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**PERCEPTIONS AND ATTITUDES TOWARD MOBILE-ASSISTED LANGUAGE  
LEARNING IN SECONDARY EDUCATION: A CASE STUDY**

***Abstract***

*This study investigates the usage patterns, attitudes, and perceived effectiveness of mobile devices for learning English as a Foreign Language (EFL) among secondary school students in a traditional religious educational context in Bosnia and Herzegovina. Data were collected through a structured questionnaire administered to 323 students at Elči Ibrahim-pašina Madrasa in Travnik, measuring efficiency, engagement, motivation, and accessibility. The data were analyzed using descriptive statistics, independent samples t-tests, and Spearman's rank correlation. The findings indicate predominantly positive attitudes toward Mobile-Assisted Language Learning (MALL), with high levels of autonomous learning both within and beyond the classroom. Notably, general mobile use for entertainment showed no significant negative relationship with perceived educational value. The results suggest that students perceive mobile learning as a motivating and personalized supplement to traditional instruction. The study highlights strong readiness for MALL integration, while emphasizing the need for improved institutional infrastructure, particularly reliable internet access.*

**Keywords:** *Mobile-Assisted Language Learning (MALL), EFL, Learner Autonomy, Student Perceptions, Secondary Education, Madrasa*

## **Introduction**

The continuous and rapid evolution of technology has profoundly impacted numerous sectors of society, with education being a primary beneficiary of these transformations. The integration of technological tools into pedagogical practices is no longer an optional supplement but has become a significant locus of pedagogical innovation and a fundamental component of contemporary educational discourse (Alam & Mohanty, 2023; Bureković et al., 2023; Zou et al., 2025). Within this broader technological revolution, Mobile-Assisted Language Learning (MALL) has emerged as a particularly transformative component of modern language acquisition, fundamentally reshaping how students interact with and internalize new languages. The genesis of mobile technology in education can be traced to the 1960s (Crompton, 2013), yet its deep integration into the daily lives of educators and students is a more recent phenomenon, accelerating dramatically over the past decade (Qureshi et al., 2020). Early implementations in the 1980s, such as the pioneering work of Twarog and Pereszlenyi, utilized basic telephonic tools to provide remote feedback to learners, representing the first tentative steps toward what would eventually become a comprehensive pedagogical approach (Czerska-Andrzejewska, 2016). Today, the ubiquity of high-capability smartphones has extended their function into virtually all domains of human activity, with these devices arguably representing the "next generation" of e-learning infrastructure. This technological shift carries particular significance in contexts where traditional educational frameworks intersect with the demands of global communication. In the Bosnian context, this intersection is especially relevant as traditional institutions like the Elči Ibrahim-pašina Madrasa navigate the complex relationship between religious education and the development of global communicative competencies in English. Despite the growing body of research on MALL in various contexts, there remains a notable gap in understanding how students in traditional religious educational settings perceive and utilize mobile technology for language learning. Most existing studies have focused on secular educational contexts or higher education institutions, leaving secondary-level religious schools largely unexplored (Šukalić et al., 2025). This gap is particularly significant given that these institutions serve substantial student populations who must balance traditional educational values with the practical demands of English language proficiency in an increasingly globalized world. The primary objective of this study is therefore twofold: first, to provide a detailed empirical analysis of MALL perceptions and usage patterns among Madrasa students; and second, to evaluate the potential for effective implementation of MALL within the

current secondary education curriculum of such institutions. By synthesizing empirical data collected from 323 students with existing theoretical frameworks, this investigation explores how mobile devices facilitate ubiquitous and asynchronous access to learning materials. Furthermore, this study aims to identify specific challenges students face in utilizing mobile technology for language learning and to generate evidence-based recommendations for institutional policy and pedagogical practice.

### **Theoretical Framework and Literature Review**

This study is grounded in a theoretical framework that integrates research on Mobile-Assisted Language Learning (MALL), learner autonomy, and technology-enhanced language education. MALL is defined as a subarea of mobile learning focused on language acquisition through mobile technologies (Czerska-Andrzejewska, 2016). Unlike traditional Computer-Assisted Language Learning (CALL), which relies on fixed, desktop-based environments, MALL is characterized by mobility and connectivity. Learners engage with language across diverse settings and participate in networked interactions, enabling microlearning and authentic communication. A key distinction in the literature excludes laptops from MALL due to their limited immediacy compared to smartphones and tablets (Czerska-Andrzejewska, 2016). This distinction highlights MALL's alignment with informal and incidental learning, as it supports spontaneous and opportunistic engagement rather than scheduled instruction. These affordances contribute to a shift from teacher-centered to learner-centered education (Kukulska-Hulme, 2010), fostering learner autonomy, defined as the ability to take control over one's learning process (Little, 2007). However, as Stockwell and Reinders (2019) emphasize, autonomy depends not only on access to technology but also on the development of self-regulatory and metacognitive skills. Insights from higher education further contextualize MALL practices. Research at the University of Zenica (Bujak & Bureković, 2025) shows that students frequently use mobile devices for independent learning, particularly during otherwise unproductive time. A developmental pattern emerges: early-stage learners rely on tools such as Google Translate for immediate comprehension, while advanced students engage with authentic materials (e.g., podcasts, YouTube) and institutional platforms like Google Classroom and Moodle. This progression reflects a shift from convenience-based use toward more pedagogically informed practices, aligning with broader theories of language development (Teymouri, 2024).

