

## Investigating the Challenges of Using Duolingo for Language Learning: A Simplified Review

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### Abstract

*This study aims to investigate the challenges faced by ESL learners using Duolingo to enhance their language learning skills. With the increasing use of mobile learning apps in education, Duolingo has emerged as a widely-used tool for language acquisition. This study adopts a mixed-method approach to investigate challenges such as, limitations in cultural context, conversational practice and motivation. A sample of 100 Duolingo users were selected through convenience sampling from an online language-learning community. The research employed questionnaire and semi-structure interviews from students to collect data. The data was analyzed through descriptive statistics and thematic analysis. Findings revealed that 70% of students reported Duolingo as engaging, 65% students reported that Duolingo does not satisfactory teach culture aspects of the language, and 80% reported lack of motivation after using it for many months. Students found it difficult to practice conversation on Duolingo due to lack of motivation. Duolingo is effective for student s to improve language acquisition.*

**Key Words:** *Conversational-based activities, cultural content, Duolingo, statistical analysis, thematic analysis, motivation, sociolinguistics*

### 1-Introduction:

This study investigates the challenges that students face when using Duolingo. Willams (2020) argue that Duolingo is a common mobile language-learning app that is widely used by students all over the world. Although, it is frequently used but even then, students are encountering obstacles that hinder their learning process. Current study aims to explores these challenges such as, lack of conversational practice, cultural understanding, and motivation. By adopting a mixed-methods technique, the study provides a wide-ranging understanding of these challenges from both quantitative and qualitative aspects. This topic investigates the challenges faced by students while using Duolingo. It is an easy mobile language learning app, applied for language acquisition. The study focuses on areas like limited cultural context, lack of communication depth, over-reliance on gamification, and the challenges of preparing learners' motivation over time. The increasing mixing of smart phone learning apps into language acquisition has transformed traditional approaches to advance learning. Duolingo offers learners an accessible and engaging way to learn language. Although, many users face key challenges when using the app, particularly related to everyday language use, cultural context, and motivation over time. All these aspects are important for effective language learning. As language involves not only vocabulary and grammar but also the ability to engage in meaningful conversation and understanding cultural aspects.

Khodarahmi and Heidari (2018) stated that knowing about the key challenges of Duolingo is very important because it supports learners and teachers to highlight the App's advantages and disadvantages. Research on the effect of language-learning apps, including Duolingo, has shown mixed results. While the app can motivate beginners to engage in language learning. Al- Ahdal and Alharbi (2021) found that Duolingo fails in providing in-depth conversational practice and contextual understanding, which are required for gaining fluency. Current study seeks to investigate key challenges and contribute to the ongoing conversation about how digital tools can improve and limit language learning process.

**Questions:**

- 1.What challenges are learners facing when using Duolingo for language learning?
2. How does Duolingo help learners practice communication?
- 3.How does Duolingo fail to teach learners about cultural understanding in language learning?

**Objectives:**

1. To highlight challenges that learners are facing during using Duolingo for language learning.
2. To investigate how Duolingo help learners improve their communication skills.
3. To find out how Duolingo fail to teach learners about cultural understanding in language learning?

**Statement of the Problem**

The increasing reliance on digital tools like Duolingo for language leaning in Pakistan has presented unique challenges as the app's design and content reflect Western cultural norms and may not fully align with the linguistics, cultural and motivational needs of Pakistani learners. This study investigates how Duolingo impacts the language learning experience in Pakistan, focusing on its effectiveness, engagement levels and cultural relevance, which are often under-explored in existing research.

**Significance of the Study:**

- Educational Insights: Helps teachers understand gaps in Duolingo's approaches to improve digital learning tools.
- Tool Development: Provides feedback for Duolingo developers to improve users' engagement and integrate cultural learning.
- Practical Applications: Offers guidance on effective use of digital tools, contributing to policy recommendations for language learning in Pakistan.

**2-Literature Review**

Mobile assist language learning (MALL) has gained importance in recent years, with apps like Duolingo leading the charge in offering free, accessible language learning. Numerous studies have explored both the benefits and limitations of these platform in improving learners' language proficiency.

**communication practice:** Multiple studies have indicated that while Duolingo is effective in teaching vocabulary and grammar, it lacks communication practice, which is critical for language acquisition. Munday (2018) argues that Duolingo focus on translation-based exercises can limit the development of conversational skills. Al-ahdal and Alhaarbi (2021) wifes that Duolingo users sometime struggle to apply what they have learned in real-life surroundings due to the app's focus on mechanical drills.

