

MOBILE-ASSISTED LANGUAGE LEARNING (MALL) AND CULTURAL AWARENESS IN ENGLISH LANGUAGE USE AMONG HIGHER EDUCATION STUDENTS IN SULU

CARLOTA U. INJAM¹, NELSON JULHAMID¹

¹School of Graduate Studies, Sulu State University, Jolo, Sulu, Philippines
Corresponding email: sscgspub@sulustatecollege.edu.ph

ABSTRACT

This study examined the relationship between Mobile-Assisted Language Learning (MALL) practices and cultural awareness in English language use among tertiary students in selected Higher Education Institutions in Sulu, Philippines. Using a quantitative descriptive–correlational design, data were collected from 200 students through a structured questionnaire measuring MALL practices and dimensions of cultural awareness based on Intercultural Communicative Competence. Descriptive statistics revealed that students demonstrated high levels of engagement in MALL and high levels of cultural awareness across knowledge, attitudes, interpreting and relating skills, discovery and interaction skills, and critical awareness. Inferential analysis showed no significant differences in MALL practices and cultural awareness when grouped according to age, gender, program, and year level. However, a significant difference was found in one skill dimension across academic programs. Most importantly, Pearson correlation analysis indicated a significant high positive relationship between MALL practices and cultural awareness. These findings suggest that mobile learning environments facilitate exposure to authentic language use and culturally embedded content, contributing to the development of intercultural competence. The study highlights the potential of MALL as an effective approach for integrating language and culture in diverse educational contexts. Further research is recommended to explore causal relationships and intervention-based applications of mobile-assisted learning.

Keywords: Mobile-Assisted Language Learning (MALL); Cultural Awareness; Intercultural Communicative Competence; English Language Learning

INTRODUCTION

Language and culture are closely connected, as language reflects the values, beliefs, and social practices of its users. In learning English, cultural awareness plays a vital role in helping learners understand meanings beyond literal interpretation and use the language appropriately in different social contexts (Kramsch, 1998; Jiang, 2000). Without this awareness, language learning may remain limited to grammar and vocabulary, preventing learners from developing full communicative competence (Byram, 1997). Thus, integrating cultural understanding into English language education is essential, particularly in today's globalized environment.

With the rise of digital technology, Mobile-Assisted Language Learning (MALL) has become an accessible and flexible approach to language education. Mobile devices allow learners to engage with authentic English materials such as videos, podcasts, and social media content anytime and anywhere (Kukulska-Hulme & Shield, 2008). These resources expose learners to real-life language use and cultural contexts, which can support not only linguistic development but also cultural awareness.

Previous studies have shown that MALL enhances learner autonomy, motivation, and engagement, while also providing opportunities for interaction and exposure to diverse cultural perspectives (Burston, 2015; Viberg & Grönlund, 2017; Godwin-Jones, 2018).

Despite these advantages, most existing studies on MALL have focused on improving measurable language skills such as vocabulary, grammar, and reading comprehension (Burston, 2015; Viberg & Grönlund, 2013). Comparatively, fewer studies have examined how MALL contributes to cultural awareness and intercultural communicative competence, which are equally important components of language learning. Scholars emphasize that exposure alone is not enough; meaningful engagement with cultural content is necessary to develop deeper understanding and sensitivity (Liaw & English, 2017; Chen & Yang, 2020). This highlights the need for further research that explores the cultural dimensions of mobile-assisted learning.

In the Philippine context, mobile technologies are widely used by students as supplementary learning tools, particularly in areas with limited access to educational resources (Sevilla & Hermosa, 2015; Villanueva & Ramos, 2014). Studies have shown that mobile learning supports language development and increases exposure to authentic English use, including culturally embedded communication (Alviar, 2019; Gomez, 2022). However, research focusing specifically on the relationship between MALL and cultural awareness remains limited, especially in culturally diverse regions such as Sulu. Given the multilingual and multicultural background of students in this area, examining how mobile learning influences their cultural understanding in English use is both relevant and necessary. Recent research has also highlighted the complex cultural and linguistic challenges faced by English language educators in multilingual contexts, emphasizing the need for culturally responsive language practices (Biri et al., 2026).