Empirical studies confirm the effectiveness of MALL across language skills. Mobile learning increases engagement and improves reading outcomes (Besa & Pañares, 2025), while supporting distributed practice. Vocabulary acquisition benefits from mobile delivery methods such as WhatsApp-based instruction (Boufahja et al., 2025) and spaced repetition tools (Teymouri, 2024). In productive skills, mobile applications enhance fluency and confidence through iterative practice and self-monitoring (Rajendran & Yunus, 2021). Additionally, MALL supports grammar learning by providing immediate feedback, which improves both error detection and accuracy (Li & Hegelheimer, 2013). Overall, MALL is most effective when its technological affordances are aligned with established pedagogical principles, including feedback immediacy, distributed practice, and authentic language use. Rather than replacing traditional instruction, it functions as a complementary component within flexible, learner-centered educational frameworks.

### **Research Methodology**

This section provides a detailed account of the research design, participant characteristics, data collection procedures, and analytical methods employed in this study. Transparency in methodological reporting is essential for evaluating the validity and reliability of research findings and for enabling replication in other contexts. The present study was designed to address three central research questions that emerged from gaps identified in the existing MALL literature, particularly regarding secondary education in traditional religious institutions:

**RQ1:** To what extent do secondary school students in the Madrasa system incorporate mobile phones into their English language learning, both in formal classroom contexts and in independent, self-directed study?

**RQ2:** What specific tools, applications, and mobile learning strategies dominate students' practices, and how are these choices shaped by perceived usability, pedagogical value, and contextual factors?

**RQ3:** To what extent are key attitudinal dimensions of MALL (i.e. efficiency, engagement, motivation, accessibility) interrelated among high-school students?

### ***Research Design and Approach***

This study employed a quantitative research design utilizing survey methodology to collect data on student perceptions, attitudes, and self-reported usage patterns. The quantitative approach was

selected for several reasons. First, it allows for the collection of data from a relatively large sample, providing statistical power to detect patterns and relationships. Second, quantitative methods enable systematic comparison across demographic groups (e.g., grade levels, gender) and the measurement of relationships between variables. Third, the use of standardized instruments facilitates comparison with findings from other contexts and studies. While qualitative methods such as interviews or focus groups might have provided richer, more nuanced insights into individual students' experiences with MALL, the quantitative approach was deemed more appropriate for the exploratory goals of this initial investigation. Future research might productively combine quantitative and qualitative methods in a mixed-methods design to capture both breadth and depth of understanding.

### ***Participants and Sampling***

The study population consisted of students enrolled at the Elči Ibrahim-pašina Madrasa in Travnik, Bosnia and Herzegovina, during the 2024-2025 academic year. The Madrasa serves students in grades 1 through 4, with a curriculum that integrates traditional Islamic studies with contemporary academic subjects, including English as a foreign language. A census sampling approach was employed, with all students across all four grade levels invited to participate in the study. This approach was chosen to maximize sample size and ensure representation across the full range of grade levels. Of the approximately 350 students enrolled at the institution, 323 provided complete and valid responses to the survey instrument, yielding a response rate of approximately 92%. This high response rate enhances confidence in the representativeness of the sample and reduces concerns about non-response bias. The demographic composition of the sample reflected the broader student population of the institution. Female students constituted 64% of respondents (N = 207), while male students comprised 36% (N = 116). The distribution across grade levels was as follows: 1st grade (N = 58), 2nd grade (N = 92), 3rd grade (N = 102), and 4th grade (N = 71). All participants were native speakers of Bosnian studying English as a foreign language, with English instruction beginning in elementary school and continuing throughout their secondary education at the Madrasa. The study received ethical approval from the institutional administration, and informed consent was obtained from all participants (or their guardians for students under 18 years of age) prior to data collection.

### ***Data Collection Procedure***

The questionnaire was administered online using Google Forms, a platform familiar to students through their regular coursework. The online format was chosen for several practical reasons: it facilitated efficient data collection from a large sample, reduced data entry errors by eliminating the need for manual transcription, and allowed students to complete the survey at their own pace in a comfortable environment. Data collection took place over a two-week period in March 2025. Students were provided with a link to the questionnaire and asked to complete it during a designated class period, though they were also given the option to complete it at home if they preferred. The questionnaire was designed to take approximately 15-20 minutes to complete. Participation was voluntary, and students were assured of the confidentiality of their responses. No identifying information beyond basic demographics was collected, and students were informed that their responses would not affect their grades or standing at the institution.

### **Results and discussion**

This section presents the empirical findings from the analysis of survey data collected from the Madrasa student sample. The results are organized thematically to address the research questions outlined in Section 3, beginning with general usage profiles before examining specific patterns of in-class and out-of-class MALL usage, application preferences, and attitudinal constructs. A foundational finding of this study is the near-universal adoption of mobile phones for educational purposes across all grade levels. When asked directly whether they use their mobile devices for learning English, an overwhelming majority of students responded affirmatively. As illustrated in Figure 1., more than 95% of students in each grade level confirmed using their devices for English learning purposes, with only a marginal minority in the 1st and 2nd grades (fewer than 5%) indicating non-usage. This finding establishes that mobile devices have already been integrated into students' learning practices, regardless of whether this integration has been formally sanctioned or systematically supported by the institution.

