

Duolingo App's Impact on Teaching English: Students' Perspective, Al-Sulayyil Case Study

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Abstract

This research aims to investigate how the Duolingo application impacts the learning of English language skills among female high school students at Al-Sulayyil First Secondary School for Girls in the Riyadh region, Kingdom of Saudi Arabia. The study focuses on assessing the effectiveness of Duolingo in enhancing writing grammar, correct pronunciation of vocabulary and sentences, and speaking fluency skills. The research employed a quantitative approach and utilized questionnaires as the primary data collection instrument. The researcher designed it as a case study, allowing for an in-depth examination of the phenomenon within its real-life context. The researcher selected 158 female high school students as the participant pool and conducted data collection through electronically distributed questionnaires. Statistical analysis using descriptive statistics to analyze the data and address the research objectives. The findings reveal that Duolingo has a significant positive impact on enhancing students' grammar writing, pronunciation, and speaking skills. Students reported improvements in their understanding of grammar concepts, their ability to construct grammatically correct sentences, and their speaking fluency after using Duolingo. The platform's interactive features, clear explanations, and engaging exercises contribute to its effectiveness in facilitating language learning. Based on these findings, the research provides recommendations for integrating Duolingo into the curriculum and optimizing its use for language education. Future research directions include exploring the long-term effects and conducting comparative studies to further understand the role of technology-assisted language learning in educational contexts.

Keywords: Duolingo, Teaching English.

1. Introduction

Education undergoes a profound transformation through technology, which brings about remarkable changes such as easy access to information, adaptable teaching methods, and simplified language acquisition. As highlighted by Purwanto and Bengkulu (2023), the progress in technology presents an array of captivating online tools for English learning, exemplified by Duolingo. Duolingo stands out as a user-friendly, enjoyable, and competitive platform that effectively enhances reading and writing skills. It is crucial to note that Duolingo serves as a valuable supplement rather than a replacement for traditional language courses, as emphasized by Hazar (2022). With its gamified approach, Duolingo's innovative use of technology is warmly embraced by educators for fostering engaging language learning experiences.

Language learning, especially English, is crucial for personal and professional growth in an interconnected world. Saudi schools recognize its significance and incorporate English into their curriculum. High school students are increasingly using Duolingo for English

proficiency. However, there is a lack of research on Duolingo's effects in Saudi Arabia, particularly among secondary students. This study examines the use of Duolingo for English acquisition among high school students at Al-Sulayyil's first secondary school for girls in Riyadh. It aims to investigate Duolingo's impact on English language acquisition from the students' perspective and provide recommendations to enhance their use of Duolingo as a learning tool.

2. Statement of the Problem

Pisanu's Students perceive Duolingo positively and find it beneficial for English vocabulary (Fadilah, 2022; Purwanto & Bengkulu, 2023). The app's engaging features boost students' motivation to practice English (Apoko et al., 2023). Duolingo is a user-friendly and valuable app that incorporates gamification and is accessible on mobile devices (Munday, 2016). Extensive research has examined the impact of Duolingo on English teaching, specifically focusing on its advantages for students. This study aims to achieve three primary objectives at Al-Sulayyil secondary school: assessing Duolingo's impact on grammar writing, evaluating its influence on high school students' pronunciation in vocabulary and sentences, and investigating its contribution to speaking skills. The study aims to investigate the impact of Duolingo on high school students' grammar writing skills, its influence on high school students' pronunciation skills, and its contribution to the development of speaking and dialogue skills among high school students.

3. Literature Review

This study builds upon previous research on technology-assisted language learning (TALL) and focuses specifically on Duolingo's impact on language skills among high school students. Duolingo, a widely used TALL tool, offers interactive lessons and activities for language acquisition and practice. Previous studies have demonstrated the effectiveness of Duolingo in improving grammar writing skills through instant feedback and scaffolded practice (Santi et al., 2023). This study aims to analyze Duolingo's impact on grammar writing skills. Additionally, Duolingo and similar tools have been found to enhance pronunciation skills through audio feedback and interactive exercises (Youlanda & Wariyati, 2023). Investigating Duolingo's influence on pronunciation skills in vocabulary and sentence contexts sheds light on its potential in addressing pronunciation challenges among high school students. Furthermore, while Duolingo's focus may not be on speaking and dialogue skills, its interactive features and speaking exercises provide opportunities for learners to practice oral communication (González-Lloret, 2018). This study explores Duolingo's impact on speaking skills among high school students, contributing to language learning theories and technology-assisted education. It offers a structured approach to examining Duolingo's influence on language skills at Al-Sulayyil first secondary school.

