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University students' perceptions on the role of mobile-assisted language learning (MALL) in developing listening skills

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Abstract

This study examined first-year students' perceptions of mobile-assisted language learning (MALL) at Bahir Dar University, Ethiopia, focusing on enhancing listening skills through the Canvas Student platform. A descriptive research design and a mixed-methods approach were employed. To this end, a total of 99 students (23 females, 76 males) participated in the study. Quantitative data were collected via a questionnaire, while qualitative data were gathered through observation. The survey results revealed that 96% of the participants agreed that mobile technology is essential for improving their English language learning, academic performance, and overall engagement. Moreover, the results from the observation showed strong student engagement with mobile devices for academic tasks like accessing course materials and collaborating across classrooms, libraries, and outdoor Wi-Fi areas, though non-academic uses such as chatting and social media also posed challenges. The Relative Importance Index (RII) analysis indicated that the participants used mobile devices mainly for sharing course materials (RII = 0.941), accessing dictionaries (RII = 0.927), and reading PDF notes (RII = 0.925). This highlights the need for integrating platforms like Canvas Student into the curriculum. Generally, the study emphasizes MALL's role in developing listening skills and improving learning outcomes. Therefore, based on the results, it is recommended that English as a Foreign Language (EFL) experts and curriculum designers should integrate mobile technology into EFL instruction to enhance collaboration, accessibility, and lifelong learning.

Introduction

In contemporary society, characterized by the widespread use of technological gadgets, the educational sector has witnessed significant growth through the adoption of innovative pedagogical methodologies, particularly in developed countries where technology has been wisely integrated into educational practices (Horton & Horton, 2003). According to Chun et al. (2016), learning and teaching practices are rapidly shifting from situated learning to new approaches across various contexts (Chan et al., 2006; Yelland, 2006), as new technologies are reshaping how educators and students interact and engage with each other. Educational methodologies have now increasingly incorporated educational applications, devices, software, and free online resources (Elabnody, 2015). Consequently, the conceptualization and implementation of effective educational practices are often deemed incomplete without integrating these technological tools, which promote active engagement between students and educators (Fishman et al., 2016; Harris et al., 2009).

Considering this, in the 21st century, learners are highly attached to their mobile devices for different purposes. For instance, mobile phones play important roles in facilitating communication among the local and global society. Moreover, they are of huge interest to educators who integrate them into learning and teaching contexts. As a results, they have already transformed and brought new teaching methodologies to teaching language skills and are flourishing with over 80,000 foreign language learning applications (West & Vosloo, 2013 ; Li, 2022). Over the past many years, the concept of teaching and learning was narrowly associated with classrooms in the school environment. However, these days the trend has considerably changed and learning is taking place anywhere such as in the home and virtually. This shift shows the necessity for educational planning that includes technological advancements as integral elements of effective teaching and learning strategies. In support of this, Lai and Gu (2011) showed in their study that students had shown great motivation to learn using their mobile phones outside the classroom context, and were able to regulate their learning. In line with this, language could be acquired in or outside the classroom where real-life, or everyday life routines take place (Kukulska-Hulme & Traxler, 2005).

An increasing number of studies in the EFL context are being inspired by the concept of using technologies, especially mobile phone technologies. A local study, for instance, indicated the effect of a mobile-based approach on the attitudes and performance of EFL teacher trainees' aural skills at Arba Minch Teacher Education College in Ethiopia. It also

showed that the trainees had a positive attitude toward using mobile-based approaches (Woldetsadik et al., 2022). Moreover, the study revealed a significant improvement in the trainees' aural comprehension. This study addresses a gap in previous research by exploring students' attitudes toward a mobile-based approach. It supports the integration of technology in education by using Canvas LMS and mobile applications to enhance students' listening skills.

The utilization of mobile phone technology in education has been increasingly supported by various international studies, which demonstrate its feasibility in teaching and learning foreign languages. Many studies have investigated both teachers' and students' attitudes toward using technology to facilitate teaching and learning English as a foreign language (Standen et al., 2001; Traxler & Kukulska-Hulme, 2005; Joseph & Uther, 2009; Rodinadze & Zarbazoia, 2012). In addition, other studies (Heift & Chapelle, 2013; Shintani & Ellis, 2014) have shown that mobile phones could play an effective role in developing listening skills and providing several opportunities for language learners. Researchers have also consistently reported that in a MALL environment, students could learn autonomously and become more motivated, learning at any time and anywhere (Hashim et al., 2017).

In the context of communication and learning, the development of listening skills is essential for effective communication in both educational settings and daily life (Brown, 2009; Dakin-Neal, 2023), and any learning can primarily be achieved through listening skills (Richards, 2008). Moreover, it is significant, especially for learners of English as a foreign language (Alzamil, 2021; Latha, 2018; Long, 1990). Considering its relevance, listening skills are defined as a set of key skills that requires active engagement.

Listening involves an interlocutor, content, a receiver, and the mental process of receiving, interpreting, and responding to spoken or non-verbal communication (Tyagi, 2013). To provide sufficient resources for listening lessons that align with educational goals, incorporating audiovisual materials can be highly effective. For example, podcasts offer flexibility, allowing students to pause, replay, and thoughtfully engage with the content as if conversing with the speaker. This interactive approach enhances students' learning experiences by enabling them to absorb information at their own pace and reflect deeply on the material. Overall, podcasts are an accessible and enriching educational tool (Rost & Wilson, 2013). It is worth emphasizing that successful engagement with lessons

that involve podcast requires focus, understanding, interpretation, and evaluation of the messages presented (Rahman et al., 2018).

In effect, teaching listening using technology, especially through Mobile Assisted Language Learning (hereafter, MALL), can play an important role in both educational settings and daily life and could facilitate active engagement and interaction (Klopfer et al., 2005; Otto, 2017). Beyond the use of MALL, the study by Cruz et al. (2012) revealed many benefits such as communication skills and interactivity. In contrast, the study also pointed out a wide range of technological, individual, instructional, and pedagogical challenges to the successful usage of these devices. Therefore, this study focuses on active listening skills, which involve engaging mental processes as the interlocutor (the podcaster, in this context) communicates with the listener.