Therefore, this study aimed to examine the relationship between Mobile-Assisted Language Learning (MALL) practices and cultural awareness in English language use among tertiary students in selected Higher Education Institutions in Sulu. The study focused on both technological practices and intercultural competence and sought to contribute to a more comprehensive understanding of language learning in mobile and culturally diverse environments. The findings provided insights for educators and institutions in designing language programs that integrate both linguistic and cultural dimensions of learning.

LITERATURE REVIEW

This study is anchored primarily on Intercultural Communicative Competence (ICC) Theory (Byram, 1997), supported by Sociocultural Theory (Vygotsky, 1978) and the Technology Acceptance Model (Davis, 1989), which together explain how mobile technologies facilitate both language learning and cultural awareness. Byram's ICC theory provides the central framework for this study, as it conceptualizes cultural awareness as a multidimensional construct involving knowledge, attitudes, interpretive skills, interaction skills, and critical cultural awareness. These dimensions directly align with the variables measured in this research, making the theory highly appropriate for examining how learners develop the ability to use English effectively across cultural contexts. Through exposure to authentic materials and intercultural interactions enabled by Mobile-Assisted Language Learning (MALL), learners are expected to develop not only linguistic competence but also the capacity to interpret, relate, and critically evaluate cultural meanings (Byram, 1997). Thus, ICC theory serves as the primary lens for understanding how cultural awareness is formed and assessed in this study.

Supporting this framework, Vygotsky's Sociocultural Theory explains that learning occurs through social interaction and is shaped by cultural context, emphasizing the role of mediated tools such as mobile technologies in facilitating meaningful learning experiences. In the context of MALL,

mobile devices function as mediational tools that allow learners to engage with authentic language use, interact with diverse communities, and co-construct cultural understanding beyond the classroom (Vygotsky, 1978). Additionally, the Technology Acceptance Model (TAM) provides insight into learners' engagement with mobile technologies, suggesting that perceived usefulness and ease of use influence the adoption of MALL platforms (Davis, 1989). This is particularly relevant in the context of Sulu, where accessibility and usability of mobile devices shape learning practices. Together, these theories justify that MALL is not only a technological tool but also a socially mediated and learner-driven environment that supports the development of intercultural competence. Therefore, the integration of these theoretical perspectives supports the assumption that MALL practices are significantly associated with the level of cultural awareness in English language use among tertiary students.

Mobile-Assisted Language Learning (MALL) has emerged as a significant approach in language education, emphasizing flexibility, accessibility, and learner-centered engagement. It is commonly defined as the use of portable digital devices to support language learning across formal and informal contexts, enabling learners to develop communicative competence through authentic and contextualized language use (Burston, 2015). MALL aligns with sociocultural and constructivist perspectives, as it promotes interaction, experiential learning, and autonomy. Through mobile technologies, learners are able to engage in meaningful tasks situated in real-life contexts, which enhances both motivation and continuous learning opportunities beyond the classroom (Kukulska-Hulme & Shield, 2008; Sharples et al., 2007).

The affordances of mobile learning further support its effectiveness in language development. Mobile technologies provide immediacy, portability, interactivity, and contextual learning opportunities, allowing learners to access language materials anytime and anywhere (Ogata & Yano, 2005; Huang et al., 2012). Despite limitations such as screen size and connectivity issues (Albers & Kim, 2001), studies have shown that mobile devices remain effective tools for delivering language instruction (Thornton & Houser, 2005). More importantly, MALL enables continuous exposure to language through multimedia resources such as videos, podcasts, and social platforms, which support vocabulary acquisition, pragmatic understanding, and speaking fluency (Miangah & Nezarat, 2012). These features position MALL as a dynamic environment for sustained language engagement.