This review examines the impact of Duolingo on high school students' English learning, specifically focusing on grammar writing, pronunciation, and speaking skills. Several studies have explored the effectiveness of Duolingo in different contexts. Ahmed (2016) found that while Duolingo was effective for acquiring Spanish, its progress in English among Arabic-speaking students was limited. On the other hand, Al Fadda and Alaudan (2020) investigated Duolingo's integration in a blended TESOL classroom and found that it positively influenced vocabulary, grammar, and fluency. Pramesti and Susanti (2020) conducted a qualitative study and highlighted the positive perspectives of English major students on Duolingo's usability and benefits. Similarly, Inayah et al. (2020) reported positive student attitudes towards Duolingo as a valuable and motivating tool for English learning. Ajisoko (2020) studied the effectiveness of Duolingo in improving vocabulary and found significant improvements in

students' scores. Additionally, Alfuhaid (2021) examined the integration of Duolingo to enhance speaking proficiency and overall language skills. Other studies have also demonstrated the positive impact of Duolingo on vocabulary mastery and students' willingness to practice English effectively (Tiara et al., 2021; Permatasari et al., 2022; Apoko et al., 2023; Purwanto & Bengkulu, 2023). Despite the existing studies, limitations such as small sample sizes and brief durations have been noted. This study aims to address these limitations by including a larger sample of female students at Al-Sulayyil First Secondary School. Overall, the previous research indicates that Duolingo can effectively enhance grammar writing skills and vocabulary mastery among high school students.

4. Method

This study examines the impact of Duolingo on English language skills among female high school students at Al-Sulayyil First Secondary School for Girls in Riyadh, Saudi Arabia. It focuses on writing grammar, pronunciation, and speaking fluency. A quantitative approach with questionnaires was used for data collection. The chapter outlines the research design, participant selection, and data collection procedures, instruments, and data analysis.

Research Design

This research used a quantitative approach to study the impact of Duolingo on English language skills, focusing on writing grammar, pronunciation, and speaking. Questionnaires were used to collect quantitative data, allowing for systematic analysis using statistical methods. The research also employed a case study methodology to investigate the effectiveness of Duolingo at Al-Sulayyil First Secondary School, providing detailed insights into instructional practices and language learning outcomes.

Participants

The study included 158 female high school students from Al-Sulayyil First Secondary School for Girls in the Riyadh region, Saudi Arabia. The selection criteria considered the participants' relevance to the research context, accessibility of the school, and the aim of having a homogeneous sample for focused analysis and interpretation.

Procedures

The study followed systematic procedures to ensure ethical conduct and data integrity. Sample recruitment involved obtaining permission from the school administration, and informed consent was obtained from the administration of Al-Sulayyil First Secondary School for Girls (see appendix A). Participants received information about the research purpose, voluntary participation, and confidentiality. Data collection involved electronic distribution of questionnaires via Google Forms, ensuring efficiency and uniformity. Completed questionnaires were securely collected for data maintenance, maintaining confidentiality. Data analysis used appropriate statistical methods. Ethical considerations prioritized participant autonomy, beneficence, justice, privacy, confidentiality, and cultural sensitivity.

Instruments and Measures

The researcher designed a questionnaire, influenced by Indrawan et al. (2023) and Harahap and Dauly (2022), assessed the impact of Duolingo on English language skills, including writing grammar, pronunciation, and speaking fluency. It was distributed electronically via Google Forms to female high school students at Al-Sulayyil First Secondary School through WhatsApp groups.

The questionnaire had three sections: Writing Grammar Assessment, Correct Pronunciation Assessment, and Speaking Fluency Assessment. Tasks included identifying errors,

completing sentences, assessing pronunciation, and evaluating Duolingo's effectiveness in improving grammar and speaking skills.

The questionnaire was chosen for data collection due to its efficiency in gathering comprehensive feedback from a large sample size. Using Google Forms allowed for streamlined data collection and easy compilation of responses for analysis. The questionnaire format enabled standardized assessment and comparison of results. It demonstrated excellent reliability, with a Cronbach's alpha value of 0.981, indicating validity and reliability. The Pearson correlation coefficient values showed significant internal consistency.