Although the aforementioned studies demonstrated the feasibility of mobile phone technologies, they were primarily focused on mobile applications that were not specifically designed for educational purposes, instead using them as educational tools. Concerning implementing technology for teaching listening skills, studies which were limited to teachers' strategies and technologies such as tape recorders, TV, and computers, which have been widely implemented in classrooms and laboratories have been conducted (Salaberry, 2001). Students' perceptions of using their mobile devices and LMS to enhance extensive listening skills outside the school have not been explored in Ethiopia.

Furthermore, previous studies did not consider the use of MALL environments for extensive listening skills practice at students' convenience beyond laboratory environments. In contrast, the current study takes a broader approach by incorporating a learning management system (LMS) and exploring students' perceptions of learning through their mobile devices and an LMS platform. Strengthening this, studies like (Adzharuddin & Ling, 2013; Elabnody, 2015; Veluvali & Surisetti, 2021) have demonstrated that LMSs and different applications are designed with many features that support traditional classrooms and independently facilitate educational courses and training programs with internet access. In addition, other studies hace shown that an LMS is more suitable for learners enrolled in higher educational institutions (Zanjani, 2017; Pappas et al., 2019). Similarly, McGill and Klobas (2009) indicated that technology-integrated learning had already become a requirement for any academic discipline and facilitated English language learning in technologically advanced countries. Furthermore, the features in Canvas, an LMS, can create better engaging environments for lifelong learning

(Webber, 2019; Mpungose, 2020).On the other hand, Nxumalo et al. (2023) claim that teachers and students do not pay attention to the new technological features of smartphones for educational contexts.

While international studies have shown that MALL enables learners to practice language skills flexibly, increasing engagement and satisfaction (Lei et al., 2022), and supports vocabulary development and reading comprehension (Li & Hafner, 2022), there is limited research on its implementation and perceived effectiveness in the Ethiopian higher education context. Therefore, the current study aims to evaluate the perceptions of first year students at Bahir Dar University regarding the use of mobile-assisted language learning (MALL) for enhancing listening skills, particularly in the context of freshman students taking the common course, Communicative English Lanaguage Skills I, which was delivered via Canvas for the purpose of the present study. The study addresses the following research questions: *Q1:* How do students perceive the effectiveness of smartphones as a tool for developing listening skills within MALL? *Q2*: What are students' perceptions of the role of LMS and Canvas Student in enhancing their listening skills? *Q3:* How do students use mobile apps to support extensive listening outside the classroom? *Q4:* What challenges do students encounter in developing listening skills via mobile-assisted learning?

Theoretical and Conceptual Frameworks

This study is supported by Krashen's Input Hypothesis (Gregg, 1986), which emphasizes the importance of comprehensible input for language acquisition, the principles supported by MALL tools. The Constructivist Learning Theory (Stabile & Ershler, 2015) further asserts the role of scaffolding, active learning, collaboration/ mediation, and self-regulated learning, which MALL allows students to practice active engagement at their convenience. Additionally, the Technological Pedagogical Content Knowledge, (TPACK) framework by (Mishra & Koehler, 2006) stresses the integration of technology with pedagogy and content, making it an integral part of enhancing listening skills through mobile-based applications like Telegram and Canvas Student LMS platforms. Together, these frameworks inform the study's exploration of MALL's potential to improve listening skills in an active, learner-centered environment.

The study also draws on MALL principles outlined by Sharples (2000), Kukulska-Hulme and Traxler (2007), and Pachler et al. (2010) to support the use of Canvas LMS on mobile devices. This enables anytime, anywhere learning, promoting self-regulated and collaborative learning However, some institutions remain hesitant to integrate mobile learning (Selwyn, 2018). Despite this, mobile devices create flexible and connected learning environments, helping students balance learning with other responsibilities (Siemens, 2005; Gharaibeh & Gharaibeh, 2020).

Figure 1
Conceptual framework for enhancing listening skills via mobile-assisted language learning (Adapted from Mishra & Koehler 2006; Sharples 2000; Kukulska-Hulme & Traxler 2007; Gharaibeh & Gharaibeh 2020).

Technology in Supporting Listening Skills

Mobile and learning management systems like Canvas and applications such as Telegram offer new opportunities for developing listening skills. MALL enables autonomous and flexible learning, providing tools like podcasts, videos, and media players to support listening practice (Kukulska-Hulme, 2009). LMS platforms like Canvas streamline access to resources and enhance student engagement by enabling communication with instructors and peers (Gamede et al., 2022). Similarly, Telegram supports interaction and collaboration, allowing students to learn flexibly while engaging with peers and instructors through multimedia features (Abu-Ayfah, 2019). Moreover, multimedia resources like podcasts and videos enhance listening skills by providing authentic input, varied accents, and real-life contexts, while transcripts and interactive tasks support comprehension and engagement (Kavaliauskienė,

2008; McBride, 2009; Cárdenas, 2023). Despite these benefits, challenges remain, including technical limitations, ethical concerns, and the need for teachers to adapt to technology-based methodologies (Ali et al., 2019; Levert, 2006). Nonetheless, these platforms create quasi-communities and facilitate authentic language practice, fostering analytical and critical thinking skills (Alzieni, 2021; Monalisa & Ardi, 2013).

Methods

This study used a mixed-methods research design combining quantitative and qualitative data to examine students' perceptions of MALL and its impact on their listening skills. Creswell (2018) highlights the value of integrating both methods to gain a comprehensive understanding of research problems, while Mertens (2004) supports this approach in language learning research, especially in EFL contexts.

