadiyah 01 Medan, it is found that the challenges faced by students are related to the lack of opportunity to practice, lack of involvement, and lack of constructive comments on the students' reading efforts. Duolingo was a known tool in this case: several students were already using it independently, attracted by its gamified activities and its capacity of providing rapid feedback on their mistakes. Previous work has noted that Duolingo's free access model and focus on short, repeatable exercises makes it

attractive to learners who might otherwise lack structured practice (Sanda & Klimova, 2021). Moreover, it was found that its activities involved vocabulary, grammar, spelling and conversational practice in an accessible game-like format (Laiya, 2024).

Several academics have researched the function Duolingo plays in language learning especially among university students. For example, Duolingo has been demonstrated to be a good complement to traditional education and to favour self-directed learning, due to its game-based design (Peláez-Sánchez, 2023). However, other research has pointed out certain disadvantages. For example, Malinda and Daulay (2024) found that in certain cases the app does not give sufficient context to assist learners understand new ideas, especially with more demanding reading passages.

These mixed findings suggest that Duolingo's effectiveness may depend on the learner population and the specific skill being examined, and that comparatively little is known about how it functions for younger, junior-secondary learners working specifically on reading comprehension.

This study therefore examined the effectiveness of Duolingo in enhancing English reading skills among seventh-grade students, with particular attention to how reflective learning and the application's feedback feature shaped their reading development. Unlike earlier studies that focused largely on university populations, this research centred on junior high school learners and explored the issue from two complementary angles, students lived experience and their teacher's professional observation, in order to understand both how Duolingo is used and what role its feedback plays in encouraging more reflective reading practice. By drawing on both perspectives, this study sought to evaluate how Duolingo supports the development of reading comprehension and to assess the contribution of its feedback system to learners' reading performance, while remaining attentive to the limitations that previous research has identified.

B. Research Method

This study used a qualitative descriptive design to gain an in-depth understanding of how Duolingo was experienced by its users, rather than to test a numerical hypothesis (Astuti, 2024). The research was conducted at SMP Muhammadiyah 01 Medan, located on Jl. Demak, Sei Rengas Permata, Medan Area, during the 2024/2025 academic year.

The participants were 35 seventh-grade students who were active users of Duolingo, selected through purposive sampling, together with one English teacher who had integrated the application into classroom instruction. From this group, five students and the teacher were involved in semi-structured interviews to obtain richer, more contextual accounts of their experience, while the full group of 35 students completed the questionnaire.

Data were collected through four main techniques: classroom observation, a closed questionnaire, semi-structured interviews, and documentation. The questionnaire, distributed through Google Forms, consisted of 16 statements rated on a five-point Likert scale (strongly agree, agree, neutral, disagree, strongly disagree) and was organised around five themes, namely usage characteristics, students' general perception of Duolingo, its affective and cognitive impact, its effectiveness for reading ability, and the role of feedback in supporting reflective learning. The interview guide explored similar themes in an open-ended format, allowing participants to elaborate on their answers.

Data were analysed using the interactive model proposed by Miles, Huberman, and Saldana (2014), comprising data reduction, data display, and conclusion drawing and verification. Questionnaire responses, interview transcripts, and observation notes were reduced and coded into recurring categories, displayed in tabular and narrative form, and then cross-checked across data sources to verify consistency before conclusions were drawn.

C. Result and Discussion

Across the 35 student respondents, Duolingo use was fairly consistent but not uniform: eleven students reported using the application daily, five used it three to five times a week, nine used it once or twice a week, and ten described their use as rare. Most sessions were short, with seventeen students spending ten to twenty minutes per session and thirteen students using it for less than ten minutes, a pattern consistent with Duolingo's micro-learning design, which favors brief, repeatable practice over long study blocks. Notably, thirty-three of the thirty-five students confirmed that they used Duolingo specifically to practice their English reading, suggesting that reading was one of the more salient purposes for which students turned to the application, even though Duolingo also covers other language skills.

To capture students' overall evaluation of Duolingo more systematically, Table 1 summarizes responses to six representative statements drawn from the questionnaire, covering general enjoyment, perceived ease of reading practice, vocabulary growth, self-evaluation, and the role of feedback.

Table 1. Summary of selected questionnaire results on Duolingo's effectiveness for reading skills (N = 35)

No	Statement	SA	A	N	D	SD
1	Enjoys learning English with Duolingo	22	10	2	0	1
2	Finds reading exercises easier with Duolingo	18	12	4	0	1
3	Vocabulary increased after using Duolingo	25	9	0	0	1
4	Duolingo helps self-evaluate reading understanding	19	11	4	0	1
5	Feedback helps identify reading mistakes	21	9	4	0	1
6	Uses feedback to improve reading skills	21	10	3	0	1

As shown in Table 1, a clear majority of students responded positively across all six statements, with strongly agree and agree responses together accounting for most answers in every item. Only one student consistently chose strongly disagree across nearly all statements, which may point to an individual case of disengagement rather than a broader pattern, since the remaining respondents' answers were largely concentrated on the agree side of the scale. In interviews, several students described concrete reasons for their positive evaluation. One student explained that "the story feature and reading exercises with visual context help me understand English reading material," while another noted that "the direct translation and audio features are very helpful; by tapping on a specific word, *I can see its meaning and hear how it is pronounced.*" These accounts suggest that the combination of contextual stories, visual support, and audio pronunciation, rather than any single feature on its own, is what students found most useful for reading comprehension.