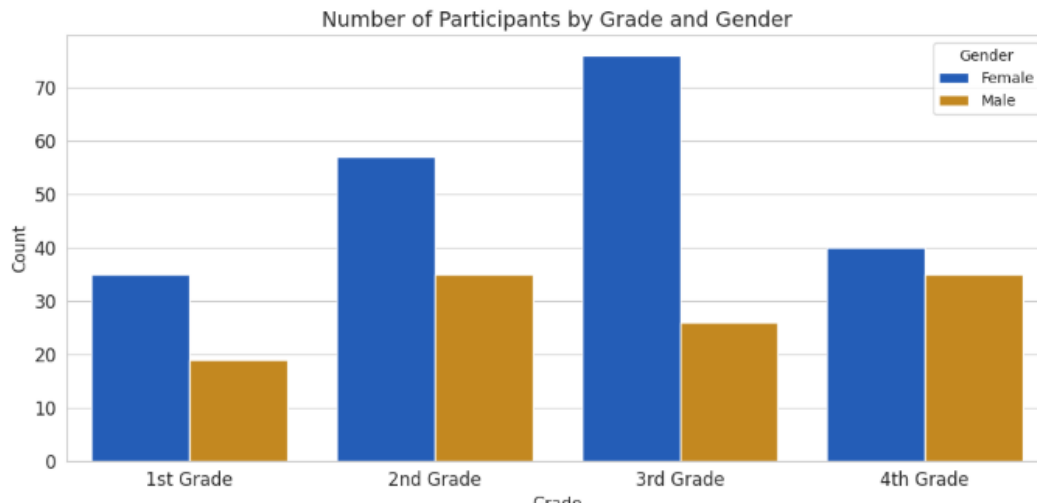


Figure 1.: Mobile Usage for English Learning by Grade

When examining general mobile usage patterns (beyond specifically educational applications), students reported spending an average of 4.2 hours per day on their mobile devices. This figure is consistent with broader research on adolescent mobile usage in developed countries and suggests that mobile devices occupy a central place in students’ daily lives. However, it is important to note that this general usage encompasses a wide range of activities, including social communication, entertainment, information seeking, and education, making it difficult to draw direct conclusions about the relationship between total screen time and educational engagement.

One of the most striking patterns to emerge from the data is a clear dichotomy in how mobile phones are utilized based on context, specifically, whether usage occurs within the formal classroom setting or during independent study time outside of class. This distinction has important implications for understanding the role of mobile devices in students’ overall language learning ecology. In the classroom context, mobile devices function primarily as auxiliary support tools rather than as primary learning platforms. The most frequent in-class activities, as shown in Figure 2., include accessing digital course materials distributed by teachers, looking up unfamiliar words or grammar rules, and performing what might be termed “lexical bridging” via Google Translate—using translation tools to overcome immediate comprehension barriers when encountering unknown vocabulary in texts or exercises.