Ninety-nine first-year natural science students, aged between 18 and 21, (23 females, 76 males), taking the course ―Communicative English Language Skills II‖ in two different sections at Bahir Dar University, were selected for the study. These students were taking the course from the corresponding author of the present study, and it was found convenient by the researchers to distribute and collect questionnaires from the students in those two sections.

A questionnaire consisting of 24 Likert scale items was used to explore students' experiences with MALL and their use of platforms such as Canvas and Telegram. Additionally, an interview was conducted to understand students' perceptions of learning in the online environment of Canvas LMS.

Validity and Reliability

The perception questionnaire was adapted from Kukulska-Hulme and Shield (2008), who identified key dimensions of Mobile-Assisted Language Learning (MALL), including accessibility, learner engagement, and the perceived effectiveness of mobile tools for language development. The questionnaire was reviewed by two TEFL experts and my research supervisors for content validity. Based on their feedback, four of the 24 items were modified, two were replaced due to irrelevance, and two were revised for clarity. Reliability was assessed using Cronbach's alpha, which yielded a score of 0.860, indicating high internal consistency and reliability.

Results

The table below presents an interpretation of the descriptive statistics for students' perceptions of Mobile-Assisted Language Learning (MALL).

Table 1

Descriptive Statistics for Students' Perceptions of MALL

Category	Item	Mean
Top-Performing Items	Mobile technology helps me exchange course materials with my friends.	4.71
	I use my mobile phone to look up word meanings and acquire vocabulary.	4.64
	Mobile technology offers many opportunities for my learning process.	4.63
	I use my mobile phone for reading (PDFs, notes, transcripts, etc.)	4.56
	I find mobile technology to be a useful tool for my study.	4.52
	Learning through mobile devices may not be preferred/favored by students.	2.51
Strongly Agreed Items	I use my mobile devices to record my teachers' lectures.	4.44
	I use mobile technology to communicate with my group members.	4.41
	Learning through mobile devices is a quicker method of getting feedback on learning.	4.32
	Learning through mobile devices can be an effective way of learning as it can give immediate support or feedback.	4.29
	Learning through mobile devices can enhance language learning and communication among students and teachers, inside and outside the classroom.	4.28
Moderately Agreed Items	Using my mobile phone is effective in enhancing my listening skills.	4.22
	Mobile devices are suitable for learning, but I may need more training.	4.22
	I use my mobile phone to submit assignments using Telegram.	4.21
	Mobile technology can help me develop my English listening skills.	4.11
	Mobile technology can be an easy way to get feedback and notifications from my instructors.	4.11
Low-Performing Items	I use other online platforms or mobile apps like Telegram to improve my listening skills.	4.08
	Mobile learning will enhance listening skills, by replacing fixed language labs and allowing practice anytime, anywhere.	4.08
	Telegram applications can support English language learning.	4.03
	Mobile-based applications like the Telegram app give unlimited time to practice learning anytime, anywhere.	3.99

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	Telegram allows videos, pictures, word documents, PDFs, PPTs, Excel sheets, and others with the support of the internet.	3.98
	Mobile technology can help me to access the course material anytime, anywhere.	3.82
	Mobile learning will be a more flexible method of learning as it can be done anytime, anywhere	3.72
	I use my mobile phone to record my teachers' lectures.	2.95

The data in Table 1 indicate that the respondents perceive that the main use of mobile technology to be sharing course materials with friends (4.71) and looking up word meanings and acquiring vocabulary (4.64), both indicating strong agreement. Other highly rated items included the opportunities that mobile technology offers for learning (4.63), serves as reading course materials (4.56), and a uses as a study tool (4.52).

The lowest mean score, 2.51, was for the statement that mobile learning is not preferred by students, which indicates that students strongly favor mobile-assisted learning. Respondents also strongly agreed that mobile technology aids tasks such as recording lectures (4.44), communicating with group members (4.41), and providing quicker feedback (4.32).

Moderate agreement was found with regard to mobile technology's effectiveness in enhancing listening skills (4.22) and its role in submitting assignments and receiving instructor feedback, with means scores of 4.21 and 4.11, respectively. Lower agreement was noted for the use of other platforms like Telegram to improve listening skills (4.08) and the flexibility of mobile learning (3.72). The least favorable response with regard to recording lectures (2.95) ndicaties limited use of this feature.

Figure 2

Relative Importance Index Analysis for Mobile Using Frequency
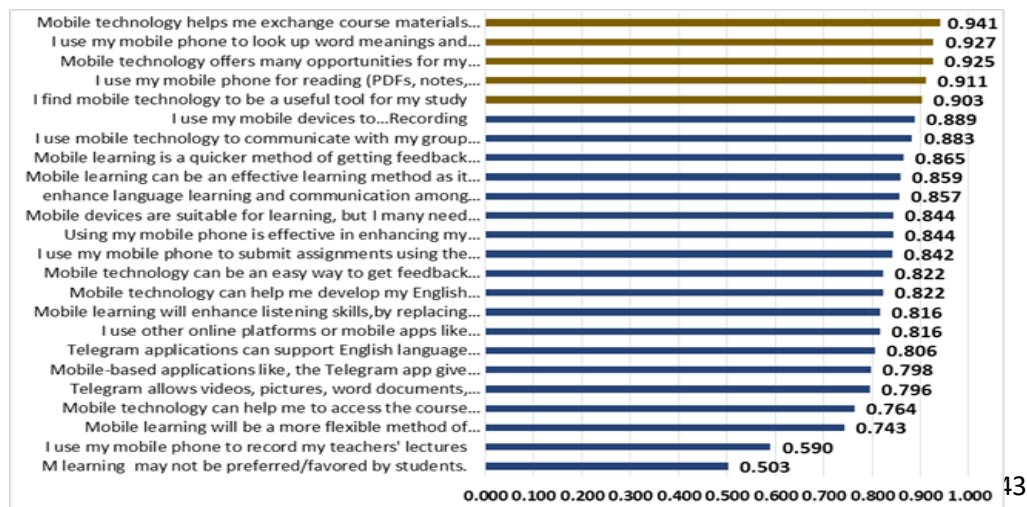
The Relative Importance Index (RII) was used to examine the significance students attribute to mobile technology in terms of communication, learning support, and accessing educational resources. The results revealed that mobile technology was highly valued for these purposes. For instance, statements such as Mobile technology helps me exchange course materials with peers and instructors (RII = 0.941) and I use my mobile phone to look up word meanings and acquire new vocabulary (RII = 0.927) received the highest ranking, showing the frequent usage of mobile devices for academic activities. The results underscore the students' perception of mobile technology as essential tools for communication and accessing information, highlighting the significant role mobile technology plays in supporting academic l activities.