Beyond linguistic development, recent studies highlight the role of MALL in fostering intercultural communicative competence. Mobile platforms provide access to authentic cultural materials and enable interaction with diverse language users, which are essential for developing sociopragmatic awareness (Viberg & Grönlund, 2017). However, scholars emphasize that exposure alone does not guarantee cultural learning; structured tasks, guided reflection, and teacher mediation are necessary to deepen learners' cultural understanding (Liaw & English, 2017; Chen & Yang, 2020). These findings suggest that MALL can support cultural awareness when learning experiences are intentionally designed to promote interpretation, interaction, and reflection.

The integration of culture in language learning is further supported by foundational theories which assert that language and culture are inseparable. Language learning involves understanding not only linguistic forms but also the cultural meanings embedded within communication (Kramsch, 1998). Similarly, intercultural competence frameworks emphasize that learners must develop knowledge, attitudes, and skills that enable them to interpret and respond appropriately to cultural differences (Byram, 1997). In this context, MALL provides authentic environments where learners can encounter diverse cultural perspectives and negotiate meaning in real communication settings (Godwin-Jones, 2018; Wang & Vásquez, 2012). These environments allow learners to construct both linguistic and cultural knowledge simultaneously.

Several international studies further demonstrate the impact of mobile learning on both cognitive and affective dimensions of language learning. Mobile-based environments have been found to increase motivation, engagement, and confidence while reducing language anxiety (Zou & Li, 2015; Al-Shehri, 2017). At the same time, mobile platforms support authentic interaction and identity formation, enabling learners to reflect on both their own and others' cultural practices (Wu, 2021; Yang & Yang, 2025). However, challenges such as limited digital literacy, inconsistent access, and lack of institutional support may hinder the effective implementation of MALL, particularly in developing contexts (Dashtestani, 2016). These factors highlight the importance of contextualizing MALL practices within specific learning environments.

In the Philippine context, MALL has gained increasing relevance due to the widespread use of mobile devices among students. Learners often use smartphones as supplementary tools for accessing English materials, especially in areas with limited educational resources (Sevilla & Hermosa, 2015; Villanueva & Ramos, 2014). Studies have shown that mobile learning enhances language proficiency, learner autonomy, and engagement, while also exposing students to authentic English use and cultural content (Alviar, 2019; Gomez, 2022). This suggests that MALL aligns well with the learning habits and needs of Filipino students, particularly in higher education.

Local studies also emphasize the role of MALL in promoting cultural awareness and intercultural competence. Exposure to multimedia content, online communication, and global digital platforms enables learners to develop sensitivity to cultural differences and improve their communicative competence (Dayag, 2016; Barrot, 2021). Research conducted in Mindanao and similar contexts shows that mobile technologies facilitate intercultural interaction, allowing students to adapt their language use across different cultural settings (Fajardo & Torres, 2022; Marasigan, 2020). Additionally, culturally contextualized mobile learning materials have been found to enhance both engagement and cultural literacy among learners (Magpantay, 2018; Pascual, 2020).

METHODS

This study employed a quantitative descriptive–correlational research design to examine the relationship between Mobile-Assisted Language Learning (MALL) practices and cultural awareness in English language use among tertiary students. The descriptive component was used to determine the extent of students' MALL practices and their level of cultural awareness, while the correlational component assessed the strength and direction of the relationship between these variables. This design is appropriate for studies that aim to identify patterns and associations among measurable variables without manipulating experimental conditions (Creswell, 2014).

The study was conducted in selected Higher Education Institutions (HEIs) in Sulu, Philippines, a culturally diverse region characterized by multiple ethnolinguistic groups. This context provides a relevant setting for examining cultural awareness in language use. A total of 200 tertiary students participated in the study, selected through purposive sampling based on their active use of mobile devices for English language learning. The sample was drawn from institutions including Mindanao State University–Sulu, Sulu State College, Sulu College of Technology, and Notre Dame of Jolo College, ensuring representation across different academic programs and year levels.

Data were collected using a structured survey questionnaire adapted from established instruments in MALL and Intercultural Communicative Competence (ICC). The instrument consisted of three parts: demographic profile, MALL practices, and cultural awareness. MALL practices were measured in terms of access, frequency, engagement, and exposure to authentic materials, while cultural awareness was assessed using dimensions derived from Byram's (1997) ICC model, including knowledge, attitudes, interpreting and relating skills, discovery and interaction skills, and critical

cultural awareness. Responses were measured using a five-point Likert scale, allowing for consistent and quantifiable data collection. Content validity was ensured through expert review, and the instrument was adapted to suit the local context.