Data Collection and Analysis

Data collection involved distributing an electronic questionnaire via Google Forms to female high school students at Al-Sulayyil First Secondary School through WhatsApp groups. The questionnaire had three sections assessing writing grammar, correct pronunciation, and speaking fluency skills. Participants used a five-point Likert scale to express their agreement with 13 statements in each section. Data analysis was performed using SPSS v25, including descriptive statistics (means, standard deviations, and relative weights) to address the research questions. Rigorous procedures were followed to ensure meaningful conclusions were drawn from the findings.

5. Findings and Discussions

The questionnaire received 158 student responses, with 95 students who used Duolingo selected as the research sample. The distribution of the sample based on secondary classes is displayed in Figure 1, showing the highest number of perceptions from the third and first secondary classes and the lowest from the second class.

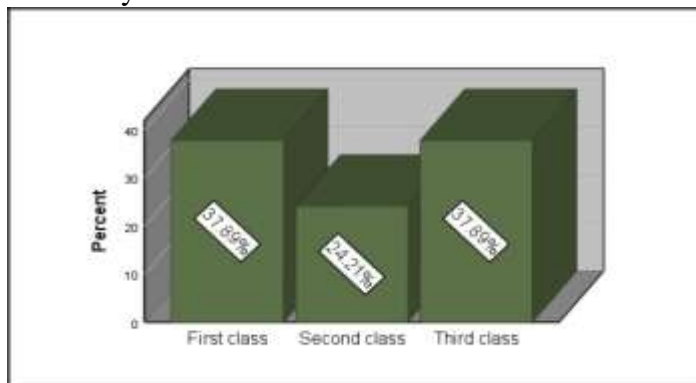


Figure 1 Distribution of the Sample According to Secondary Classes

Duolingo's positive impact on high school students' grammar writing skills at Al-Sulayyil First Secondary School is evident through comprehensive data analysis. Table 1 reveals that students highly agree on the benefits of using Duolingo, particularly in effectively understanding English grammar concepts. Additionally, students' express confidence in applying grammar rules and constructing grammatically correct sentences after utilizing Duolingo. They find the platform's grammar explanations clear and understandable, and they report engaging and interactive grammar exercises. The study also evaluates Duolingo's influence on high school students' pronunciation skills in vocabulary and sentence contexts.

Table 1 Descriptive Statistics for Writing Grammar Skill (N = 95)

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD	RW	Rank
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	F	%	F	%	F	%	F	%	F	%				
Duolingo helped me understand English grammar concepts effectively.	1	1.1	3	3.2	9	9.5	36	37.9	46	48.4	4.29	0.849	85.80	7
I feel more confident in applying English grammar rules after using Duolingo.	0	0	2	2.1	12	12.6	39	41.1	42	44.2	4.27	0.764	85.40	9
Duolingo provided sufficient exercises to practice English grammar.	2	2.1	2	2.1	7	7.4	37	38.9	47	49.5	4.32	0.866	86.40	4
My writing skills have improved since using Duolingo.	1	1.1	5	5.3	11	11.6	31	32.6	47	49.5	4.24	0.931	84.80	12
I find it easier to construct grammatically correct sentences after using Duolingo.	2	2.1	4	4.2	10	10.5	36	37.9	43	45.3	4.2	0.941	84.00	13
Duolingo's explanations of grammar topics are clear and understandable.	1	1.1	2	2.1	9	9.5	41	43.2	42	44.2	4.27	0.805	85.40	10
Duolingo effectively identifies and corrects my grammar mistakes.	1	1.1	1	1.1	7	7.4	38	40	48	50.5	4.38	0.76	87.60	1
Duolingo's grammar exercises are engaging and interactive.			3	3.2	7	7.4	38	40	47	49.5	4.36	0.757	87.20	2
Duolingo has														

improved my ability to recognize grammatical errors in English sentences.	1	1.1	1	1.1	9	9.5	40	42.1	44	1	4.32	0.775	86.40	3
I believe Duolingo has positively impacted my overall understanding of English grammar.	1	1.1	3	3.2	11	11.6	36	37.9	44	46.3	4.25	0.863	85.00	11
I feel more motivated to learn English grammar because of Duolingo.	2	2.1	1	1.1	9	9.5	37	38.9	46	48.4	4.31	0.851	86.20	6
I have noticed improvements in my grammar accuracy since using Duolingo.	2	2.1	3	3.2	4	4.2	42	44.2	44	46.3	4.29	0.861	85.80	8
Duolingo has made learning English grammar enjoyable for me.	1	1.1	4	4.2	9	9.5	31	32.6	50	52.6	4.32	0.89	86.40	5
Average											4.29	0.84	85.88	

According to the findings from Table 2, Duolingo significantly improves students' pronunciation accuracy. Students observe notable enhancements in their ability to pronounce words correctly and find Duolingo's pronunciation exercises engaging and interactive. Furthermore, students strongly agree that Duolingo effectively trains them to differentiate between similar-sounding English words, highlighting its efficacy in pronunciation training.