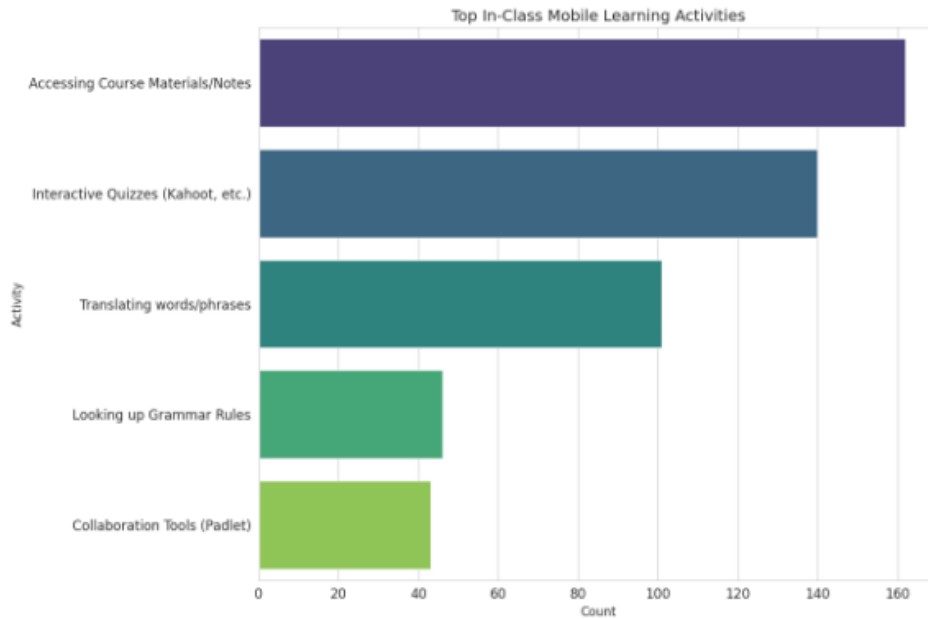


Figure 2: Frequency of In-Class Mobile Learning Activities

The data reveal that teacher-directed activities involving mobile devices are relatively common, with gamified assessment tools like Kahoot! receiving particularly high frequency ratings ( $M = 4.5$  on a 5-point scale). Kahoot! allows teachers to create interactive quizzes that students answer using their mobile devices, transforming traditional comprehension checks into engaging, game-like competitions. Students reported that these activities are both enjoyable and educationally valuable, suggesting that when mobile technology is integrated into classroom instruction in pedagogically sound ways, it enhances rather than detracts from the learning experience. Google Translate emerged as another heavily used tool in the classroom context ( $M = 4.2$ ), though its usage pattern differs from Kahoot! in that it is primarily student-initiated rather than teacher-directed. Students reported using translation tools when they encounter unknown words in reading texts or need to quickly understand teacher instructions or explanations. While some educators express concern about over-reliance on translation tools, arguing that they may inhibit the development of inferencing skills and contextual vocabulary learning, the data suggest that students view these tools pragmatically as efficiency aids that allow them to maintain comprehension and continue engaging with learning tasks rather than becoming stuck on individual unknown words. Interestingly, activities involving authentic English-language content consumption, such as watching videos or listening to podcasts, received relatively low frequency

ratings for in-class usage ( $M = 1.5$ ). This likely reflects the structured nature of classroom instruction, where teachers follow predetermined curricula and lesson plans that may not always incorporate extensive multimedia content. Additionally, practical constraints such as limited class time, concerns about classroom management, and potential variability in students' internet connectivity may discourage teachers from regularly incorporating student-directed media consumption during class time. The pattern of mobile device usage shifts dramatically when we examine students' independent learning activities outside the classroom. As shown in Figure 3., out-of-class usage is characterized by significantly greater engagement with authentic English-language content and self-directed learning tools.

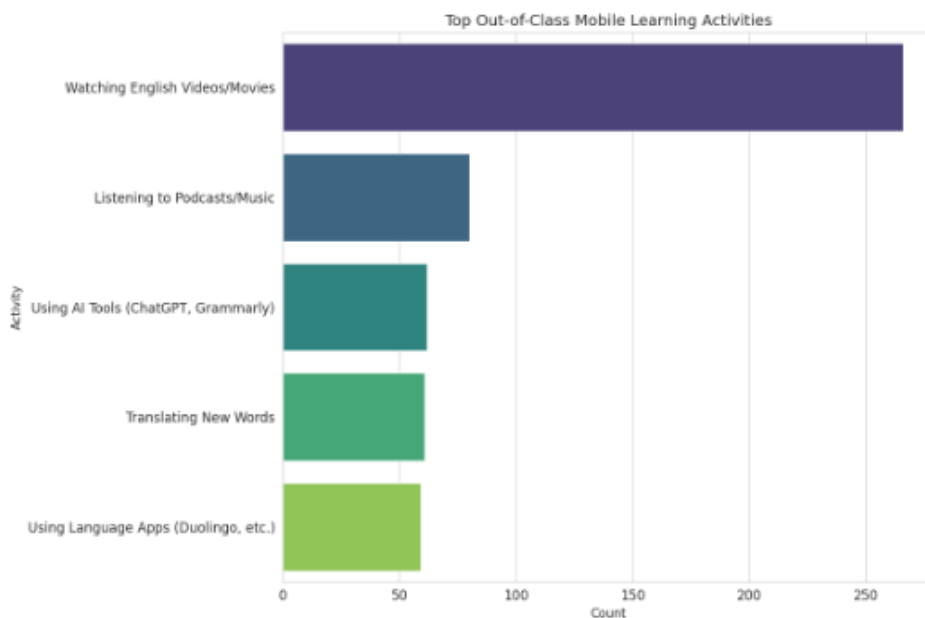


Figure 3: Frequency of Out-of-Class Mobile Learning Activities

Students predominantly use their phones outside of class to access English-language media, with watching movies or TV series with English subtitles (or in English with Bosnian subtitles) emerging as the most frequent activity ( $M = 4.6$ ). This finding aligns with research on informal language learning, which suggests that exposure to authentic language use in meaningful contexts contributes significantly to vocabulary development, listening comprehension, and cultural understanding. The popularity of media consumption for language learning likely reflects both its educational value and its entertainment value—students can simultaneously enjoy engaging content and improve their English skills, making this a highly motivating form of language

practice. Listening to English-language music and podcasts also received high frequency ratings for out-of-class usage ( $M = 4.1$ ), further emphasizing the importance of authentic audio input in students' self-directed learning. Podcasts, in particular, offer a valuable resource for language learners because they typically feature natural, conversational language use and cover a wide range of topics that can match students' individual interests. Perhaps most noteworthy is the emergence of AI-powered tools, particularly ChatGPT, as a significant category for out-of-class learning support ( $M = 3.9$ ). More than 40% of students reported regularly using ChatGPT for assistance with writing assignments, grammar questions, and language practice. Students described using the AI tool for various purposes: generating example sentences to understand grammar structures, receiving feedback on their writing, practicing conversational English through text-based dialogue, and even getting explanations of complex concepts in simpler language. This finding reflects the rapid integration of generative AI into students' learning practices and suggests that educational institutions need to develop policies and pedagogical strategies that address this emerging reality. In contrast to in-class patterns, gamified learning tools like Kahoot! showed dramatically lower frequency ratings for out-of-class usage ( $M = 1.2$ ). This makes intuitive sense, as these tools are primarily designed for synchronous, group-based activities that work best in classroom settings. Similarly, while Google Translate remains a commonly used tool outside of class ( $M = 3.5$ ), its frequency is somewhat lower than in-class usage, possibly because students have more time to use other strategies (like looking up words in dictionaries or inferring meaning from context) when working independently.