Data collection followed ethical research procedures, including securing institutional permission, obtaining informed consent, and ensuring confidentiality of responses. Questionnaires were distributed personally and collected after completion, then encoded and prepared for statistical analysis. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize the data, while inferential statistics including t-test, one-way ANOVA, and Pearson's *r* correlation were employed to determine differences and relationships among variables. All analyses were conducted at a 0.05 level of significance to ensure the reliability and validity of the findings.

RESULTS AND DISCUSSION

Table 1 presents the demographic characteristics of the respondents. The majority of participants were aged 18 years and above (99.0%), indicating that the sample largely represents adult tertiary learners. In terms of gender, most respondents were female (79.0%), suggesting a gender imbalance in the sample. Regarding academic program, a substantial proportion of students were enrolled in education-related courses, particularly Bachelor of Elementary Education (39.5%) and Technical-Vocational programs (25.0%). In terms of year level, the majority were first-year students (59.0%), followed by third-year students (24.0%), while fewer respondents were in the second and fourth years.

Overall, the sample reflects a predominantly young, female, and early-year tertiary student population, which may influence patterns of mobile learning engagement and cultural awareness. These characteristics should be considered when interpreting subsequent results, particularly in relation to generalizability.

Table 1
Demographic Characteristics of Respondents (N = 200)

Variable	Category	Frequency	Percentage %
Gender	Male	42	21.0
	Female	158	79.0
Age	15 years old & below	0	0.0
	16 – 17 years old	2	1.0
	18 years old & above	198	99.0
Program	BSN	0	0.0
	CAS	37	18.5
	BEE	79	39.5
	BSE	20	10.0
	BSA	14	7.0
	TVL	50	25.0
Year Level	First Year	118	59.0
	Second Year	19	9.5
	Third Year	48	24.0
	Fourth Year	15	7.5

Table 2 presents the extent of Mobile-Assisted Language Learning (MALL) practices among the respondents. The overall mean score of 4.71 (SD = 0.49) indicates that students strongly engage in mobile-assisted language learning, suggesting a high level of integration of mobile technologies in their

English learning practices. All indicators were rated “Strongly Agree,” reflecting consistent and frequent use of mobile devices for language-related activities.

Among the indicators, the highest mean was observed in the use of mobile learning resources to understand real-life English use ($M = 4.76$), followed closely by the perceived role of mobile content in improving cultural understanding ($M = 4.73$). These findings suggest that students do not only use mobile devices for basic language practice but also for accessing authentic and culturally embedded materials. This aligns with the view that MALL facilitates contextualized and meaningful language exposure, enabling learners to connect linguistic forms with real-world usage.

The high level of engagement in MALL practices supports previous findings that mobile technologies enhance accessibility, flexibility, and learner autonomy in language learning (Kukulska-Hulme & Shield, 2008; Burston, 2015). Similarly, the frequent use of authentic content such as videos, podcasts, and online platforms reflects the role of mobile learning in providing continuous exposure to language and culture (Miangah & Nezarat, 2012). These results further indicate that learners actively utilize mobile tools not only for academic purposes but also for informal and self-directed learning.

Moreover, the findings suggest that MALL serves as an effective medium for integrating language and culture, as students reported that mobile content contributes to their understanding of English-speaking communities. This supports the argument that mobile learning environments provide opportunities for authentic interaction and cultural exposure, which are essential for developing intercultural competence (Viberg & Grönlund, 2017; Godwin-Jones, 2018). Overall, the results confirm that MALL is widely practiced among tertiary students in Sulu and plays a significant role in shaping both linguistic and cultural aspects of English learning.