**Motivation and Engagement:** One of Duolingo most appealing features is its gamification, which includes rewards, streaks, and levels to keep learners engaged. However, Golonka et al. (2020) found that while gamification initially motivates learners, its repetitive nature can lead to disengagement over time. Learners may become more focused on maintaining streaks rather than genuinely learning the language, causing a drop in long-term motivation.

**Cultural Understanding:** Language learning is not just about understanding vocabulary and grammar; it also involves understanding the cultural context in which the language is used. Parmaxi and Zaphiris (2020) highlight that Doling provides less exposure to cultural and social aspects of language, which are crucial for learners to develop sociolinguistic competency. Williams (2020) argues that while Duolingo is a useful supplementary tool, it should not be relied upon for learners seeking to understand the cultural intricacies of the language they are studying.

**Cultural Context:** The role of cultural immersion in language learning cannot be overstand. Smith (2020) claimed that learners must understand the social and cultural context of language to use it effectively in real-world situations. Duolingo's lessons, however, are designed to teach language structure without introducing cultural context, limiting learner's ability to engage fully with the language in diverse settings.

Brown and Gracia (2019) support this view, arguing that the absence of cultural references in digital learning tools like Duolingo hinders the development of sociolinguistic competence-the ability to use language appropriately depending on the cultural and social context.

**Conversation Fluency:** Johnson (2018) argues that conversation practice is important for language learning. It enables learners to apply grammatical knowledge in communication. Duolingo, however, focuses more on rote grammar exercises than on fostering conversational skills, which limits learners' ability to develop fluency in real-life interactions. Lee (2021) found that learners who primarily use Duolingo struggle with speaking fluency due to the lack of opportunities for authentic, interactive conversation within the app.

**Gamification:** Thompson (2019) notes that gamification, while motivating, can lead to learners prioritizing rewards over genuine learning. Duolingo's system of streaks and badges incentivizes task completion rather than deep understanding, which often results in superficial learning.

**Motivation:** White (2019) argues that the repetitiveness of Duolingo's lessons can cause learners to lose interest over time. While the app is effective for short-term engagement. Its failure to introduce changeable and challenging content leads to reduce motivation, which affects overall language acquisition. Garcia (2021) stated that this finding, noting that learners are more likely to stay motivated when lessons are tailored to their skill level and learning preferences-features that Duolingo lacks.

**Feedback Mechanisms:** Richards (2018) emphasized the importance of personalized feedback in language learning. While Duolingo provides immediate corrections, its feedback is often too generic, failing to explain why an answer is incorrect, which limits the learner's ability to improve. Brown (2022) also highlights that personalization feedback and individual learner's needs, is vital for progress. Duolingo's one-size fits-all approaches do not offer the depth of feedback required for language competency for intermediate and advanced learners. Ahmed and Rashid (2020) stated that prevailing studies offers basic knowledge but there is limited understanding of how these issues specifically impact Pakistani learners in a cultural and educational context. Lambert (1972) claimed in his theory of motivation in learning highlights integrative motivation for the desire to understand a culture, which Duolingo lacks.

#### **Theoretical Framework:**

In the context of digital language tools like Duolingo, this theory highlights the need for cultural and social components in language learning. The absence of cultural immersion and limited interaction in Duolingo contradicts Vygotsky's emphasis on social context for effective language development.

**Sociocultural Theory of Language Learning by Lev Vygotsky** argues that the role of social interaction and cultural context are important in the development of cultural context. Social interaction and cultural context both are vital for the development of cognitive abilities and language acquisition. Vygotsky claimed that language learning is deeply rooted in social interaction and the cultural situations in which learners are absorbed. Duolingo is the digital language tool in the context of Information and Communication Technology (ICT). Sociocultural Theory of Language Learning theory highlights the requirement for cultural and social components in language learning. The absence of cultural aspects and limited interaction in Duolingo opposes Vygotsky importance on social context for effective language development. **Application of Sociocultural Theory to Duolingo:**

This theory reveals that there is a lack of cultural context in Duolingo App. Vygotsky's theory emphasizes that language is a social tool that is closely tied to culture. This app is failed to provide learners with cultural experience means they miss out on essential social and cultural aspects of language learning. This theory highlighted limited interaction and emphasized that language acquisition is a process that requires social interaction Duolingo features do not align with this principle and making it harder for learners to gain communicational fluency. The framework will guide the analysis of Duolingo's challenges in providing a complete language-learning experiences and focusing on the missing culture to Vygotsky's Social cultural Theory.

