A Study on the Benefits and Barriers of MALL Integration in English Language Education in Chinese Universities

Zengfang Lin[1]*, Ain Nadzimah Abdullah[2], Arshad Abdul Samad[2]

[1]College of Foreign Languages, Dali University, Dali 671003, Yunnan, China

[2]School of Education, Taylor's University, Petaling Jaya 47500, Selangor, Malaysia

*Author to whom correspondence should be addressed.

Abstract: With the increasing use of technology in language education, understanding the benefits and barriers of mobile-assisted language learning (MALL) is crucial for effective integration. Qualitative data were collected through interviews among Chinese English teachers in universities. Thematic analysis was employed to identify themes. The findings reveal that Chinese English teachers perceive MALL to offer benefits like convenience, effectiveness, efficiency, engagement, personalization, and resource richness. However, several barriers were identified, including low teacher ability, student device misuse, lack of institutional support, technical limitations, health concerns, and time constraints. These findings contribute to a deeper understanding of the factors influencing the adoption of MALL in Chinese universities and have implications for language teaching practice.

Keywords: MALL; English language education; Benefit; Barrier

1. Introduction

Mobile-assisted language learning (MALL) has emerged as a transformative approach in English language education. In China, the Ministry of Education has actively promoted the integration of information technology into education, emphasizing the role of MALL in fostering autonomous and mobile learning [1]. While MALL has been found to offer significant benefits, such as improved vocabulary and language skills, it also presents challenges, including technical limitations, distractions, and teachers' readiness [2]. However, English teachers' perceptions of its advantages and challenges in Chinese universities are not fully understood. This study investigates the benefits and barriers of MALL adoption in Chinese university contexts, aiming to provide insights for educators, institutions, and app developers to optimize its implementation and address existing barriers.

2. Literature review

MALL significantly enhances language education by improving motivation, communication skills, and personalized learning experiences [3,4]. It provides access to rich resources, fosters collaborative learning, and supports inclusive participation, particularly for reserved students [5]. Additionally, mobile apps enable tailored progress tracking and formative assessment, helping instructors and learners monitor progress effectively [6]. These benefits make MALL a transformative tool for creating engaging, accessible, and effective language learning environments.

MALL offers significant benefits but poses barriers to mobile users. Ertmer [7] categorized these into first-order barriers, such as technical issues like small screens and inconsistent networks [8-10], and second-order barriers, including limited digital literacy and negative attitudes toward technology [4,11]. Teachers' resistance, concerns about distractions, cheating, and health issues further hinder adoption [2,12]. To address these, Zain and Bowles [4] recommended interaction-based designs, teacher training, and careful app selection. Overcoming these barriers is essential for effective MALL integration.

3. Methods

This study adopted a qualitative approach using interviews to collect data. Interviews were conducted among ten selected teachers via WeChat call at their convenience. The ten interviewees were anonymized by assigning them the letters A through J as substitutes for their names. Thematic analysis was used to analyze data to identify the themes for the benefits and barriers of MALL.