Table 2

Extent of Mobile-Assisted Language Learning (MALL) Practices (N = 200)

Statements	Mean	SD	Interpretation
I regularly use my mobile device to study English.	4.71	0.63	Strongly Agree
I use mobile apps (e.g., language apps, video apps) daily for English learning.	4.68	0.64	Strongly Agree
I access authentic English content (videos, podcasts, news) on my mobile device for learning.	4.68	0.63	Strongly Agree
Mobile learning resources help me understand real-life English use.	4.76	0.54	Strongly Agree
Mobile apps/online content improve my cultural understanding of English-speaking communities.	4.73	0.51	Strongly Agree
Overall	4.71	0.49	Strongly Agree

Legend: (5) 4.50-5.00=Strongly Agree (SA); (4) 3.50 – 4.49=Agree (A); (3) 2.50 – 3.49=Neutral (N); (2) 1.50 – 2.49=Disagree (D); (1) 1.00 – 1.49=Strongly Disagree (SD)

Table 3 presents the level of cultural awareness of the respondents across five dimensions based on Intercultural Communicative Competence (Byram, 1997). The overall mean score of 4.68 indicates that students demonstrate a high level of cultural awareness, as reflected in their consistent “Strongly Agree” ratings across all dimensions. This suggests that learners are not only linguistically engaged but also culturally responsive in their use of English.

Among the dimensions, knowledge of cultural norms ($M = 4.73$) and attitudes toward cultural diversity ($M = 4.73$) obtained the highest mean scores. These findings indicate that students possess strong awareness of cultural practices and exhibit openness toward cultural differences. This aligns with the view that cultural knowledge and positive attitudes form the foundation of intercultural

competence, enabling learners to recognize and appreciate diverse communicative contexts (Byram, 1997; Kramsch, 1998).

The dimensions related to skills—interpreting and relating ($M = 4.62$) and discovery and interaction ($M = 4.69$)—also yielded high ratings, suggesting that students are able to analyze cultural meanings and adapt their communication in intercultural situations. These skills reflect learners' ability to go beyond surface-level understanding and engage in meaningful interpretation of language within cultural contexts. Such findings support previous studies indicating that exposure to authentic materials and interaction through mobile platforms enhances learners' sociopragmatic competence (Viberg & Grönlund, 2017; Chen & Yang, 2020).

Critical cultural awareness ($M = 4.61$), although slightly lower than other dimensions, remains at a high level, indicating that students are capable of reflecting on cultural representations, recognizing biases, and evaluating cultural assumptions. This dimension is particularly important as it represents a higher-order cognitive skill in intercultural competence, involving critical reflection and evaluation. The result suggests that learners are not merely consumers of cultural content but are actively engaging in critical thinking about cultural issues.

Overall, the findings confirm that tertiary students in Sulu demonstrate well-developed intercultural communicative competence across cognitive, affective, and behavioral dimensions. This supports the argument that exposure to mobile-assisted learning environments contributes to the development of cultural awareness by providing access to authentic language use and diverse cultural perspectives (Godwin-Jones, 2018; Wang & Vásquez, 2012). The consistently high ratings across all dimensions suggest that MALL plays a significant role in fostering culturally informed language use among learners.

Table 3

Level of Cultural Awareness in English Language Use (N = 200)

Dimensions	Mean	SD	Interpretation
Knowledge of Cultural Norms	4.73	0.46	Strongly Agree
Attitudes toward Cultural Diversity	4.73	0.42	Strongly Agree
Skills of Interpreting and Relating	4.62	0.51	Strongly Agree
Skills of Discovery and Interaction	4.69	0.47	Strongly Agree
Critical Cultural Awareness	4.61	0.53	Strongly Agree
Overall	4.68		Strongly Agree

Legend: (5) 4.50-5.00=Strongly Agree (SA); (4) 3.50 – 4.49=Agree (A); (3) 2.50 – 3.49=Neutral (N); (2) 1.50 – 2.49=Disagree (D); (1) 1.00 – 1.49=Strongly Disagree (SD)

Table 4 presents the results of the tests of differences in cultural awareness when grouped according to demographic variables. The findings indicate that there are no statistically significant differences in cultural awareness across age, gender, program, and year level ($p > .05$).

