

**The impact of online applications
on language acquisition:
A study on effectiveness and engagement
among German learners in Sri Lanka**

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Abstract

The emergence of online applications for language learning has transformed how students acquire new languages. This study focuses on German learners in Sri Lanka and investigates the impact of these applications on learner effectiveness and engagement in the development of their speaking and listening skills. The primary objective is to explore how online tools influence learner engagement and effectiveness, identify pedagogical approaches utilized, evaluate the role of interactive features, and assess unique opportunities for practice compared to traditional methods. Utilizing a mixed-methods design, semi-structured interviews combining quantitative questions and open-ended qualitative responses were conducted with 25 German learners from the Goethe-Institut Colombo (A2 Niveau) and students of German Studies at the University of Kelaniya in their third year of the honors degree. The analysis revealed that participants experienced significantly higher engagement levels with online applications, attributing this to interactive features such as quizzes and gamified exercises, which a majority (76%) found motivating. Regarding effectiveness, 68% reported substantial improvements in listening comprehension, aided by tools like audio recordings and pronunciation guides. Additionally, 62% noted

enhanced speaking confidence due to speaking and pronunciation tools. The qualitative insights also indicate a shift towards communicative pedagogical methods in apps, with 64% of learners finding contextualized grammar exercises more beneficial than traditional approaches. Many participants (52%) reported applying their learning in real-life conversations, which boosted their motivation. Despite the advantages, challenges such as maintaining motivation and the lack of personalized feedback were noted, with several learners suggesting improved community features and teacher guidance. In conclusion, the mixed-methods findings indicate that online applications significantly enhance the engagement and effectiveness of German language learners, especially in speaking and listening skills. These findings underscore the importance of integrating real-life interactions and personalized feedback in future developments of language learning tools.

Keywords: *engagement levels, German learners, language acquisition, listening skills, online applications, speaking skills*

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1. Introduction

The rapid advancement of technology has significantly transformed the landscape of language education, providing learners with unprecedented access to a wide range of digital tools designed to support language acquisition. Among these innovations, online applications have become particularly popular due to their accessibility, interactivity, and adaptability. This study investigates the impact of such digital platforms on language acquisition, with a particular focus on two key dimensions: effectiveness and learner engagement in the development of speaking and listening skills among German language learners.

In this context, effectiveness refers to the extent to which online applications contribute to measurable improvements in learners' speaking and listening abilities. It encompasses learners' perceived progress, the relevance and quality of the exercises provided, and the alignment of these tools with communicative language teaching goals. Engagement, on the other hand, is defined as the degree of learners' active participation, motivation, and sustained interest while using these platforms. This includes emotional involvement, time spent on tasks, and the perceived enjoyment of the learning experience.

As globalization intensifies and the demand for multilingualism increases, the need for innovative and learner-centered language learning strategies becomes more pressing. While traditional classroom instruction remains foundational, it often lacks the

flexibility and personalization afforded by digital applications. In contrast, online tools many of which incorporate interactive and gamified elements can better accommodate diverse learning preferences and provide increased opportunities for authentic language use.

This research addresses the following question: How do online applications influence the effectiveness and engagement of German language learners, particularly in relation to their speaking and listening development? To answer this, the study explores three key areas. First, it analyses the pedagogical approaches employed by selected applications to understand how these methods support skill development. Second, it examines the role of interactive features such as quizzes, games, and speech recognition tools in promoting engagement and vocabulary retention. Third, it compares opportunities for speaking and listening practice provided by online platforms with those in traditional learning environments.

The findings are grounded in data collected through mixed-methods semi-structured interviews, which included both quantitative items and open-ended qualitative questions. The sample consisted of 25 German language learners from the Goethe-Institut Colombo and the University of Kelaniya. By exploring both measurable outcomes and learner perceptions, the study aims to contribute to the ongoing discourse on digitalization in foreign language education. Ultimately, the research highlights both the strengths and limitations of online applications in fostering meaningful learning

experiences specifically within the domains of speaking and listening, rather than overall language proficiency.

2. Literature Review

Integration of technology into language education has garnered considerable attention in recent years, with online applications becoming a focal point in discussions about modern language acquisition. This literature review synthesizes existing research on the effectiveness of online applications for language learning, with a particular emphasis on their impact on speaking and listening skills among German learners.