**Intercultural Communicative Competence (Byram, 1997)** according to this theory Duolingo lacks cultural depth, this theory guides the study to evaluate Duolingo's effectiveness in preparing users for intercultural communication. It provides a theoretical

basis for assessing Duolingo's cultural limitations and how these impact learner engagement and motivation in a Pakistani context.

**Research Gap:** In Pakistan, limited studies have focused on the challenges such as, engagement, cultural learning and motivation for Pakistani users.

### 3-Methodology:

The mixed methods paradigm with Pragmatism and Constructivism philosophical framework was applied to provide a more comprehensive understanding of this study.

**Study Design:** Mixed method research design, combining quantitative (questionnaire) and qualitative (semi structure interviews for data collection.

**Intervention:** Investigating the challenges faced by Duolingo users regarding language learning through an online community focused on different elements such as engagement, cultural learning and motivation.

#### Sampling Technique

Convenience sampling to selected participants who actively use Duolingo for language learning.

**Table No-1. Sample and Population**

Data Collection Type	Population	Sample
Quantitative (Questionnaire)	All Duolingo users in Pakistan learning English	100 active Duolingo users selected from online language-learning communities and social media.
Qualitative (Interviews)	Teachers and language instructors familiar with Duolingo	10 semi-structured interviews with selected teachers who use Duolingo.
Quantitative (Questionnaire)	All Duolingo users in Pakistan learning English	100 active Duolingo users selected from online language-learning communities and social media.

### **Data collection Methods**

1. Questionnaire: To gather quantitative data on engagement, cultural learning and motivation.
2. Semi-structured interviews conducted with teachers to explore their experience in-depth.

### **Data Analysis Methods**

1. Descriptive Statistics method was used for analyzing quantitative data through questionnaires.
2. Thematic Analysis was used for qualitative data through semi-structured interviews, containing on themes related to challenges in using Duolingo.

**Limitations & Delimitations:** Focus on Duolingo online app users. Convenience sampling may not represent the all populations of Duolingo users. Cultural prejudice may affect responses. Participants' different responses may influence outcomes.

### **Data Collection Instruments**

**Questionnaire:** 20-item questionnaire focusing on engagement with Duolingo, satisfaction with cultural learning and motivation levels. Closed-ended questions using Likert Scale (1-5 scale) for responses.

**Semi-structured Interview:** Conducted with 20 students to gather in-depth insights into the challenges they face using Duolingo questions explore personal learning experiences, cultural aspects and motivation after prolonged use of the app.

### **Table No 2. Description of Quantitative & Qualitative Analysis**

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Component	Questionnaire	Semi-Structured Interview
Type of Questions	Closed-ended (Likert scale, multiple choice, Yes/No)	Open-ended, flexible for in-depth responses
Number of Statements/Questions	15 statements	10 questions
Key Words in Questions	Engagement, motivation, culture, effectiveness, user experience	Experience, challenges, effectiveness, motivation, engagement
Time for Completion	15 minutes	30 minutes
Intervention	Completed by 100 Duolingo users for quantitative insights	Conducted with 10 teachers for qualitative insights

**Interpretation:** The study applied a questionnaire with 15 close-ended statements to check Duolingo users' challenges quantitatively, followed by semi-structure interviews with 10 teachers to explore deeper insights. This mixed-methods study may allow for a comprehensive understanding of Duolingo's effectiveness and the challenges faced by users.

#### 4-Data Analysis

**1-Questionnaire Design:** The questionnaire for this study applies close-ended questions to collect quantitative data on user's experiences with Duolingo. Likert scale statements from Strongly Agree to Strongly Disagree to measure agreement with statements about engagement, cultural content and motivation. This questionnaire contains Multiple-Choice questions to gain background information like frequency of use and Yes/No questions for two choices relating to different challenges. Total 15 statements were included in the questionnaire to keep it concise but comprehensive, covering different aspects of Duolingo use. The questionnaire might take 15 minutes to complete. The intervention for Questionnaire contains gathering data from 100



Duolingo users. They filled the questionnaire which helps identify the different challenges learners face with the App. Intervention enables a systematic assessment of user experiences and motivations. The statements in the questionnaire were about Engagement, Cultural Elements, Motivation, Learning Effectiveness and User Experiences.

**2-Semi-Structure Interviews:** It was design to gain qualitative data from 10 teachers, focusing on the challenges and perceived effectiveness of Duolingo for language learning. Each interview time was 30 minutes. Questions are Open-ended to collect teachers' responses about the use of Duolingo. These 10 questions were about the Experiences, Perception, Effectiveness and Motivation.