Perceived Importance and Difficulties

Table 2

Analysis of Perceived Importance and Difficulties

Item	Category	Frequen	Percent
How often do you use mobile devices to improve your listening skills in English?	Less than once a week	26	26.3
	Once a week	14	14.1
	2-3 times a week	27	27.3
	4-5 times a week	20	20.2
	Every day	12	12.1
What have you used to practice your listening skills on your mobile devices?	English audio recordings	7	7.1
	English movies and videos	41	41.4
	Podcasts related to my listening skills course	24	24.2
	Music apps that have song lyrics	13	13.1
	Language learning apps such as Duolingo and Pimsleur	11	11.1
	Select all that apply/all	3	3.0
How can using mobile phones and online tools enhance various listening activities?	By providing access to a wide range of authentic audio materials within the virtual environment	32	32.3
	Through interactive platforms that encourage active participation and engagement during virtual listening tasks	31	31.3
	By offering personalized learning experiences that practically help to practice learning anytime anywhere.	36	36.4

Please choose examples of listening tasks you have practiced in your listening lessons.	Participating in live audio discussions and group activities within virtual classrooms	13	13.1
	Completing interactive listening comprehension exercises and quizzes embedded within online lessons	11	11.1
	Listening to our teacher reading the listening text, and answering the accompanying questions in writing	54	54.5
	Reading the provided listening texts and answering questions in writing	18	18.2
	Select all that apply/all	3	3.0
Can you share your strategies for improving focus, understanding, interpreting, and evaluating messages in listening skills?	I take notes or summarize key points while listening to the teacher.	34	34.3
	I usually participate in reflection activities in the classroom to enhance my listening skills.	12	12.1
	I pay close attention to the teacher's voice content.	14	14.1
	Select all that apply/all	39	39.4

The majority of the respondents (27.3%) used mobile devices two to three times per week to improve their listening skills, with 26.3% using them less than once a week and 12.1% using them daily. The most popular resources for listening practice were English movies and videos (41.4%), followed by course podcasts (24.2%), music apps (13.1%), and language-learning apps (11.1%). Participants valued mobile learning for its capacity to provide personalized experiences (36.4%) and access to authentic audio materials (32.3%), with 31.3% appreciating interactive platforms that promote active participation. Despite the advantages of mobile tools, traditional classroom tasks, such as listening to the teacher read texts remain prevalent (54.5%). To enhance listening skills, the respondents employed strategies like note-taking (34.3%), active participation (12.1%), and focusing on the teacher's voice (14.1%). These findings indicate frequent use of mobile devices for listening practice, with mobile learning offering personalized experiences and varied resources, while traditional methods still play a significant role.

Table 3
Familiarity with Canvas Student and Perceptions of Using Online Platforms for Listening Skills Development

Item	Category	Frequency	Percent
Are you familiar with the learning management system —Canvas Student,‖ the mobile app for accessing online courses and materials?	Yes, I am familiar with Canvas Student.	21	21.2%
	No, I am not familiar with Canvas Student.	78	78.8%
How do you feel about the advantages of using other online platforms or mobile apps to learn listening skills?	I think using online platforms or mobile apps is a great way to improve the development of listening skills.	54	54.5%
	I have not used online platforms or mobile apps to practice listening skills, so I cannot comment.	45	45.5%

The data in Table 3 show that 78.8% of the respondents were unfamiliar with Canvas Student, the mobile app for accessing online courses and materials. Only 21.2% of them reported that they were familiar with the platform. This indicates that there was a lack of awareness or limited usage of Canvas Student among the respondents.

Regarding perceptions of using other online platforms or mobile apps to improve listening skills, 54.5% of the respondents believed that these tools were effective. However, 45.5% did not use them, so they could not comment on the effectiveness of these tools. These results suggest that while many of the respondents acknowledged the potential benefits, a large number had not yet engaged with these resources. This highlights the importance of raising awareness and offering practical training on using mobile and online tools to support the development of listening skills.

Interpretation of open-ended survey responses

The open-ended survey responses revealed the respondents‘ challenges, strategies, and perspectives on improving listening skills, mobile learning, and online platforms. The respondents identified obstacles such as difficulty with pronunciation and accents, limited vocabulary, and a lack of practice opportunities outside the classroom. They also mentioned technical issues such as poor connectivity and personal barriers like motivation and confidence. As for strategies, students emphasized regular practice and using multimedia resources like

podcasts and videos. Many viewed mobile learning as an essential tool, appreciating its flexibility, accessibility, and exposure to diverse English accents. Although most were initially unfamiliar with Canvas, after participating in an awareness creation session, they acknowledged its potential to enhance learning through its multimedia features and structured organization.

Interview

The interview included five participants to understand their perceptions of MALL and LMS.Participants expressed that classroom-only listening instruction is insufficient for improving their listening skills, with one student stating, "I do not believe that listening skills lessons in the classroom alone are enough." The participants also mentioned that they primarily used mobile phones for reading and entertainment purposes. They noted that online platforms might better support their education if they learned to use them effectively. They said that the flexibility and accessibility of online platforms allow them to learn at their own pace and engage with additional resources such as podcasts and videos.