Table 2 Descriptive Statistics for Correct Pronunciation Skill (N = 95)

Statement	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean	SD	RW	Rank
	F	%	F	%	F	%	F	%	F	%				
Duolingo has helped me improve my English pronunciation.	0	0	3	3.2	6	6.3	43	45.3	43	45.3	4.33	0.736	86.60	8

I feel more confident in pronouncing English words correctly after using Duolingo.	2	2.1	1	1.1	7	7.4	41	43.2	44	46.3	4.31	0.826	86.20	11
Duolingo's pronunciation exercises are helpful in refining my accent.	2	2.1	1	1.1	7	7.4	39	41.1	46	48.4	4.33	0.831	86.60	9
I find Duolingo's pronunciation feedback accurate and useful.	0	0	2	2.1	9	9.5	38	40	46	48.4	4.35	0.74	87.00	3
Duolingo effectively trains me to differentiate between similar-sounding English words.	0	0			11	11.6	38	40	46	48.4	4.37	0.685	87.40	2
I believe Duolingo has positively impacted my ability to understand spoken English.	0	0	3	3.2	10	10.5	33	34.7	49	51.6	4.35	0.796	87.00	4
Duolingo's pronunciation exercises are engaging and interactive.	1	1.1	2	2.1	7	7.4	38	40	47	49.5	4.35	0.796	87.00	5
Duolingo provides sufficient practice opportunities for improving English pronunciation.	1	1.1			8	8.4	37	38.9	49	51.6	4.4	0.735	88.00	1
Duolingo has helped me reduce my native	1	1.1	4	4.2	8	8.4	34	35.8	48	50.5	4.31	0.876	86.20	12

language's influence on English pronunciation.															
I have noticed improvements in my pronunciation clarity since using Duolingo.	0	0	3	3.2	8	8.4	37	38.9	47	49.5	4.35	0.769	87.00	6	
Duolingo's pronunciation exercises have made me more aware of my pronunciation errors.	0	0	4	4.2	9	9.5	38	40	44	46.3	4.28	0.808	85.60	13	
I find Duolingo's pronunciation challenges stimulating and effective.	1	1.1	1	1.1	8	8.4	43	45.3	42	44.2	4.31	0.759	86.20	10	
Duolingo has made learning English pronunciation enjoyable for me.	2	2.1			8	8.4	39	41.1	46	48.4	4.34	0.807	86.80	7	
Average											4.34	0.78	86.74		

Furthermore, the study examines Duolingo's impact on the development of speaking and dialogue skills among high school students. The results from Table 3 indicate that Duolingo significantly enhances students' fluency and confidence in speaking English. Students believe that Duolingo positively influences their ability to express themselves in English and perceive it as providing ample opportunities to practice speaking skills. They strongly agree that Duolingo makes learning to speak English enjoyable.

Table 3 Descriptive Statistics for Speaking or Fluency Skill (N = 95)

Statement	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean	SD	RW	Rank
	F	%	F	%	F	%	F	%	F	%				
Duolingo has helped me become more	1	1.1	2	2.1	37	38.9	45	47.4	1	1.1	4.29	0.824	85.80	9

fluent in speaking English.															
I feel more confident in having conversations in English after using Duolingo.	1	1.1	3	3.2	6	6.3	41	43.2	44	46.3	4.31	0.813	86.20	8	
I believe Duolingo has positively impacted my ability to express myself in English.	1	1.1	2	2.1	10	10.5	35	36.8	47	49.5	4.32	0.829	86.40	7	
Duolingo effectively exposes me to various English-speaking situations.	1	1.1	3	3.2	9	9.5	36	37.9	46	48.4	4.29	0.849	85.80	10	
I find Duolingo's speaking challenges stimulating and engaging.	2	2.1			9	9.5	36	37.9	48	50.5	4.35	0.822	87.00	6	
Duolingo provides ample opportunities for practicing English speaking skills.	2	2.1	3	3.2	7	7.4	37	38.9	46	48.4	4.28	0.895	85.60	11	
Duolingo's feedback on speaking exercises is constructive and useful.	0	0	2	2.1	8	8.4	40	42.1	45	47.4	4.35	0.726	87.00	4	
I feel more comfortable speaking English in real-life situations because of	0	0	2	2.1	8	8.4	40	42.1	45	47.4	4.24	0.931	84.80	12	