### *Comparative Analysis of Contextual Patterns*

Table 1 provides a direct comparison of in-class versus out-of-class frequency for several common mobile learning activities, highlighting the contextual differences in usage patterns.

<b>Activity Category</b>	<b>In-Class Frequency (Mean)</b>	<b>Out-of-Class Frequency (Mean)</b>
Lexical Lookup (Google Translate)	4.2	3.5
Gamified Quizzes (Kahoot!)	4.5	1.2

MediaConsumption (Movies/Podcasts)	1.5	4.6
AI Support (ChatGPT)	1.8	3.9

Table 1: Comparison of in- and out-of class frequency among common apps

The stark contrasts visible in this table underscore an important point: mobile learning is not a monolithic phenomenon but rather takes different forms depending on the social and pedagogical context. In-class usage is characterized by tool-based, teacher-facilitated activities that support immediate classroom tasks, while out-of-class usage emphasizes authentic content consumption and self-directed exploration. Both patterns have educational value, but they serve different functions in students’ overall language development. This finding suggests that effective MALL integration requires attention to how mobile learning can be optimized for different contexts rather than assuming that a single approach will work equally well in all settings.

***Application Preferences and Attitudes***

Understanding which specific applications and tools students prefer provides valuable insights for educators and institutions seeking to support effective MALL implementation. The survey asked students to identify which mobile applications they use most frequently for English learning, with results shown in Figure 4.