After participants took lessons on Canvas, they reported a notable shift in their experiences with MALL and LMS. One of the participants remarked, "The lessons through Canvas have completely changed my ways to learning." They also emphasized the effectiveness of using mobile phones to access educational content and successfully communicate with peers through platforms like Telegram and Messenger. Overall, participants stated that the online environment improved not only their listening skills but also supported their overall academic experience.

Discussion

The results indicate that 96% of the respondents perceived mobile devices as essential for enhancing their listening skills and academic performance. In response to the first research question, 83% of the participants responded that mobile technology supports the development of listening skill, , reinforcing its pedagogical value. These findings align with prior studies (Looi et al., 2010; Pimmer et al., 2016; Romero-Rodríguez et al., 2020), which asserted the role of mobile technology in augmenting resource accessibility and promoting active engagement.

Regarding the second research question, the study shows a significant gap in students' familiarity with learning management systems

(LMS), especially Canvas. This underscores the urgent need for more structured support and training to enable students to navigate such platforms effectively. While 73.7% of the respondents acknowledged the effectiveness of mobile devices in sharing academic resources, their limited knowledge of LMS tools highlights the necessity of additional instruction to facilitate the successful integration of MALL into their instructional practices. This result is consistent with the results of a study by Khlaisang and Sukavatee (2023), who emphasized the importance of structured systems in mobile learning, as well as Wong et al. (2015), who highlighted the importance of linking formal and informal learning through mobile technology.

The third research question revealed that 78% of the respondents recognized Telegram as a key platform for both academic and social engagement, particularly in enhancing listening skills. Its flexibility supported collaborative learning outside the classroom, asserting the importance of mobile applications in supporting extensive listening and interactive learning (Abu-Ayfah, 2019; Alahmad, 2020; Aristovnik et al., 2023).

Regarding the fourth question, which is about challenges students face in developing listening skills, 90% of the participants emphasized the need for structured training to effectively integrate mobile technology into their learning. Although there was limited internet connectivity and they were unfamiliar with Canvas LMS, the students showed a strong willingness to engage with MALL provided that proper guidance is given. This is consistent with the results of a study by Maulina et al. (2022), who emphasized the importance of selecting the right technology, and Ibrahim et al. (2017), who pointed out the relevance of mobile technology and collaboration in improving learning outcomes.

The main results from the interviews showed a strong need for integrating mobile devices into academic tasks. Students learned through Canvas and expressed a high level of satisfaction with the platform. They also suggested additional ways to continue their education through online platforms, in addition to the physical classrooms.

Conclusions

Generally, this study indicates that students acknowledged the crucial role of smartphones and mobile apps, particularly Telegram, as effective tools in supporting the development of listening skills through the MALL environment. Moreover, while students showed strong engagement in Mobile Assisted Language Learning, their limited

familiarity with LMS platforms like Canvas emphasizes a need for designing structured guidance. Therefore, it is important to improve students' digital literacy, provide targeted instruction on LMS use, and address persistent technical barriers such as connectivity issues to fully realize the potential of MALL in improving the development of listening skills.

Limitations

This study focused solely on listening skills due to the prevalent hallenges in effectively implementing lessons that meet the needs of 21st century and the need to incorporate of modern teaching methods and tools. Additionally, the study faced difficulties with the use of Canvas, primarily due to persistent internet connectivity issues in Bahir Dar, Ethiopia, and lack of consistent follow-up. Internet access had been unavailable for over a year, and when was restored, it remained limited to specific locations, such as the library and administrative offices. As a result, student engagement with the platform was severely estricted.

Data Availability

The data supporting this study's findings are available from the corresponding author upon reasonable request.

Conflict of Interest

The authors declare that they have no conflict of interest.

REFERENCES

Abu-Ayfah, Z. A. (2019) Telegram app in learning English: EFL students' perceptions. *English Language   Teaching*, *13,* 51-62.https://doi.org/10.5539/elt.v13n1p51

Adzharuddin, N. A., & Ling, L. H. (2013). Learning management system (LMS) among university students: does it work*? International Journal of E-Education, e-Business, e-Management and e-Learning,3*(3), 248-252. https://doi.org/10.7763/ijeeee.2013.v3.233

Alahmad, M. (2020). The effectiveness of Telegram app in learning English. Budapest *International Research and Critics in Linguistics and Education (BirLE) Journal, 3*(3), 1274–1280. https://doi.org/10.33258/birle.v3i3.1165

Ali, M. M., Mahmood, M. A., Anwar, M. N., Khan, L. A., & Hussain, A. (2019). Pakistani learners' perceptions regarding mobile assisted language learning in ESL Classroom. *International Journal of English Linguistics, 9*(4), 386-398. 10.5539/ijel.v9n4p386

Alzamil, J. (2021). Listening Skills: Important but difficult to learn. *Arab World English Journal, 12*(3), 366–374. https://doi.org/10.24093/awej/vol12no3.25

Alzieni, H. (2021). The Impact of Mobile-Assisted Language Learning (MALL) in Developing the Listening Skill: A Case of Students at Dubai Men's College, the United Arab Emirates. *Arab World English Journal, 2*, 84–95. https://dx.doi.org/10.24093/awej/MEC2.6

Aristovnik, A., Karampelas, K., Umek, L., & Ravšelj, D. (2023). Impact of the COVID-19 pandemic on online learning in higher education: A bibliometric analysis. *Frontiers in Education*, *8*, Article 1225834. https://doi.org/10.3389/feduc.2023.1225834

Brown, A. (2009). Students' and teachers' perceptions of effective foreign language teaching: A comparison of ideals. *The Modern Language Journal*, *93*(1), 46–60. https://doi.org/10.1111/j.1540-4781.2009.00827.x

Cárdenas, J. (2023). The use of multimedia resources to improve listening skills in young learners. *Sinapsis: La Revista Científica del ITSUP*, *1*(22), 7.