Specifically, analysis of variance showed no significant difference in cultural awareness across age groups, $F = 0.723$, $p = .396$, suggesting that cultural awareness is relatively consistent regardless of age. Similarly, the independent samples t-test revealed no significant difference between male and female respondents, $t = -0.332$, $p = .740$, indicating that gender does not significantly influence cultural awareness in this context.

Further, no significant differences were found across academic programs, $F = 1.893$, $p = .113$, or year level, $F = 2.238$, $p = .085$. These findings suggest that cultural awareness is uniformly developed among students regardless of their academic background or level of study. This may be attributed to

the widespread access to mobile technologies and digital content, which provide similar learning experiences across different groups.

The results imply that cultural awareness in English language use is not dependent on demographic characteristics but may instead be influenced by shared exposure to mobile-assisted learning environments. This supports previous findings that mobile technologies provide equal access to authentic language and cultural content, thereby reducing differences across learner groups (Viberg & Grönlund, 2017; Godwin-Jones, 2018). It also aligns with the notion that intercultural competence can be developed through consistent exposure and interaction rather than demographic factors alone (Byram, 1997).

Table 4
Differences in Cultural Awareness by Demographic Variables

Variable	Test	Test-value	p-value	Interpretation
Age	Anova	F = 0.723	.396	Not Significant
Gender	t-test	t = -0.332	.740	Not Significant
Program/Course	Anova	F = 1.893	.113	Not Significant
Year Level	Anova	F = 2.238	.085	Not Significant

**Significant at alpha 0.05*

Table 5 presents the differences in Mobile-Assisted Language Learning (MALL) practices when grouped according to demographic variables. The results indicate that there are generally no significant differences in MALL practices across age, gender, and year level ($p > .05$), suggesting that students demonstrate similar levels of engagement with mobile-assisted learning regardless of these characteristics.

However, a significant difference was found in the dimension of skills of interpreting and relating when grouped according to academic program, $p = .020$. This indicates that students from different academic programs vary in their ability to interpret and relate cultural meanings when using mobile-assisted language learning tools.

This finding suggests that disciplinary background may influence how students engage with culturally embedded language content. For instance, students in language- or education-related programs may have more exposure to tasks that require interpretation of meaning, contextual analysis, and cross-cultural communication, which could enhance their interpretive skills. In contrast, students from non-language programs may engage with mobile learning primarily for functional or informational purposes rather than deeper cultural analysis.

The absence of significant differences across other demographic variables implies that MALL practices are widely accessible and consistently used across student groups. This supports previous studies indicating that mobile learning promotes inclusive and flexible learning environments, reducing disparities among learners (Kukulska-Hulme & Shield, 2008; Burston, 2015).

Nevertheless, the presence of a significant difference in one dimension highlights that while access to technology may be uniform, the depth of engagement and type of learning outcomes may vary depending on academic context. This finding suggests the need for more structured and discipline-sensitive integration of MALL to ensure that all students develop higher-order intercultural skills.

Table 5

MOBILE-ASSISTED LANGUAGE LEARNING (MALL) AND CULTURAL AWARENESS IN ENGLISH
LANGUAGE USE AMONG HIGHER EDUCATION

Summary of Differences in MALL Practices by Demographic Variables

Variable	Results	p-value	Interpretation
Age	No significant difference	> .05	Not Significant
Gender	No significant difference	> .05	Not Significant
Program/Course	Significant	.020	Not Significant
Year Level	No significant difference	> .05	Not Significant

**Significant at alpha 0.05*

For research question 6, it determined to identify the relationship between Mobile-Assisted Language Learning (MALL) practices and cultural awareness in English language use. The result shows a strong positive correlation between Mobile-Assisted Language Learning (MALL) practices and cultural awareness ($r = 0.714$, $p < .05$). This indicates that increased engagement in mobile-assisted language learning is associated with higher levels of cultural awareness among the respondents.

This finding suggests that the use of mobile technologies facilitates not only language development but also exposure to culturally embedded content, which enhances learners' understanding of diverse communicative practices. The result supports Intercultural Communicative Competence (Byram, 1997), which emphasizes that intercultural competence develops through interaction and engagement with authentic cultural contexts.