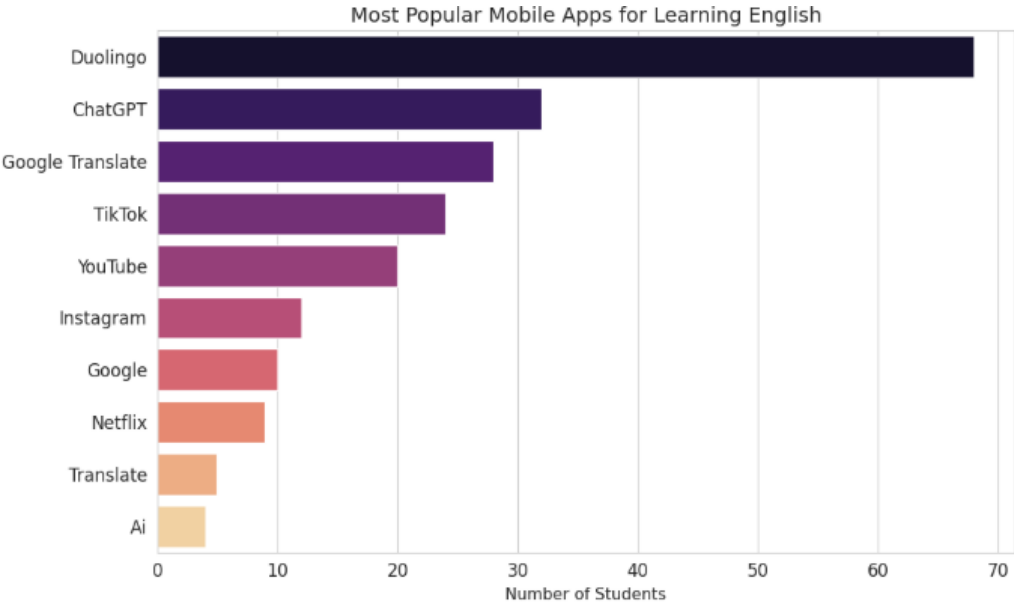


Figure 4: Most Popular Mobile Apps for Learning English

Duolingo emerged as the dominant dedicated language learning application, with approximately 68% of students reporting regular use. Duolingo's popularity likely stems from several factors: its gamified approach makes learning feel like playing a game rather than studying; its adaptive algorithm adjusts difficulty based on user performance; its bite-sized lessons fit well into brief free moments throughout the day; and its free access model removes financial barriers to usage. The app's emphasis on daily practice streaks also creates a motivational structure that encourages consistent engagement over time. Google Translate was the second most commonly cited tool (61%), confirming its central role in students' mobile learning practices. While educators sometimes view translation tools with skepticism, students clearly find them valuable for overcoming immediate comprehension barriers. The key pedagogical question is not whether students should use translation tools—the data make clear that they will—but rather how to help students use these tools strategically and avoid over-dependence. ChatGPT, despite being a relatively new tool (publicly released only in late 2022), has already achieved remarkable penetration, with 42% of students reporting regular use for English learning. This rapid adoption reflects both students' eagerness to experiment with new technologies and the genuine utility of conversational AI for language practice. Students reported using ChatGPT for a variety of purposes: explaining grammar rules, providing example sentences, offering writing feedback, and even engaging in text-based conversational practice. The tool's ability to provide immediate, personalized responses makes it particularly valuable for independent learners who may not have ready access to native speakers or teachers for individual assistance. YouTube was cited by 58% of students as an important learning resource, reflecting its vast repository of English-language content spanning educational videos, entertainment, music, and authentic cultural content. The platform's recommendation algorithm also helps students discover new content aligned with their interests, potentially exposing them to vocabulary and contexts they might not encounter in traditional textbook materials. Traditional language learning platforms like Memrise, Quizlet, and Babbel showed more modest adoption rates (ranging from 15-25%), suggesting that while these tools have their adherents, they have not achieved the same level of widespread use as more general-purpose tools like Google Translate or entertainment-oriented platforms like YouTube.

This pattern may reflect students’ preference for tools that integrate learning with entertainment or immediate utility rather than applications that feel explicitly like “studying.”

***Attitudinal Constructs and Perceptions***

Beyond usage patterns and application preferences, understanding students’ attitudes toward MALL is crucial for predicting the likelihood of successful integration and identifying potential barriers to adoption. The survey measured four key attitudinal constructs—Accessibility, Efficiency, Engagement, and Motivation—using multiple Likert-scale items. Figure 5. presents the distribution of responses across these constructs using box plots, which show the median, interquartile range, and overall distribution of scores.

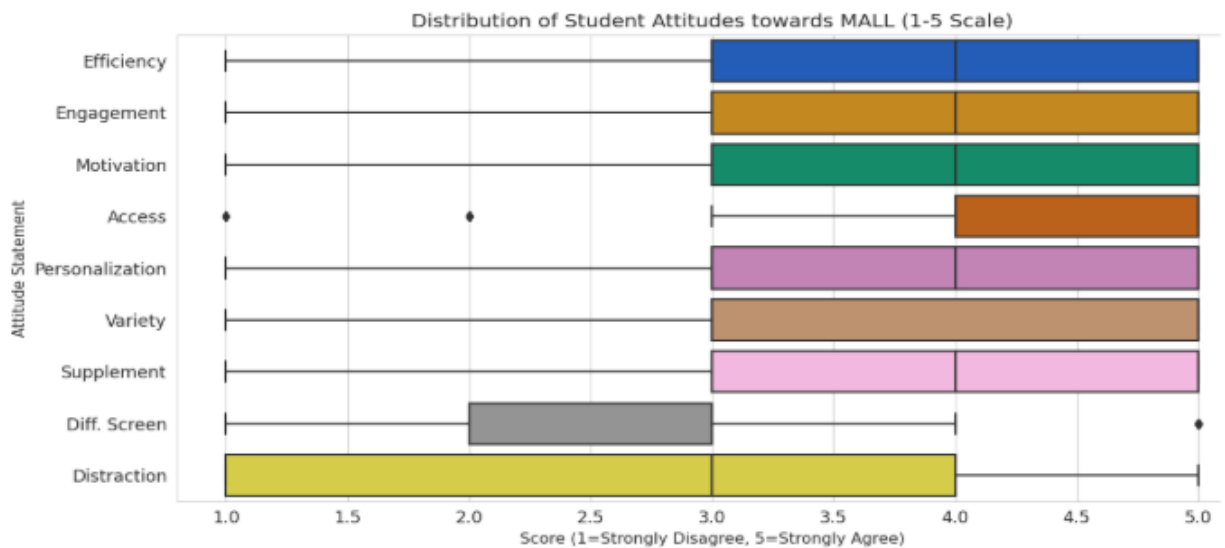


Figure 5: Distribution of Student Attitudes (Boxplot)

The results reveal overwhelmingly positive attitudes across all four constructs. Accessibility received the highest median score (Mdn = 4.8), with minimal variability, indicating near-universal agreement that mobile devices make learning materials more accessible. This finding aligns with MALL’s core value proposition: by carrying a powerful learning tool in their pockets, students can access educational resources anytime and anywhere, removing many of the temporal and spatial constraints of traditional learning. Efficiency also received very high ratings (Mdn = 4.6), suggesting that students perceive mobile learning as an effective use of their time and effort. Qualitative comments from the open-ended survey questions revealed that students particularly

value the ability to “make use of otherwise wasted time” by studying during commutes, waiting periods, or brief breaks throughout the day. This perception of efficiency is important because it suggests that students view mobile learning not as an additional burden but as a convenient way to integrate language practice into their existing daily routines. Engagement and Motivation constructs showed slightly more variability but still maintained high median scores (Mdn = 4.3 and 4.4, respectively). Students reported that mobile learning activities are more interesting and enjoyable than traditional textbook exercises, and that having access to mobile learning tools increases their overall motivation to study English. The somewhat greater variability in these constructs compared to Accessibility and Efficiency suggests that while most students find mobile learning engaging and motivating, individual differences in learning preferences and technology comfort levels create more variation in these affective responses.