4. Results and discussion

4.1. Benefits of MALL

Figure 1 is the thematic map of the benefits of MALL integration. The teachers perceived MALL to be convenient, effective, efficient, rich in resources, personalized, and engaging.
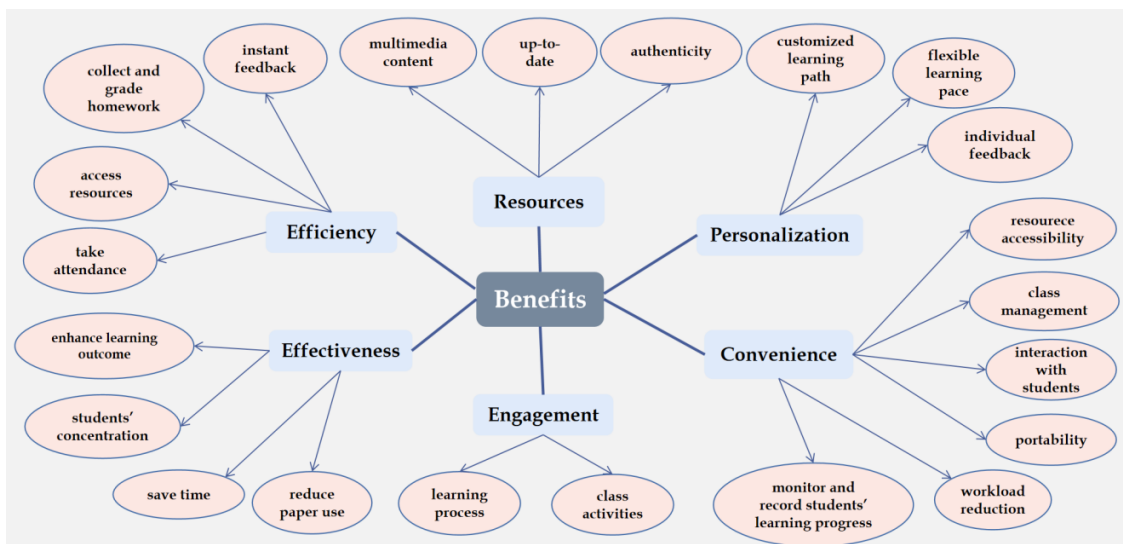

Figure 1. Thematic map of the benefits of MALL

4.1.1. Convenience

Convenience emerged as the most common theme in this study, which was also reported by Criollo *et al.* [13] and Mortazavi *et al.* [14], who found that MALL users valued its convenience in teaching. Respondents highlighted the convenience of resource accessibility, portability, class management, student interaction, workload reduction, and monitoring students' learning progress. Many teachers liked using MALL in teaching large classes because it was convenient for "viewing students' questions, tracking students' learning progress, and reducing my teaching workload (interviewee G)." The portability of mobile devices provides convenience for students and teachers to access resources and share information anytime and anywhere [5]. Interviewee E found that mobile-enhanced teaching platform apps made class management more convenient for taking attendance, interacting with students, and making announcements. Interviewees B and D noted the convenience for students, especially those at the back or with poor eyesight, to view slides simultaneously on their phones.

4.1.2. Effectiveness

Effectiveness is another key benefit of using MALL, aligning with Li [15] and Maarouf [16]. Interviewees reported that it enhanced learning outcomes, maintained students' focus on class, and saved time and paper. Many emphasized the benefits of "rich and authentic materials" and "flexible learning approaches" in contributing to positive learning outcomes. Interviewee F adopted MALL to boost teaching quality and found it effective and well-received, as reported by Burston and Athanasiou [17] and Shadiev *et al.* [18]. Interviewee J revealed MALL is effective in "motivating students, enabling autonomous learning, and saving time." Similarly, interviewees C and J agreed that using MALL could streamline teaching, as "students can check the reference answers and explanations" and raise unresolved questions.

4.1.3. Efficiency

MALL enhances efficiency in attendance, resource access, homework collection, grading, and instant feedback, aligning with previous literature [19,20]. Teachers liked the QR code for taking attendance, noting it was quick and "saved class time otherwise wasted on individual roll-call." Interviewees A and C highlighted the efficiency of collecting and grading homework digitally, avoiding carrying workbooks home. Mobile devices also enable efficient communication between students and teachers, as seen when teacher A used voice messages for quick pronunciation feedback.

4.1.4. Resource richness

Teachers appreciated using mobile phones to access rich, up-to-date, and authentic resources like e-books, videos, online courses, and online dictionaries, aligning with Criollo *et al.* [13]. Five interviewees valued apps for providing current vocabulary, idioms, and cultural content, enhancing engagement with real-life language use. Offering authentic language materials outside the classroom, mobile devices support autonomous learning [21,22].

4.1.5. Personalization

Teachers viewed mobile apps as dynamic tools offering customized learning paths, flexible paces, and individual feedback. Interviewee H praised vocabulary apps for tailoring vocabulary learning to students' proficiency levels. Interviewee J emphasized the freedom for students to learn at their own pace. Additionally, apps enable progress tracking, which helps teachers identify learners' strengths and weaknesses. Personalized feedback, such as voice messages for pronunciation, further supported individualized learning and motivation. Kukulska-Hulme [5] noted that mobile phones enhance personalized learning by addressing individual needs,

allowing students to focus on areas requiring improvement.