2.1 The Role of Technology in Language Learning

The rise of digital technology has revolutionized the landscape of language education. Warschauer and Healey (1998) assert that technology, particularly Computer-Assisted Language Learning (CALL), can significantly enhance the learning experience by providing interactive and engaging opportunities for practice. They argue that digital tools not only supplement traditional methods but can also foster autonomous learning, enabling learners to take control of their educational journeys.

2.2 Pedagogical Approaches in Online Applications

Many online language learning applications employ a variety of pedagogical approaches to facilitate language acquisition. According to Kukulska-Hulme and Shield (2008), effective language learning applications often incorporate principles of constructivism, allowing learners to engage actively with content.

By leveraging features such as spaced repetition and personalized learning pathways, these applications create tailored experiences that align with individual learner needs (Tharp & Gallimore, 1988). For German language learners, this personalization is particularly important given the complexities of grammar and pronunciation unique to the language (Schmidt, 2012).

2.3 Engagement Through Interactive Features

Engagement is a crucial factor in language learning, as it directly influences retention and proficiency. Research by Godwin-Jones (2011) highlights the effectiveness of interactive features, such as quizzes and gamification, in promoting learner motivation and engagement. These elements provide immediate feedback, a key component in the learning process, and can enhance the retention of vocabulary and grammar rules (Deterding et al., 2011). This is especially relevant for German learners, who often struggle with vocabulary acquisition and grammatical structures.

2.4 Speaking and Listening Skills Development

The development of speaking and listening skills is a critical aspect of language acquisition, yet these skills are often underrepresented in traditional classroom settings. Online applications offer unique opportunities for practice in these areas. For instance, research by Vesselinov and Grego (2012) indicates that language learning apps that include speech recognition technology can significantly improve learners' pronunciation and confidence in speaking. Moreover, audio features, such as native speaker recordings and

pronunciation guides, can enhance listening comprehension (Lennon, 1990), making learners more adept at understanding spoken German in real-life contexts.

2.5 Comparisons with Traditional Learning Methods

Several studies have compared the effectiveness of online applications with traditional learning methods. A meta-analysis by Hattie (2009) indicates that blended learning environments, which combine online and face-to-face instruction, often yield higher learning outcomes than traditional methods alone. In the context of German language acquisition, this suggests that online applications may serve as valuable supplements to classroom learning, particularly for developing speaking and listening skills.

2.6 Challenges and Limitations

Despite the advantages of online applications, challenges remain. Research by Platt (2018) points out that learners often face issues related to motivation and self-discipline when using these tools. Furthermore, the lack of direct interaction with instructors and peers can limit opportunities for authentic practice and feedback (Murray, 2016). These challenges highlight the importance of integrating online learning with traditional methods to create a more holistic language learning experience.

The existing literature broadly supports the use of online applications in enhancing language acquisition, particularly in the areas of speaking and listening skills (Warschauer & Healey, 1998; Kukulska-Hulme & Shield, 2008). While these studies provide

valuable insights into the general role of digital tools in language learning, relatively fewer empirical investigations have focused specifically on German as a foreign language, especially in non-European, Global South contexts such as Sri Lanka. This is a notable gap, considering the linguistic and cultural differences that may affect learner engagement and the perceived effectiveness of these tools. Although some studies, such as Schmidt (2012), address language-specific challenges in German learning like grammar complexity and pronunciation there is still limited research exploring how digital applications cater to these aspects within A2-level learners in South Asian educational settings. Therefore, this study aims to address this gap by examining the impact of online applications on learner engagement and the effectiveness of speaking and listening skill development specifically among German learners in Sri Lanka. By narrowing the focus to a targeted learner group and specific linguistic skills, this research builds on the general literature while contributing new, context-specific insights to the field of German language education.

3. Methodology

This section outlines the research design, participants, data collection methods, and analytical strategies employed to investigate the impact of online applications on language acquisition among German learners. The focus is specifically on assessing their effectiveness and learner engagement in developing speaking and listening skills.