***Relationships Among Attitudinal Construct***

To understand how different attitudinal dimensions relate to one another, a correlation matrix was computed using Spearman’s rank correlation coefficient. Figure 6. displays these relationships visually, with darker colors indicating stronger correlations.

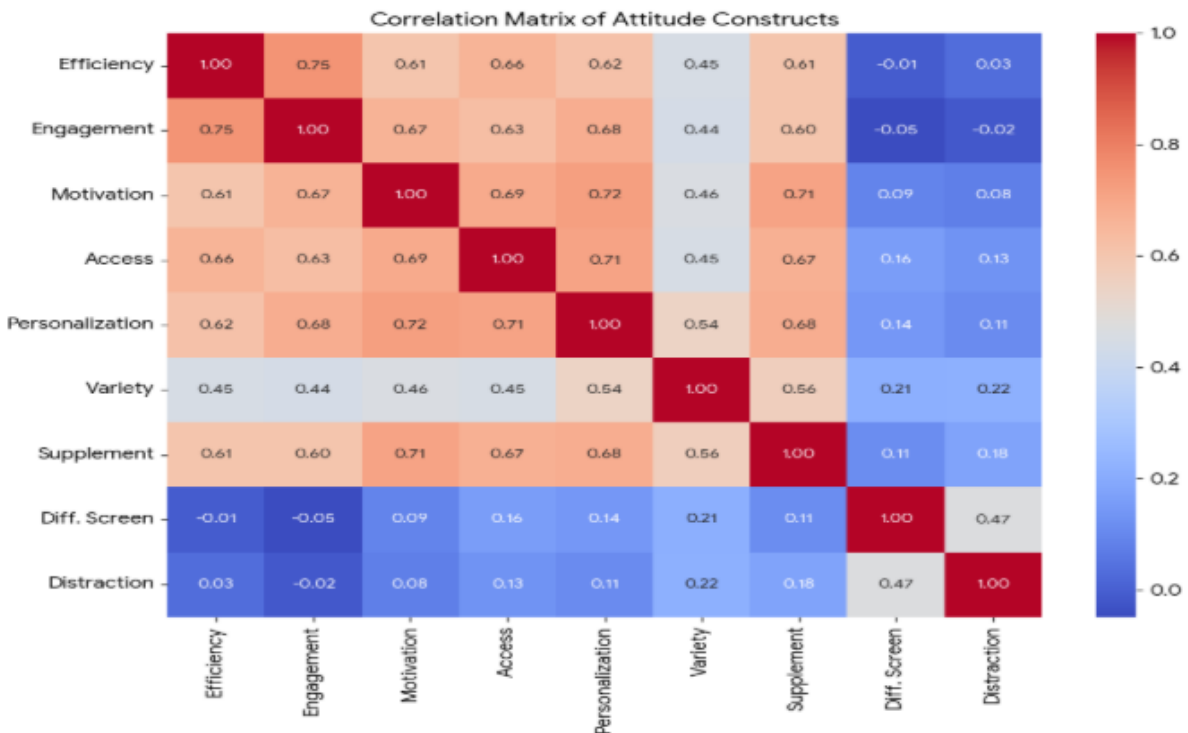


Figure 6: Correlation Matrix of Attitude Constructs

The correlation matrix reveals a strong “positivity cluster,” indicating that these attitudinal constructs are closely interrelated. Students who perceive mobile learning as efficient almost invariably also find it engaging ( $\rho = 0.75, p < 0.001$ ) and motivating ( $\rho = 0.61, p < 0.001$ ). This pattern suggests that positive attitudes toward MALL tend to be holistic rather than compartmentalized (i.e. students who appreciate one aspect of mobile learning generally appreciate other aspects as well). The strong correlation between Efficiency and Engagement is particularly noteworthy from a pedagogical perspective. It suggests that when mobile learning activities are designed to be genuinely effective for language development, they also tend to be more engaging for students. This finding challenges a potential false dichotomy between “rigorous but boring” and “fun but ineffective” learning activities, suggesting instead that well-designed mobile learning can be both pedagogically sound and intrinsically motivating. The correlation between Accessibility and other constructs, while positive, was somewhat weaker ( $\rho = 0.42-0.48$ ). This may indicate that accessibility is a necessary but not sufficient condition for positive MALL experiences—students universally appreciate the convenience of mobile access, but this alone does not guarantee that they will find mobile learning efficient, engaging, or motivating. The quality of the learning activities and resources, not just their accessibility, matters for overall satisfaction.