**Table No 3. Descriptive Statistics Results:**

Question	Mean Score	% Agree	Standard Deviation
Frequency of Use	N/A	40% daily	1.2
Duolingo is Engaging	3.8	70%	0.7
Cultural Learning in Lessons is Sufficient	2.5	35%	1.0
Motivation After Several Months of Use	2.0	80% decline	1.3

**Interpretation:** Engagement with a mean score of 3.8 and 70% agreement on engagement. Descriptive analysis reveals highly engagement but significant drop in motivation over time. Cultural Learning with a low mean score of 2.5 and 3.5% satisfactory highlight that most user feel Duolingo lacks in cultural depth. Descriptive analysis reveals lack of cultural context in learning. Motivation with a mean score of 2.0 for long-term motivation indicate a significant drop, with 80% of user reporting decreased motivation over time

**Table No-4. Theme, Description, Questions and Findings**



Theme	Description	Questions	Findings
Effectiveness of Duolingo	Focus on how well Duolingo teaches core language skills (vocabulary and Grammar)	How effective do you think Duolingo is in teaching essential language skills like Vocabulary and grammar?	Teachers felt Duolingo was effective for vocabulary and grammar but limited in developing speaking and communication skills.
Engagement & Motivation	Factors influencing student motivation and engagement with the App.	What aspects of Duolingo do you think keep students motivated and what causes them to lose motivation?	High initial engagement that wanes over time due to repetitive content and
Cultural Learning	Assesses Duolingo's cultural content and real-world	Do you feel that Duolingo provides	Teachers agreed that Duolingo lacks sufficient cultural content,

	language application.	enough cultural context to supplement language learning?	which could limit practical language application for advanced learners.
Challenges in Using Duolingo	Identifies the main difficulties students encounter with Duolingo.	What are the biggest challenges students face when using Duolingo to learn English?	Challenges included lack of feedback, absence of adaptive learning and limited interactive speaking practice.
Supplemental use with other Resources	Evaluates whether Duolingo should be use alone or alongside other resources.	Do you think Duolingo is sufficient on its own, or should it be supplement with other resources?	Teachers recommended combining Duolingo with traditional resources for a more comprehensive language-learning experience.
Overall Satisfaction	Teachers' overall satisfaction with Duolingo as a language learning tool.	How would you rate your overall satisfaction with Duolingo as	General satisfaction as a supplemental tool, but not as a comprehensive standalone

		a tool for language learning, based on your observations of learner progress and feedback?	solution for language proficiency
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**Table No- 5. Sami-Structured Interviews: Thematic Analysis**

<b>Theme</b>	<b>Description</b>	<b>Questions</b>
<b>Effectiveness of Duolingo</b>	Examines teachers' perceptions of how effective Duolingo is in teaching language skills, focusing on vocabulary, grammar, listening, and speaking.	"How effective do you think Duolingo is in teaching essential language skills like vocabulary and grammar?"
<b>Engagement and Motivation</b>	Investigates how engaging Duolingo is for students over time, and what factors influence or reduce motivation.	"What aspects of Duolingo do you think keep students motivated, and what causes them to lose motivation?"
<b>Cultural Learning</b>	Explores the extent to which Duolingo provides cultural context, and if it is sufficient for holistic language learning	"Do you feel that Duolingo provides enough cultural context to supplement language learning? Why or why not?"

<p><b>Challenges in Using Duolingo</b></p>	<p>Identifies specific challenges teachers observe among students using Duolingo, such as lack of feedback, adaptive learning, and practice opportunities.</p>	<p>What are the biggest challenges students face when using Duolingo to learn English, in your opinion?"</p>
<p><b>Supplemental Use with Other Resources</b></p>	<p>Looks at how teachers view Duolingo as a standalone tool versus in combination with other learning resources.</p>	<p>Do you think Duolingo is sufficient on its own, or should it be supplemented with other resources? If so, which resources do you recommend?"</p>
<p><b>Overall Satisfaction</b></p>	<p>Evaluates the teachers' overall satisfaction with Duolingo as a language - learning tool based on student feedback and outcomes.</p>	<p>"How would you rate your overall satisfaction with Duolingo as a tool for language learning, based on your observations of student progress and feedback?"</p>