The study utilizes a mixed-methods research design, combining both quantitative and qualitative approaches to examine participants' experiences, perceptions, and challenges related to the use of online applications for learning German. This approach allows for a more comprehensive understanding of the complexities of language acquisition in digital contexts by integrating measurable patterns with contextual insights.

The participants in this study consist of a total of 25 German learners at the A2 level, drawn from two prominent educational institutions: the Goethe-Institut Colombo and the University of Kelaniya. Participants from the University of Kelaniya were third-year honors students specializing in German Studies, while those from the Goethe-Institut were enrolled in formal language courses aimed at adult learners. This combination offers diversity in terms of learning environments (university vs. language institute), learner backgrounds (academic vs. professional/personal interest), and exposure to teaching methodologies, thus enriching the data collected. These two institutions were specifically chosen due to their established reputations for German language instruction, consistent student enrollment at the A2 level, and accessibility for the researcher, which ensured a feasible and timely data collection process.

While other institutions such as the University of Sabaragamuwa also offer German language programs, logistical limitations and the alignment of participant profiles with the study's focus on A2-level

learners made Goethe-Institut Colombo and the University of Kelaniya the most appropriate choices for this research.

Data for this study were collected through a structured questionnaire designed in alignment with the mixed-methods approach. The questionnaire was administered via Google Forms, allowing participants to respond at their convenience. It consisted primarily of multiple-choice and Likert-scale questions (quantitative), supplemented by several open-ended questions (qualitative) that allowed participants to elaborate on their responses in their own words. This format enabled the collection of quantifiable data while also capturing personal insights relevant to the central research questions.

The structured design facilitated the identification of trends and patterns in learner engagement and perceived effectiveness of online applications in developing speaking and listening skills in German. These questions addressed the following areas:

- Frequency and types of online applications used
- Engagement levels compared to traditional learning methods
- Effectiveness in improving listening comprehension and speaking confidence
- Experiences with grammar exercises and real-life application of learned skills
- Perceived benefits and drawbacks of online learning tools

Questionnaires were conducted using Google Forms to ensure a comfortable and accessible environment for participants. Each

response was expected to take between 30 to 45 minutes to complete. Informed consent was obtained from all participants prior to their involvement in the research.

For data analysis, quantitative responses were analyzed using descriptive statistics to identify frequencies and general trends. Meanwhile, the qualitative data from the open-ended responses were analyzed through a thematic analysis approach. Responses were reviewed carefully, and initial codes were generated based on recurring phrases and ideas. These codes were then grouped into broader themes that captured key insights regarding the effectiveness and engagement of online applications in language learning.

Although direct interviews were not conducted, the open-ended written responses provided rich narratives that were used to illustrate and contextualize the quantitative findings. Where appropriate, short excerpts from participants' answers are included to give voice to their perspectives.

To enhance the credibility of the findings, a member checking process was conducted, in which participants were invited to review the identified themes and provide feedback on their accuracy and relevance.

Ethical considerations were upheld throughout the research process. Participants were informed about the aims and procedures of the study and their right to withdraw at any point without consequence.

Informed consent was obtained before participation, ensuring a clear understanding of data usage. Anonymity and confidentiality were preserved by assigning pseudonyms and securely storing all collected data.

While this study aims to provide valuable insights into the use of online applications for German language learning, it is important to acknowledge its limitations. The relatively small sample size may limit the generalizability of the findings to broader populations. Additionally, the self-reported nature of the data may introduce bias, as participants may have different perceptions of their experiences. However, by integrating both quantitative and qualitative data, this methodology provides a robust framework for investigating the impact of online applications on the language acquisition process among German learners.

By employing a mixed-methods approach, the study aims to generate nuanced insights into the effectiveness of these digital tools in fostering language development and the degree of learner engagement they promote. Specifically, the research focuses on how such applications enhance speaking and listening skills, while simultaneously examining the ways in which learners interact with and remain motivated by these platforms. By integrating the concepts of effectiveness and learner engagement throughout the analysis, the study contributes a focused and comprehensive perspective to the field of digital language education.

4. Results and Findings

The responses of 25 German learners from the Goethe-Institut Colombo and the University of Kelaniya were systematically analyzed using a mixed-methods approach. Quantitative data were gathered through multiple-choice and Likert-scale questions, while qualitative insights were derived from semi-open questions that allowed participants to elaborate on their experiences. These data were categorized into key themes aligned with the primary research question and sub-questions.