4.1.6. Engagement

MALL enhances English learning by making it more engaging through game-like experiences and interactive activities. Interviewees C and E used roll-call features to capture students' attention and boost learning interest. Teacher A noted that apps with rewards, progress tracking, and competition motivated learners. Similarly, B highlighted how MALL increased students' interest in learning, benefiting overall teaching effectiveness.

4.2. Barriers to MALL

The barriers to using MALL can be classified into six themes: low teacher ability, student device misuse, lack of institutional support, technical limitations, health concerns, and time constraints (**Figure 2**).
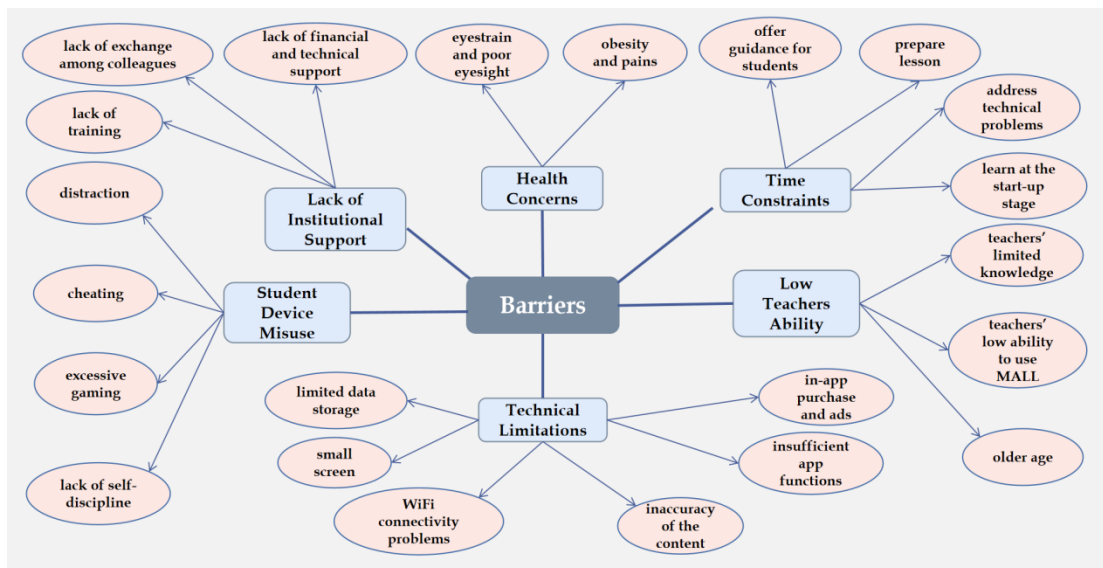

Figure 2. Thematic map of barriers of MALL

4.2.1. Low teacher ability

Teachers' low ability, including insufficient knowledge, skills, and age-related challenges, poses barriers to MALL integration. Previous studies have also identified teachers' limited technological knowledge as a barrier [7,10,11]. Gao and Sun [23] noted that experienced EFL teachers, despite their expertise, often struggle with technology. Zain and Bowles [4] emphasized that insufficient skills can lead to misuse of mobile devices or negative student perceptions. Interviewees expressed concerns about their practical abilities, highlighting a gap between theoretical knowledge and application. This disparity underscores the need for digital skills development through learning and practical exploration. Interviewees suggested "increasing MALL training sessions" to enhance teachers' knowledge and skills, particularly for older teachers. This aligns with recommendations by Zain and Bowles [4] for specialized training to improve teachers' proficiency in using mobile technology.

4.2.2. Student device misuse

Students' misuse of mobile phones may cause distractions, cheating, excessive gaming, and a lack of self-discipline, as noted by Metruk [2]. Teachers reported students using phones for chatting, gaming, or cheating, making monitoring difficult. Teacher E highlighted her efforts to curb misuse by walking around and monitoring

activities. Additionally, concerns about cheating on homework and exams were prevalent, with interviewees urging app developers to implement anti-cheating measures like real-time monitoring and facial recognition.