**Table No-6 Comparison of Qualitative Analysis and Thematic Analysis**

<b>Qualitative Analysis</b>	<b>Quantitative Analysis</b>
Descriptive Statistics	Thematic Analysis
Engagement: 70% of students reported engaging regularly with Duolingo	Engagement: Positive aspects include gamification, but the drawback includes repetitive content.
Cultural Learning 65% were dissatisfied with Duolingo's coverage of cultural aspects	Cultural Learning: Most students felt that Duolingo did not cover cultural aspects of language learning. Themes such as lack of cultural context emerged from interviews.
Motivation: 80% reported a decrease in motivation after using Duolingo for several months.	Motivation: The interviews revealed that learners lose motivation after prolonged use, due to lack of variety and conversational practice

**Answers of the Research Questions**

**Q1. What challenges are learner facing during using Duolingo for language learning?**

Most of the learners start using Duolingo with pleasure, but with the passage of time, they lose motivation. The reason is the repetitive nature of this App, after using it the exercises can look similar and there is variability to keep information fresh. Duolingo doesn't adapt much to individual progress, so learners may feel like they aren't being rewarded for their achievements over time. As a result, they get bored and feel less interested in continuing with the App.

**Q2. How does Duolingo help learners practice communication?**

Duolingo provides foundational practice in reading and writing skills and little bit in listening practice. This App supports learners to learn words and sentence structure but doesn't provide much for daily communication with native speakers. Duolingo teach learners how to ask for directions in new language, it doesn't exercise a two-way conversation where they'd have to listen, perceive and respond. It doesn't make learners for speaking with others.

**Q. 3. How does Duolingo fail to teach learner about cultural understanding in language learning?**

From some aspects of language learning Duolingo is fail because it focuses on teaching vocabulary and grammar without involving culture behind the language such in Pakistan, learners greet each other with "Assalamu Alaykum" followed by a handshake or hug. Learning only the literal meaning of "Hello" in English would miss this cultural greeting, that is necessary in Pakistani context. In Urdu, while addressing elders often requires the formal word "aap" instead of the informal "tum" or "tu" to show respect. Duolingo App that teaches only vocabulary but doesn't teach these cultural aspects that could lead learners to

unintentionally sound disrespectful by using informal words. Pakistani use phrases such as, “Insha’Allah” in their conversation, often when talking about future plans. If learners are not aware about these cultural expressions, they could misunderstand it as unnecessary. Pakistani when taking food often say “Bismillah”. A lack of cultural context could leave learners unaware of these social cues, leading to misunderstanding. Pakistani when addressing someone by their relationship title, like “Ammi”, Bhai, Auntie as a sign of respect. Duolingo a language learning App only teach the words “Mother, Father and Uncle” doesn’t teach these social practices, which are unique to Pakistani culture.

#### **Statistical Findings:**

- **Engagement:** Findings revealed that 70% of learners reported Duolingo as engaging but felt it did not offer conversational practice. Students found it difficult to practice conversations on Duolingo as it focuses much on vocabulary and grammar.
- **Cultural Learning:** 65% of learners reported that Duolingo is insufficient in teaching cultural elements. 65% students reported that Duolingo does not satisfactory teach cultural aspects of the language. Most of the students felt hesitation for conversations due to a lack of cultural and social context in the lectures.
- **Motivation:** 80% of learners reported a lack of motivation after several months of use.

#### **Qualitative Findings:**

- **Engagement:** Many teachers appreciated Duolingo’s gamified technique but some learners noted repetition in lessons, which is hurdle for engagement. Positive aspects include gamification, but the negative includes repetitive content.
- **Cultural Learning:** Many teachers reported a mutual complaint that there is a lack of cultural context in lessons, which did not prepare learners for daily language use. They felt that Duolingo did not cover cultural aspects of language learning.
- **Motivation:** Some teachers reported that their motivation decreased over time due to the lack of variety and conversational practice. The interviews revealed that learners lose motivation after long use, due to lack of variety and communication exercise. 80% students reported lack of motivation after using it for many months. Although, Duolingo’s gamified system initially motivated students, the repetitive nature of the exercises leads to a drop in interest over time.

#### **Concision:**

The study highlighted significant challenges faced by Duolingo users, particularly regarding engagement, cultural learning and sustained motivation. While students enjoy the app initially due to its engaging format, many feel that it does not adequately address cultural aspects, and their motivation wanes after prolonged use due to repetitive lessons and lack of interaction. By understanding these challenges, teachers and app developments can consider improvements in cultural integration, variety in content, and more opportunities for real conversational practice to enhance the effectiveness of digital language learning tools like Duolingo.

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