Duolingo.															
Duolingo has helped me overcome my fear of speaking English.	4	4.2	2	2.1	11	11.6	37	38.9	41	43.2	4.15	1	83.00	13	
Duolingo's speaking exercises are helpful in improving my English fluency.	1	1.1	2	2.1	6	6.3	39	41.1	47	49.5	4.36	0.784	87.20	2	
Duolingo's speaking exercises encourage me to practice speaking regularly.	1	1.1	1	1.1	8	8.4	39	41.1	46	48.4	4.35	0.769	87.00	5	
I find Duolingo's speaking tasks relevant to real-life communication.	1	1.1	3	3.2	6	6.3	36	37.9	49	51.6	4.36	0.824	87.20	3	
Duolingo has made learning to speak English enjoyable for me.	1	1.1	2	2.1	6	6.3	38	40	48	50.5	4.37	0.786	87.40	1	
Average											4.31	0.83	86.18		

Most students agreed that Duolingo effectively improves their understanding of grammar concepts and helps them construct grammatically correct sentences. Students feel more confident and motivated to learn English grammar through Duolingo, which encourages active participation in grammar learning activities. They also find Duolingo enjoyable for learning grammar. These viewpoints are supported by previous studies emphasizing the benefits and positive perception of Duolingo in language learning. Duolingo reinforces grammatical rules, improves writing accuracy, and facilitates better writing proficiency. Additionally, Duolingo effectively trains students to recognize and correct grammar mistakes, contributing to their overall writing skills.

Regarding pronunciation skills, students report positive experiences with Duolingo, particularly in terms of practice opportunities and engaging exercises. Duolingo effectively trains students to differentiate between similar-sounding words, enhancing their pronunciation proficiency. Students show improvements in pronunciation, increased confidence, and satisfaction after using Duolingo. The platform's exercises refine accent,

provide accurate feedback, and address common pronunciation challenges. The engaging and interactive approach of Duolingo contributes to students' motivation and satisfaction in learning English pronunciation.

The positive findings align with previous studies, indicating that Duolingo enhances various language competencies, including pronunciation. Duolingo positively impacts speaking proficiency and overall language skills. Its comprehensive approach, user-friendly interface, and engaging features contribute to its effectiveness in improving pronunciation as well as grammar and vocabulary mastery. Furthermore, Duolingo is valuable for developing speaking and dialogue skills. It makes learning to speak English enjoyable and provides helpful exercises for improving fluency. Students appreciate the constructive feedback on speaking exercises, fostering confidence in speaking English.

The study evaluates Duolingo's impact on English learning at Al-Sulayyil First Secondary School, focusing on grammar, pronunciation, and speaking skills. Positive findings indicate Duolingo's effectiveness in enhancing grammar writing, pronunciation clarity, and speaking fluency among students. Previous research by Al Fadda & Alaudan (2020), Permatasari et al. (2022), Pramesti and Susanti (2020), Inayah et al. (2020), Purwanto & Bengkulu (2023), Apoko et al. (2023), and Ahmed (2016) supports these conclusions. Duolingo's interactive approach fosters motivation and proficiency in various language skills. Alfuhaid's (2021) and Apoko's (2023) studies further validate Duolingo's positive influence on speaking proficiency and vocabulary mastery. Collectively, these studies highlight Duolingo's comprehensive support in improving English language skills, demonstrating its value as a supplement to traditional language instruction.

6. Conclusion

In summary, this chapter highlights the significant role of Duolingo in improving English language learning among high school students. It demonstrates that Duolingo effectively enhances grammar writing, pronunciation, and speaking skills. Students find the platform helpful and enjoyable, with positive impacts on their confidence and proficiency in expressing themselves orally. These findings align with previous research and are supported by Duolingo's comprehensive approach, user-friendly interface, and engaging features. Recommendations include integrating Duolingo into the curriculum, customizing learning paths, providing constructive feedback, promoting engagement and motivation, and acknowledging the study's limitations. Future research should address sample size and diversity, explore long-term effects, conduct comparative studies, and incorporate qualitative analysis to optimize the effectiveness of Duolingo and similar platforms in language learning contexts. Overall, this chapter provides practical recommendations and implications for leveraging Duolingo to enhance English language learning outcomes.

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