Chan, T.-W., Roschelle, J., Hsi, S., Kinshuk, Sharples, M., Brown, T., Patton, C., Cherniavsky, J., Pea, R., Norris, C., Soloway, E., Balacheff, N., Scardamalia, M., Dillenbourg, P., Looi, C.-K., Milrad, M., & Hoppe, U. (2006). One-to-One Technology-Enhanced Learning*: An Opportunity for Global Research*

Collaboration. *Research and Practice in Technology Enhanced Learning*, *01*(01), 3–29. https://doi.org/10.1142/s1793206806000032

Chun, D., Kern, R., & Smith, B. (2016). Technology in Language Use, Language Teaching, and Language Learning. *The Modern Language Journal, 100*(S1)*, 64–80. https://doi.org/10.1111/modl.12302

Creswell, J. W. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications. https://doi.org/10.1177/1937586719832223

Cruz, Y., Boughzala, I., & Assar, S. (2012). Opportunities and obstacles for mobile learning in a Business School. In 2012 International Conference on Communications and Information Technology (ICCIT). *IEEE*. 58-61. https://doi.org/10.1109/ICCITechnol.2012.6285824

Dakin-Neal, K. (2023). *Head, heart, and hands listening in coach practice:* The listening coach (1st ed.). Routledge. https://doi.org/10.4324/9781003296027

Elabnody, M. R. (2015). A survey of top 10 open source learning management systems. *International Journal of Scientific & Technology Research, 4*(8)*, 7–11. https://elabnody.net/

Gregg, K. R. (1986). The input hypothesis: Issues and implications by S. D. Krashen. *TESOL Quarterly*, *20*(1), 116–122. https://www.jstor.org/stable/3586393

Gharaibeh, M. K., & Gharaibeh, N. K. (2020). An empirical study on factors influencing the intention to use mobile learning. *Advances in Science, Technology and Engineering Systems Journal, 5*(5), *1261–1265. https://doi.org/10.25046/aj0505151

Ibrahim, M. K., & Ibrahim, Y. A. (2017). Communicative English language teaching in Egypt: Classroom practice and challenges. *Issues in Educational Research*, *27*(2), 285-313. https://doi.org/10.12987/9780300129076-002

Fishman, B., & Dede, C. (2016). Teaching and technology: New tools for new times. *Handbook of Research on Teaching, 1269–1334*. https://doi.org/10.3102/978-0-935302-48-6_21

Gamede, B. T., Ajani, O. A., & Afolabi, O. S. (2022). Exploring the adoption and usage of learning management system as alternative for curriculum delivery in South African higher education institutions during COVID-19 lockdown. *International Journal of Higher Education, 11*(1), 71–84. https://doi.org/10.5430/ijhe.v11n1p71

Golzar, J., Noor, S., & Tajik, O. (2022). Convenience sampling. *International Journal of Education & Language Studies, 1*(2), 72–77. DOI:10.22034/ijels.2022.162981

Harris, J., Mishra, P., & Koehler, M. (2009). Teachers' Technological Pedagogical Content Knowledge and Learning Activity Types. *Journal of Research on Technology in Education, 41(4), 393–416.* https://doi.org/10.1080/15391523.2009.10782536

Heift, T., & Chapelle, C. A. (2013). Language Learning Through Technology. In *The Routledge Handbook Of Second Language Acquisition* (Pp. 555-569). Routledge. Https://Www.Taylorfrancis.Com/

Horton, W., & Horton, K. (2003). E-learning tools and technologies: A consumer's guide for trainers, teachers, educators, and instructional designers 418–419 John Wiley & Sons.

Joseph, S. R., & Uther, M. (2009). Mobile devices for language learning: Multimedia approaches. *Research and Practice in Technology Enhanced Learning*, *4*(01), 7-32. https://doi.org/10.1142/s179320680900060x

Kavaliauskienė, G. (2008). Podcasting: A tool for improving listening skills. *Teaching English with technology*, *8*(4),11–12.

Khlaisang, J., & Sukavatee, P. (2023). Mobile-assisted language learning to support English language communication among higher education learners in Thailand. The Electronic Journal of e-Learning, *21*(3), 234–247. https://doi.org/10.34190/ejel.21.3.2974

Klopfer, E., Yoon, S., & Perry, J. (2005). Using palm technology in participatory simulations of complex systems: A new take on ubiquitous and accessible mobile computing. *Journal of Science Education and Technology*, *14*, 285-297. https://doi.org/10.1007/s10956-005-7194-0

Kukulska-Hulme, A. (2009). Will mobile learning change language learning? *ReCALL*, *21*(2), 157-165. https://doi.org/10.1017/s0958344009000202

Kukulska-Hulme, A., & Traxler, J. (2005). Mobile learning. *A handbook for educator and trainers*. DOI: 10.19173/irrodl.v8i2.437

Kukulska-Hulme, A., Traxler, J., & Pettit, J. (2007). Designed and user-generated activity in the mobile age. *Journal of Learning Design, 2*(1), 52-65. https://doi.org/10.5204/jld.v2i1.28

Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration

and interaction. *ReCALL*, *20*(3), 271-289.
https://doi.org/10.1017/S0958344008000335

Hashim, H., Md. Yunus, M., Amin Embi, M., & Mohamed Ozir, N. A. (2017). Mobile-assisted Language Learning (MALL) for ESL Learners: A Review of Affordances and Constraints. Sains Humanika, (9) 1–5. https://doi.org/10.11113/sh.v9n1-5.1175

Lai, C., & Gu, M. (2011). Self-regulated out-of-class language learning with technology. *Computer assisted Language Learning, 24*(4), 317-335. https://doi.org/10.1080/09588221.2011.568417

Latha, A. (2018). Importance of listening skills over other skills. *International Journal of Advance Engineering and Research Development, 5*(6), 123–127. https://doi.org/10.6007/IJARBSS/v9-i13/6244