4.2.3. Lack of institutional support

Institutional challenges, such as insufficient funding, technical support, and training, hinder MALL adoption in teaching. Three teachers reported a lack of MALL training, funding, and opportunities for knowledge exchange, aligning with findings by Villa *et al.* [24]. Six respondents received little to no MALL training, while four of them had only moderate exposure, highlighting the need for more training. Additionally, poor campus network infrastructure may disrupt lessons, emphasizing the need for reliable technical support. Financial barriers, such as costs for apps and memberships, further limited MALL use. Interviewee D stressed the need for teacher collaboration and knowledge exchange to enhance MALL integration.

4.2.4. Technical limitations

Technical limitations, such as small screens, in-app purchases, ads, and connectivity issues, remain barriers to MALL integration, as noted by Hafour [9], Metruk [2], Yu [10], and Zain and Bowles [4]. Interviewees D and H highlighted problems like unstable WiFi, limited storage, and small screens. While small screens offer portability, they are inconvenient for lengthy texts. Additionally, in-app purchases and ads create financial burdens and distractions, as noted by A and C. Concerns about the app's content accuracy, insufficient functions, and weak invigilation features are also raised by teachers. They emphasized the need for improved app quality, financial support, and training to select appropriate apps, aligning with Zain and Bowles' [4] recommendations.

4.2.5. Health concerns

Teachers expressed concerns that excessive mobile device use could lead to health issues such as eyestrain, poor eyesight, neck and shoulder pain, and even obesity due to prolonged screen time and sedentary behavior, as also noted by Zou *et al.* [12]. Prolonged screen exposure and poor posture during device use exacerbate these risks. To address these concerns, educators should encourage outdoor activities, regular breaks, and proper posture. These measures can help mitigate health risks and foster responsible mobile phone use in education.

4.2.6. Time constraints

Teachers acknowledged that while MALL saves time, it also demands time for learning modern technology, addressing technical issues, preparing lessons, and guiding students. Teachers revealed that resolving WiFi connection issues or device problems during class may consume time, which shows the need for improved teachers' skills and technical support from the school. Interviewees noted that evaluating content quality and aligning it with curriculum standards was time-intensive, particularly for teachers with limited knowledge, insufficient experience, and older age. Heavy teaching workloads, as mentioned by D, left little time for exploring, which required more training, workshops, and open courses to ease the integration process.

5. Conclusion

This study investigated the benefits and barriers of MALL in Chinese university English education. MALL offers significant benefits, including convenience, personalized paths, effectiveness in enhancing learning outcomes, and engagement while saving time and promoting eco-friendly practices. However, barriers like technical issues, student distractions, teachers' insufficient knowledge, health concerns, and lack of institutional

support hindered its integration. To maximize MALL's potential, comprehensive teacher training, improved institutional support, user-friendly platforms, and usage guidelines are essential. Addressing these challenges while enhancing MALL's benefits can achieve a balanced and sustainable approach that enhances language teaching efficacy.

Disclosure statement

The authors declare no conflict of interest.

References

[1] Zhai X, Shi C, 2020, The Implementation Status, Challenges and Prospect of Ten-Year Development Plan for Educational Informationization (2011–2020). Modern Educational Technology, 30(12): 20–27.

[2] Metruk R, 2020, Confronting the Challenges of MALL: Distraction, Cheating, and Teacher Readiness. International Journal of Emerging Technologies in Learning (iJET), 15(2): 4–14.

[3] Panagiotis A, Penelope K, 2020, Mobile Assisted Language Learning (MALL): Trends from 2010 to 2020 Using Text Analysis Techniques. European Journal of Education, 3(3): 84–93.

[4] Zain DSM, Bowles FA, 2021, Mobile-Assisted Language Learning (MALL) for Higher Education Instructional Practices in EFL/ESL Contexts: A Recent Review of Literature. Computer-Assisted Language Learning, 22(1): 282–307.

[5] Kukulska-Hulme A, 2020, Mobile-Assisted Language Learning, in The Encyclopedia of Applied Linguistics, Wiley, New Jersey, 1–9.