The findings provide strong empirical support for the primary hypothesis, demonstrating that students use mobile devices for language learning in both formal and informal contexts. Rather than representing a future trend, MALL is already an established component of the learning ecosystem among Bosnian students. The data also reveal a clear developmental trajectory. Madrasa students primarily rely on mobile devices for lexical support and content consumption, while more advanced learners, such as university students, tend to adopt more autonomous and academically oriented uses of mobile technology. This progression suggests a shift from using mobile devices as a safety net toward their role as an academic gateway, reflecting increased linguistic proficiency and metacognitive awareness. Students can be characterized as digital pragmatists, selecting tools based on immediate functional value rather than technological novelty. This is evident in the strategic use of tools such as Google Translate for comprehension and ChatGPT for writing support (Khampusaen, 2025). However, this pragmatic engagement coexists with what may be termed a “distraction paradox.” Although students perceive mobile learning as effective, a large proportion report distraction as a major limitation, a finding consistent with

previous research highlighting the disruptive role of social media and notifications (McCoy, 2020). While students appear confident in managing this distraction, experimental evidence suggests that multitasking may still negatively affect long-term retention, thus reducing exam performance (Glass & Kang, 2018). The findings further highlight the importance of institutional support. A substantial proportion of students identified inadequate internet connectivity as a key barrier, indicating that effective MALL implementation depends not only on access to devices but also on reliable digital infrastructure (Nikolopoulou et al., 2023). Without such support, the pedagogical potential of mobile technologies remains constrained. Finally, the increasing use of AI tools, particularly ChatGPT, signals an important shift in learning practices. A significant number of students already employ AI for writing support, aligning with research that highlights its potential to improve organization and grammatical accuracy (Khampusaen, 2025; Jamshed et al., 2024). This can be viewed as a particularly positive development, especially in light of numerous studies emphasizing the persistent need to strengthen students' grammatical competence in EFL contexts (Bureković & Grubešić, 2026; Rizvić-Eminović et al., 2018; Rizvić-Eminović et al., 2025). At the same time, concerns remain regarding over-reliance on such tools, which may lead to formulaic output and reduced critical engagement (Barrot, 2024).

## **Conclusion**

This study confirms that Mobile-Assisted Language Learning (MALL) is not an emerging trend but an already established component of the language learning ecosystem among Bosnian secondary school students. The findings demonstrate near-universal adoption of mobile devices for English learning, supporting the central hypothesis that students actively engage with mobile technologies across both formal and informal contexts (Czerska-Andrzejewska, 2016). However, this engagement is not uniform; rather, it is shaped by contextual factors, with in-class usage primarily serving supportive, task-oriented functions, and out-of-class usage reflecting more autonomous, self-directed learning practices. A key contribution of this study lies in identifying a developmental trajectory in MALL usage. While Madrasa students predominantly rely on mobile devices for immediate comprehension support and content consumption, comparison with higher education contexts suggests a progression toward more sophisticated, academically oriented uses of mobile technologies. This shift from “lexical support” to “academic gateway” reflects

increasing linguistic competence and metacognitive awareness, aligning with broader models of learner development.

The results underscore that successful MALL integration depends not only on student motivation and device access but also on institutional conditions. Infrastructural constraints, particularly unreliable internet connectivity, remain a significant barrier, limiting the effective pedagogical use of mobile technologies (Nikolopoulou et al., 2023). Additionally, the growing use of AI tools such as ChatGPT signals a shift in learning practices, offering clear benefits for language support while simultaneously raising concerns about over-reliance and reduced critical engagement (Jamshed et al., 2024; Barrot, 2024).

Taken together, these findings suggest that MALL is most effective when integrated strategically within pedagogical frameworks that account for contextual differences, support learner autonomy, and address potential limitations. Rather than replacing traditional instruction, mobile technologies should be positioned as complementary tools that enhance flexibility, engagement, and access to authentic language use. Future research should further explore how structured pedagogical interventions can maximize the benefits of MALL while mitigating its challenges.

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## PERCEPCIJE I STAVOVI O MOBILNO POTPOMOGNUTOM UČENJU JEZIKA U SREDNJOŠKOLSKOM OBRAZOVANJU: STUDIJA SLUČAJA

### *Sažetak*

*Ovo istraživanje ispituje obrasce upotrebe, stavove i percipiranu efikasnost mobilnih uređaja u učenju engleskog kao stranog jezika među srednjoškolcima u tradicionalnom religijskom obrazovnom kontekstu u Bosni i Hercegovini. Podaci su prikupljeni putem upitnika primijenjenog na uzorku od 323 učenika Elči Ibrahim-pašine medrese u Travniku, pri čemu su mjereni konstrukti efikasnosti, angažmana, motivacije i pristupačnosti. Podaci su analizirani primjenom deskriptivne statistike, t-testova nezavisnih uzoraka i Spearmanove korelacione analize. Rezultati ukazuju na pretežno pozitivne stavove prema mobilno potpomognutom učenju jezika (MALL), uz visok nivo autonomnog učenja kako unutar tako i izvan učionice. Važno je istaći da opća upotreba mobilnih uređaja u zabavne svrhe nije pokazala statistički značajnu negativnu povezanost s percipiranom obrazovnom vrijednošću. Rezultati sugeriraju da se učenje jezika potpomognuto mobilnim tehnologijama percipira kao motivirajući i personalizirani dodatak tradicionalnoj nastavi. Istraživanje ukazuje na visoku spremnost za integraciju MALL-a, uz naglašenu potrebu za unapređenjem institucionalne infrastrukture, posebno u pogledu pouzdane internet konekcije.*

***Ključne riječi:*** *učenje jezika potpomognuto mobilnim tehnologijama (MALL), EFL, autonomija učenika, percepcija učenika, srednje obrazovanje, medresa*