Lei, X., Fathi, J., Noorbakhsh, S., & Rahimi, M. (2022). The impact of mobile-assisted language learning on English as a foreign language learners' vocabulary learning attitudes and self-regulatory capacity. *Frontiers in Psychology, 13*. https://doi.org/10.3389/fpsyg.2022.872922

Levert, G. (2006). *Designing for mobile learning:* Clark and Mayer's principles applied. Learn Solutions. ISBN: 978-623-147-283-0

Li, R. (2022). Effects of mobile-assisted language learning on EFL/ESL reading comprehension. *Educational Technology & Society*, *25*(3), 15-29. http://dx.doi.org/10.30191/ETS.202304_26(2).0003

Li, Y., & Hafner, C. A. (2022). Mobile-assisted vocabulary learning: Investigating receptive and productive vocabulary knowledge of Chinese EFL learners. ReCALL, *34*(1), 66–80. https://doi.org/10.1017/s0958344021000161

Looi, C., Seow, P., Zhang, B., So, H., Chen, W., & Wong, L. (2010). Leveraging mobile technology for sustainable seamless learning: a research agenda. *British Journal of Educational Technology, 41*(2), 154–169. https://doi.org/10.1111/j.1467-8535.2008.00912.x

Long, M. H. (1990). The least a second language acquisition theory needs to explain. *TESOL Quarterly, 24*(4), 649. https://doi.org/10.2307/3587113

Maulina, M., Ignacio, J. F., Bersabe, L. A. C., Serrano, A. J. D. J., Carpio, N. G., & Santos, E. G. D. (2022). Technology-based media used in teaching listening skills. *Exposure: Jurnal Pendidikan Bahasa Inggris*, *11*(1), 85–99. https://doi.org/10.26618/exposure.v11i1.6564

McBride, K. (2009). Podcasts and second language learning: Promoting listening comprehension and intercultural competence. In S.

Thouësny & L. Bradley (Eds.), Electronic discourse in language learning and language teaching (pp. 153–168). John Benjamins Publishing Company.

McGill, T. J., & Klobas, J. E. (2009). A task–technology fit view of learning management system impact. *Computers & Education, 52*(2), 496–508. https://doi.org/10.1016/j.compedu.2008.10.002

Mertens, D. M. (2004). Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods. SAGE Publications. https://doi.org/10.4135/9781412985666

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record, 108*(6), 1017–1054.https://journals.sagepub.com/

Mkhonta-Khoza, P. P., & Nxumalo, M. S. (2021). ICT in language learning: Teaching and learning of the mother tongue Siswati. *International Journal of Research in Humanities and Social Studies, 8* (6), 2021, 19-27. 2582-1601/www.ijahss.com

Mohamed Haggag, H. (2024). Using a Mobile-Based Learning Management System (M-LMS) for Developing English Technical Report Writing Skills of Computers and Artificial Intelligence Students. 39(1), 361-400. DOI:10.21608/MATHJ.2024.262776.141

Monalisa, M., & Ardi, H. (2013). Using ―Edmodo‖ educational social network in teaching English to high school students. *Journal of English Language Teaching*, *2*(1), 220-225.t http://ijleal.ump.edu.my/

Morley, J. (2001). Aural comprehension instruction: Principles and practices. *Teaching English as a Second or Foreign Language*, *3*, 69-85. https://www.oapub.org/edu/

Motteram, G. (2013). Developing and extending our understanding of language learning and technology. www.britishcouncil.org

Mpungose, C. B. (2020). Emergent Transition from Face-To-Face To Online Learning In A South African University In The Context Of The Coronavirus Pandemic. *Humanities and Social Sciences Communications*, *7*(1), 1-9. Doi: 10.1057/S41599-020-00603-X

Ningsih, A. G., Indriyani, V., & Kurniawati, E. (2024). Views of students and lecturers on module development in learning listening skills in higher education. *JMKSP (Jurnal Manajemen, Kepemimpinan, dan Supervisi Pendidikan)*, *9*(1), DOI: https://doi.org/10.31851/jmksp.v9i1.13696

Nosratinia, M., Ghavidel, S., & Zaker, A. (2015). Teaching metacognitive strategies through Anderson's model: Does it affect EFL learners' listening comprehension? *Theory and Practice in Language Studies*, *5*(6), 1233. http://dx.doi.org/10.17507/tpls.0506.01

Nxumalo, M. S., Mkhonta-Khoza, P. P., & Oloyede, O. I. (2023). EXPLORING ESWATINI GENERAL CERTIFICATE OF SECONDARY EDUCATION SISWATI TEACHERS'EXPERIENCES ON ONLINE TEACHING. *UNESWA Journal of Education (UJOE)*, *6*(1). http://ojs.uneswa.ac.sz/

Otto, S. E. K. (2017). *From Past to Present*. The Handbook of Technology and Second Language Teaching and Learning, 10–25. Portico. https://doi.org/10.1002/9781118914069.ch2

Pachler, N., Bachmair, B., & Cook, J. (2009). Mobile devices as resources for learning: adoption trends, characteristics, constraints and challenges. *Mobile Learning*, 73–93. https://doi.org/10.1007/978-1-4419-0585-7_3

Pappas, I. O., Giannakos, M. N., & Sampson, D. G. (2019). Fuzzy set analysis as a means to understand users of 21st-century learning systems: The case of mobile learning and reflections on learning analytics research. *Computers in Human Behavior, 92*, 646–659. https://doi.org/10.1016/j.chb.2017.10.010

Perry, R. W., & Lindell, M. K. (2003). Preparedness for emergency response: guidelines for the emergency planning process. *Disasters*, *27*(4), 336-350.

Peterson, P. W. (2001). Skills and strategies for proficient listening. *Teaching English as a second or foreign language. Boston: Heinle & Heinle*.