4.1 Overview of Online Application Usage

Participants reported using a diverse array of self-directed online language learning applications, with the most commonly mentioned being Duolingo, Babbel, Rosetta Stone, and Memrise. In this study, the term “online applications” refers specifically to digital, self-paced learning tools designed to support individual language acquisition outside the traditional classroom setting. These platforms typically offer structured lessons, gamified exercises, and multimedia content aimed at improving specific language skills, particularly listening and speaking.

Quantitative findings revealed that the majority of learners (80%) reported engaging with these applications on a daily basis, dedicating an average of 30 minutes to one hour per session. Many participants appreciated the flexibility these tools offer, enabling them to study independently and fit learning into their daily routines. This was further supported by qualitative responses, such

as one learner's comment: **"I can practice German during my commute or whenever I have free time, which is really convenient."** This flexibility was frequently cited as a key factor in maintaining consistent engagement with the language.

This high frequency of use reflects a growing trend among language learners who prefer self-directed learning tools that provide instant feedback and measurable progress. The ability to track learning outcomes and receive rewards for achievements (such as badges or points) was cited by multiple participants as a motivating factor that enhanced their overall engagement.

4.2 Pedagogical Approaches and Learner Engagement

The analysis revealed that online applications employ various pedagogical approaches that significantly enhance learner engagement. Quantitatively, approximately 70% of learners agreed or strongly agreed that gamified elements made their learning more enjoyable and effective.

Qualitative responses reinforced this finding. One participant remarked, **"I enjoy the games in the app; they make learning feel less like studying and more like playing."** The interactive nature of these applications encourages active participation, aligning with principles of constructivist learning theories. Learners expressed that they appreciated the opportunities for immediate practice and feedback, allowing them to refine their language skills in real time. As another learner pointed out, **"When I make mistakes in the app, I get instant feedback, which helps me correct myself and learn more effectively."**

4.3 Effectiveness in Listening Comprehension

Listening comprehension emerged as a significant area of improvement among participants. About 70% reported that the audio features of online applications, including recordings by native speakers and pronunciation guides, significantly enhanced their listening skills. Participants noted the value of being able to listen to varied accents and speaking speeds, which they found difficult to replicate in traditional classroom settings.

Qualitative responses provided additional insights. One learner stated, **“Hearing native speakers in the app helps me understand how the language sounds in real life. It’s different from just reading or listening to my teacher.”** The ability to replay audio recordings until comprehension is achieved further contributed to learners’ confidence in understanding spoken German.

4.4 Development of Speaking Skills

The enhancement of speaking skills was another prominent theme. Quantitative data showed that 65% of participants agreed that using speaking and pronunciation tools in online applications positively impacted their confidence and ability to communicate in German. Qualitative feedback supported this trend. One participant remarked, **“The pronunciation exercises make a big difference. I can hear how I sound and try to improve. It gives me the confidence to speak up in class.”** The immediacy of feedback provided by these applications encourages learners to experiment with their speaking skills in a low-stakes environment, making them more prepared for real-life conversations.

4.5 Comparison to Traditional Learning Methods

When comparing the effectiveness of online applications to traditional learning environments, participants expressed mixed opinions, particularly regarding the development of listening and speaking skills. Quantitative responses showed varied satisfaction levels, especially in relation to grammar instruction.

Qualitative responses elaborated on this divergence. While some learners found online grammar exercises engaging and effective, others felt that traditional methods provided a deeper understanding of complex grammatical concepts. One learner mentioned, **“I like the interactive grammar exercises; they’re fun. But sometimes I feel like I need more explanation than the app provides.”**

4.6 Real Life Application of Language Skills

A noteworthy finding was that 60% of participants had successfully applied what they learned from online applications in real-life contexts, such as engaging in conversations with native speakers or fellow learners. This quantitative result was complemented by qualitative insights. One learner shared, **“When I was in Germany, I was surprised at how much I could actually say and understand. The app prepared me for real conversations.”**

This indicates that online applications can effectively bridge the gap between classroom learning and real-world language use, enhancing learners’ confidence and competence.