Furthermore, the result aligns with previous studies showing that mobile learning environments provide access to real-world language use and multicultural interactions, thereby promoting intercultural awareness (Viberg & Grönlund, 2017; Godwin-Jones, 2018). Overall, the findings confirm that MALL is significantly associated with the development of cultural awareness in English language use.

Table 6

Correlation Between MALL Practices and Cultural Awareness

Variable	r-value	p-value	Interpretation
MALL Practices × Cultural Awareness	0.714	< .05	Strong Positive Correlation

**Significant at alpha 0.05*

CONCLUSION

This study found that tertiary students in Sulu demonstrate high levels of engagement in Mobile-Assisted Language Learning (MALL) and high levels of cultural awareness across all dimensions. A significant positive relationship between MALL practices and cultural awareness was also established, indicating that increased use of mobile learning is associated with stronger intercultural competence in English language use.

The main contribution of this study lies in providing empirical evidence that MALL supports not only linguistic development but also cultural awareness, particularly in a culturally diverse and underrepresented context such as Sulu. It highlights the role of mobile technologies as effective tools for integrating language and culture in higher education. However, the study is limited by its use of a descriptive-correlational design, which does not establish causality, and by its reliance on self-reported data from a specific regional sample, which may affect generalizability. Future research may explore experimental or longitudinal designs to examine causal relationships and investigate how specific MALL interventions influence different dimensions of intercultural competence across varied contexts.

REFERENCES

- Al-Shehri, S. (2017). MALL in action: Mobile language learning in Saudi higher education. *International Journal of Educational Technology in Higher Education*, 14(1), 1–15.
- Biri, A. K., Arilin, A., Rasdi, A., Dawami, M., Usman, K., Teh, A., ... Nassal, F. J. (2026). When English Isn't Enough: Exploring the Emotional and Professional Dilemmas of English Teachers Using Translanguaging in Multilingual Classrooms. *Journal of Cultural Analysis and Social Change*, 11(1), 2218–2232. <https://doi.org/10.64753/jcasc.v11i1.4284>
- Burston, J. (2015). Twenty years of MALL project implementation: A meta-analysis of learning outcomes. *ReCALL*, 27(1), 4–20.
- Byram, M. (1997). Teaching and assessing intercultural communicative competence. *Multilingual Matters*.
- Chen, C. M., & Yang, S. H. (2020). Enhancing intercultural sensitivity through mobile-assisted language learning. *Language Learning & Technology*, 24(3), 77–95.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Fajardo, M., & Torres, N. (2022). Mobile technology and intercultural communication among Mindanao students. *Journal of Philippine Linguistic Studies*, 7(1), 55–70.
- Godwin-Jones, R. (2018). Emerging technologies: Mobile-assisted language learning revisited. *Language Learning & Technology*, 22(2), 3–12.
- Kramsch, C. (1998). *Language and culture*. Oxford University Press.
- Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile-assisted language learning. *ReCALL*, 20(3), 271–289.
- Liaw, M. L., & English, K. (2017). Intercultural communication in the context of mobile-assisted language learning. *Computer Assisted Language Learning*, 30(7), 658–679.
- Miangah, T. M., & Nezarat, A. (2012). Mobile-assisted language learning: A literature review. *Open Learning*, 27(4), 249–264.
- Sharples, M., Taylor, J., & Vavoula, G. (2007). A theory of learning for the mobile age. *Journal of Computer Assisted Learning*, 23(3), 229–241.
- Viberg, O., & Grönlund, Å. (2017). Understanding students' learning practices through mobile devices in higher education. *Interactive Learning Environments*, 25(5), 621–635.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wang, Y., & Vásquez, C. (2012). The effect of mobile-assisted learning on global communication skills. *Language Learning in Higher Education*, 2(2), 223–242.
- Wu, X. (2021). Intercultural learning through WeChat interactions. *Language and Intercultural Communication*, 21(2), 135–150.
- Zou, D., & Li, H. (2015). Exploring mobile-assisted language learning to enhance intercultural competence. *Educational Technology Research and Development*, 63(6), 1017–1038.