[6] Chen Z, Jia J, 2020, Twenty Years' Researcher on MALL in China: Review and Outlook. Foreign Language World, (01): 88–95.

[7] Ertmer PA, 1999, Addressing First- and Second-Order Barriers to Change: Strategies for Technology Integration. Educational Technology Research & Development, 47(4): 47e61.

[8] Cervantes E, 2023, Why Is My Phone's Battery Draining So Fast? Android Authority, viewed March 15, 2025, https://www.androidauthority.com/smartphone-battery-draining-fast-fix-1052999/

[9] Hafour MF, 2022, The Effects of MALL Training on Preservice and In-Service EFL Teachers' Perceptions and Use of Mobile Technology. ReCALL, 2022: 1–17.

[10] Yu A, 2019, Understanding Information Technology Acceptance and Effectiveness in College Students' English Learning in China, Ph.D. dissertation.

[11] Sophonhiranrak S, 2021, Features, Barriers, and Influencing Factors of Mobile Learning in Higher Education: A Systematic Review. Heliyon, 7(4): e06696.

[12] Zou C, Li P, Jin L, 2021, Online College English Education in Wuhan against the COVID-19 Pandemic: Student and Teacher Readiness, Challenges and Implications. PLOS ONE, 16(10): e0258137.

[13] Criollo CS, Guerrero-Arias A, Jaramillo-Alcazar A, et al., 2021, Mobile Learning Technologies for Education: Benefits and Pending Issues. Applied Sciences, 11(9): 4111.

[14] Mortazavi M, Nasution MK, Abdolahzadeh F, et al., 2021, Sustainable Learning Environment by Mobile-Assisted Language Learning Methods on the Improvement of Productive and Receptive Foreign Language Skills: A Comparative Study for Asian Universities. Sustainability, 13(11): 6328.

[15] Li X, 2022, The Effectiveness of Mobile-assisted Language Learning (MALL) Applications on the Spoken English Assessments in China's Universities, 2021 International Conference on Social Development and Media

Communication, Atlantis Press.

[16] Maarouf S, 2022, Students' Attitudes Towards Using Smartphones in English Language Learning During the Spread of COVID-19. A Field Study in the Secondary Schools in Lattakia Governorate. Association of Arab Universities Journal for Education and Psychology, 19(4): 7.

[17] Burston J, Athanasiou A, 2020, Twenty-Five Years of MALL Experimental Implementation Studies: What Do We Really Know About It? In Recent Tools for Computer- and Mobile-Assisted Foreign Language Learning, 35–59.

[18] Shadiev R, Wang X, Halubitskaya Y, et al., 2022, Enhancing Foreign Language Learning Outcomes and Mitigating Cultural Attributes Inherent in Asian Culture in a Mobile-Assisted Language Learning Environment. Sustainability, 14(14): 8428.

[19] Krisbiantoro B, Pujiani T, 2021, The Effectiveness of MALL and Flipped Classroom in Teaching Writing to the Eleventh Graders of SMA in Banyumas. EduLite: Journal of English Education, Literature and Culture, 6: 86.

[20] Li J, Gao M, Tu X, 2021, Research on Pre-service English Teachers' Professional Ability Development Preference Based on MALL. Theory & Practice in Language Studies, 11(3): 295–301.

[21] Dai Y, Wu Z, 2021, Mobile-Assisted Pronunciation Learning with Feedback from Peers And/Or Automatic Speech Recognition: A Mixed-Methods Study. Computer Assisted Language Learning, 2021: 1–24.

[22] Puebla C, Fievet T, Tsopanidi M, et al., 2022, Mobile-Assisted Language Learning in Older Adults: Chances and Challenges. ReCALL, 34(2): 169–184.

[23] Gao S, Sun N, 2021, Research on College English Teachers' Informational Teaching Competence based on TPACK. Journal of Liaoning Teachers College (Social Sciences Edition), 01: 65–66.

[24] Villa EJE, Figueredo ORB, Lobo APM, 2018, El M-Learning en la Educacion Superior en Colombia: Un Caso de Aplicacion. Vol. Numero 14. Publicaciones FAC.