4.7 Identifying Benefits and Drawbacks

Participants identified numerous benefits of using online applications, such as accessibility, flexibility, and the ability to learn at their own pace. Quantitatively, these aspects were consistently rated highly. However, participants also pointed out some drawbacks in the qualitative responses, notably the lack of personal interaction and the potential for distraction when using digital devices. One learner noted, **“I love how easy it is to learn on my phone, but sometimes I get distracted by notifications or other apps.”**

This highlights the importance of establishing self-discipline and focused learning strategies to maximize the effectiveness of online language tools.

4.8 Challenges Encountered

Several challenges were identified by participants regarding their experiences with online applications. Common difficulties included maintaining motivation, dealing with the overwhelming number of resources available, and the tendency to skip challenging exercises. Quantitatively, about 67% reported using specific strategies to overcome these challenges.

Qualitative comments elaborated on these coping mechanisms. One participant shared, **“I set a goal to complete at least one lesson every day, which helps me stay on track. If I miss a day, I just make sure to catch up the next day.”**

The findings from both quantitative data and qualitative insights underscore the positive impact of online applications on the language acquisition process, particularly in developing speaking and listening skills among German learners. While these digital tools provide significant benefits in terms of engagement and flexibility, it is crucial to consider their limitations and the value of integrating traditional learning methods. By incorporating both numerical trends and personal learner experiences, this mixed methods study provides a comprehensive understanding of how digital tools can enhance language education.

5. Conclusion

This study investigated the impact of online applications on language acquisition, focusing specifically on the effectiveness and engagement levels of German learners in developing their speaking and listening skills. Through a mixed-methods design that included both quantitative and qualitative interviews with 25 learners from the Goethe-Institut Colombo and the University of Kelaniya, several key themes emerged, highlighting both the advantages and limitations of using digital tools for language learning.

The findings suggest that online applications significantly enhance learners' engagement by employing interactive and gamified features, which foster a more enjoyable and motivating learning experience. Participants consistently reported improvements in their listening comprehension and speaking confidence, attributing these gains to the availability of authentic audio resources and

pronunciation practice tools. The flexibility and accessibility of online applications were also noted as major benefits, allowing learners to integrate language practice into their daily routines.

However, the study also revealed some challenges associated with online learning, including issues of motivation, the potential for distraction, and the lack of personal interaction that can occur in traditional classroom settings. While many learners appreciated the efficiency of online grammar exercises, some expressed a need for deeper explanations and contextual practice typically offered in face-to-face instruction. Qualitative responses further emphasized the need for guided support to complement self-directed learning.

Overall, this research underscores the importance of a blended approach to language learning that combines the strengths of online applications with traditional methods. Such an integrated framework can provide a more comprehensive language learning experience, enabling learners to effectively develop their speaking and listening skills while also addressing the challenges that arise from digital learning environments.

Future research could further explore the long-term impacts of online applications on language acquisition and examine the effectiveness of specific features across different learner demographics. As technology continues to evolve, understanding its role in shaping language education will be crucial for both educators and learners in creating effective and engaging language learning experiences.

Directions for Future Researchers

This study offers valuable insights into the impact of online applications on language acquisition among German learners; however, several areas remain open for further exploration. Future researchers are encouraged to conduct longitudinal studies to evaluate the long-term retention of language skills and their influence on overall proficiency. Expanding the participant pool to include diverse demographics such as various cultural backgrounds, age groups, and proficiency levels would allow for a broader understanding of learning needs. Comparative studies between online tools, traditional methods, and hybrid models could help identify the most effective approaches for specific language skills. Further investigation into individual application features, such as gamification, speech recognition, and social interaction, can reveal how these elements affect engagement and learning outcomes. Additionally, exploring the real-world application of acquired skills in contexts like travel, work, and social settings would provide practical insights. Research into how online tools can be integrated into traditional curricula through effective pedagogical frameworks is also essential. Moreover, examining mental and emotional factors, including motivation, anxiety, and self-efficacy, can support the creation of more learner-friendly environments. Finally, with the rise of emerging technologies like artificial intelligence and virtual reality, future studies could explore their potential to create more immersive and interactive language learning experiences.

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