Pimmer, C., Mateescu, M., & Gröhbiel, U. (2016). Mobile and ubiquitous learning in higher education settings. A systematic review of empirical studies. *Computers in Human Behavior*, *63*, 490–501. https://doi.org/10.1016/j.chb.2016.05.057

Pinkwart, N., Hoppe, H. U., Milrad, M., & Perez, J. (2003). Educational scenarios for cooperative use of Personal Digital Assistants. *Journal of Computer-Assisted Learning*, *19*(3), 383-391.

Postovsky, V. A. (1975). On paradoxes in foreign language teaching. *The Modern Language Journal*, *59*(1/2), 18-21.Purdy, M., & Borisoff, D. (Eds.). (1997). Listening in everyday life: A personal and professional approach. University Press of America.

Pyrczak, F. (2021). *Completing Your Thesis or Dissertation: Professors Share Their Techniques & Strategies.* https://doi.org/10.4324/9781315266718

Ualtrics. (2021). Convenience sampling method: How and when to use it? https://www.qualtrics.com/en-gb/experience-management/research/convenience-sampling/

Rahman, A., Atmowardoyo, H., & Salija, K. (2018*). Podcast effects on EFL learners' listening comprehension (S1 thesis).* Universitas Negeri Makassar. http://eprints.unm.ac.id/

Renukadevi, D. (2014). The role of listening in language acquisition; the challenges & strategies in teaching listening. *International Journal of Education and Information Studies*, *4*(1), 59-63.

Richards, J. C. (2015). The changing face of language learning: Learning beyond the classroom. *RELC Journal, 46*(1), 5-22. https://doi.org/10.1177/0033688214568288

Richards, J. C., & Rodgers, T. S. (2014). *Approaches and methods in language teaching*. Cambridge University Press.

Richards, J. C. (2008). *Teaching listening and speaking*: *From theory to practice*. Cambridge University Press.

Rodinadze, S., & Zarbazoia, K. (2012). The advantages of information technology in teaching the English language. *Frontiers of Language and Teaching*, *3*(5), 271-275. https://www.scribd.com/

Romero-Rodriguez, J.-M., Aznar-Diaz, I., Hinojo-Lucena, F.-J., & Gomez-Garcia, G. (2020). Mobile Learning in Higher Education: Structural Equation Model for Good Teaching Practices. IEEE Access, 8, 91761–91769. https://doi.org/10.1109/ACCESS.2020.2994967

Rost, M. (2013). Teaching and Researching: Listening. https://doi.org/10.4324/9781315833705

Rost, M., & Wilson, J. J. (2013). Active listening. *Taylor & Francis*. https://doi.org/10.4324/9781315832920 Rost, M. (2002). Listening tasks and language acquisition. *In Memorias del Congreso JALT 2002 (pp. 18-28).*

Rost, M., & Candlin, C. N. (2014). Listening in Language Learning. https://doi.org/10.4324/9781315846699

Salaberry, M. R. (2001). The use of technology for second language learning and teaching: A retrospective. *The Modern Language Journal, 85*(1), 39–56. *Portico.* https://doi.org/10.1111/0026-7902.00096

Selwyn, N. (2018). *Technology as a Focus of Education Policy.* The Wiley Handbook of Educational Policy, 457–477. Portico. https://doi.org/10.1002/9781119218456.ch20

Shintani, N., & Ellis, R. (2014). Tracking _learning behaviors' in the incidental acquisition of two-dimensional adjectives by Japanese beginner learners of L2 English. *Language Teaching Research*, *18*(4), 521-542. https://doi.org/10.1177/1362168813519885

Sharples, M. (2000). The design of personal mobile technologies for lifelong learning. *Computers & Education,* (34), 177–19*3*. https://doi.org/10.1016/s0360-1315(99)00044-5

Siemens, G. (2005). Connectivism: Learning as network-creation. *ASTD Learning News, (10).* http://www.elearnspace.org/

Standen, P. J., Brown, D. J., & Cromby, J. J. (2001). The effective use of virtual environments in the education and rehabilitation of students with intellectual disabilities. *British Journal of Educational Technology, 32*(3), 289-299. https://doi.org/10.1111/1467-8535.00199

Stabile, C., & Ershler, J. (2015). Constructivism reconsidered in the age of social media. Jossey-Bass.

Traxler, J., & Kukulska-Hulme, A. (2007). *Mobile Learning. Routledge.* https://doi.org/10.4324/9780203003428

Tyagi, B. (2013). Listening: An important skill and its various aspects. *An International Journal in English*, *12*(1), 1–8*.* www.the-criterion.com/

West, M., & Vosloo, S. (2013). UNESCO policy guidelines for mobile learning. Edited by Rebecca Kraut. Paris: UNESCO, 41(1). https://scholar.google.fr/

Veluvali, P., & Surisetti, J. (2021). Learning management system for greater learner engagement in higher education—A review. *Higher Education for the Future, 9*(1), 107–121. https://doi.org/10.1177/23476311211049855

Webber, J. (2019). The implementation of Chromebooks and the learning management system Canvas in K-3 classrooms as part of a district-wide 1:1 program (Master's thesis). Texas A&M University-Commerce. https://www.proquest.com/

Woldetsadik, G., Bachore, M., Alemu, T., & Gezahegn, T. H. (2022). The Effect of the Mobile-Based Lesson Approach on the Attitude and Performance of EFL Teacher Trainees' Aural Skills. *The*

International Journal of Technologies in Learning, 30(1), 29–50. https://doi.org/10.18848/2327-0144/cgp/v30i01/29-50

Wong, L.-H., Milrad, M., & Specht, M. (Eds.). (2015). *Seamless Learning in the Age of Mobile Connectivity*. Springer Singapore. https://doi.org/10.1007/978-981-287-113-8

Yelland, N. (2006). *Shift to the future: Rethinking learning with new technologies in education.* https://doi.org/10.4324/9780203961568

Zanjani, N. (2017). The important elements of LMS design that affect user engagement with e-learning tools within LMSs in the higher education sector. *Australasian Journal of Educational Technology, 33*(1).   https://ajet.org.au/index.php/