Beyond general enjoyment, students also reported gains they associated with vocabulary and motivation. Twenty-five students strongly agreed and nine students agreed that their vocabulary had risen after using Duolingo. Several students described behaviors such as marking down new words or crafting their own phrases as a way of reinforcing what they had learnt. One student said *Duolingo made it "easier... to learn English" and described monitoring progress "through the number of XP, unit levels, and whether I can understand sentences or short conversations without translating them,"* which suggests a developing awareness of their own learning process, a characteristic often linked to self-regulated learning (Nilson, 2023).

Feedback was seen as a very salient issue. Most students felt that the feedback offered by Duolingo, including corrections to their answers, scores, and short explanations, helped them to pinpoint their reading mistakes and motivated them to look back at the answers they got wrong. "*I get feedback pretty quickly and it helps me know my mistakes right away and repeat the*

questions I got wrong," one student said *while another characterized the response as "quite fast and clear," with incorrect answers usually followed by a short explanation or translation.* A smaller proportion of students were more ambivalent on this feature, indicating that sometimes explanations were given too rapidly to be fully comprehended. This implies that the effectiveness of Duolingo's feedback may rely on individual learning rate and language skill.

The teacher's story was largely consistent with these student impressions. Duolingo, she said, was good at making pupils "more active in their learning," and she noted that the speaking and repetition drills indirectly reinforced reading through vocabulary recognition and pronunciation practice. In terms of feedback, the teacher stated that when students did make mistakes, they could also see right answers with explanation and she regarded this an important part of the learning process. She also said clearly that she would like to continue to use Duolingo on a regular basis and saw that the children seemed to be happier and more involved when the program was used in class. This correspondence between instructor and student perspectives serves to improve the overall picture: Duolingo was related with better engagement, more consistent feedback, and a reading practice that students found doable and gratifying, across two independent sources.

These results are mostly consistent with other research on the use of Duolingo in teaching contexts. Similar positive perceptions of Duolingo for vocabulary learning were reported in studies with junior high school students (Alan Jaelani, 2020; Fadilah, 2022), and research on university learners revealed that the application was a supplement to formal instruction and facilitated independent practice (Peláez-Sánchez, 2023). Likewise, studies on reading in particular showed that the game-based design of Duolingo helped learners develop their reading skills (Liunokas, 2024), and, more generally, evidence on gamified reading activities indicates that they can increase EFL learners' engagement

and motivation (Anggrainy et al., 2024). The present study builds on this body of work by focusing explicitly on reading abilities among younger, junior-secondary learners, and by studying feedback and reflective learning together rather than as distinct problems.

At the same time, the findings reflect a caution raised in earlier work. Like the finding of Malinda and Daulay (2024) that Duolingo can provide inadequate context for more complex material, some students in this study commented that the grammar explanations appeared too short for more advanced sentence structures. This suggests that Duolingo would be a good tool to develop reading fluency, vocabulary and basic comprehension, but would need to be augmented with teacher-led instruction when students are faced with more complex texts or grammatical structures.

The pattern of consistent, short and largely self-initiated use together with positive perceptions of feedback and vocabulary growth all point to the fact that Duolingo is less of a stand-alone reading course and more of a flexible, low-stakes space for students to practice, receive immediate correction and reflect on their own reading mistakes. This is in line with the broader idea that reflective and self-regulated learning grows out of opportunities to monitor one's own progress and act on corrective feedback (Nilson, 2023), and it suggests that the value of an application like Duolingo lies as much in how consistently it is used as in any particular feature it offers.

D. Conclusion and Suggestion

This study examined how Duolingo was perceived and used by seventh-grade students and their English teacher at SMP Muhammadiyah 01 Medan, with particular attention to reading skills, reflective learning, and feedback. The results indicate that both the teacher and the students had a positive perception of Duolingo, especially on vocabulary acquisition, reading comprehension, and enthusiasm to learn autonomously. Students usually used the application consistently, albeit only briefly,

and its feedback function through corrections, scores and short explanations seemed to encourage a more introspective approach to reading practice by encouraging students to detect and revisit their own mistakes.

The results also imply that Duolingo is best used as a supplement rather than as replacement for classroom teaching, especially for more complicated reading content that requires more in-depth grammatical clarification. These findings might lead teachers to consider using Duolingo as a supplementary tool in classroom activities, while continuing to guide students to a more critical and reflective engagement with what they read, for example, through discussing their mistakes together rather than relying solely on the automated feedback of the application. Students, in turn, may benefit from being prompted to map and reflect on their own progress, rather than to engage passively with the program.

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