

The Role of Technology in Mitigating Mother Culture Interference on EFL Learners' Intercultural Communicative Competence

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Abstract

This paper examines the potential of technology to mitigate the interference of mother culture on English as a Foreign Language (EFL) learners' development of Intercultural Communicative Competence (ICC). As globalization continues to necessitate effective cross-cultural communication, EFL learners often struggle to overcome the influence of their native cultural norms and communication patterns. In the realm of EFL education, the development of ICC has become increasingly crucial. However, learners often face challenges due to interference from their mother culture, which can impede their ability to effectively communicate across cultural boundaries. This study explores how various technological tools and platforms can be leveraged to expose learners to diverse cultural contexts, facilitate authentic intercultural interactions, and promote critical cultural awareness. Through a review of current literature and analysis of emerging technological solutions, we propose a framework for integrating technology into EFL curricula to enhance learners' ICC while minimizing mother culture interference.

Keywords: Intercultural communicative competence, Mother culture interference, EFL, Technology-enhanced language learning

ملخص:

تبحث هذه الورقة البحثية في قدرة التكنولوجيا على التخفيف من تأثير الثقافة الأم على تطوير متعلمي اللغة الإنجليزية كلغة أجنبية (EFL) للكفاءة التواصلية بين الثقافات. مع استمرار العولمة التي تستلزم التواصل الفعال بين الثقافات، غالبًا ما يكافح متعلمو اللغة الإنجليزية كلغة أجنبية للتغلب على تأثير معايير ثقافتهم الأم وأنماط التواصل. في مجال تعليم اللغة الإنجليزية كلغة أجنبية (EFL)، أصبح تطوير الكفاءة التواصلية بين الثقافات أمرًا بالغ الأهمية بشكل متزايد. ومع ذلك، غالبًا ما يواجه المتعلمون تحديات بسبب تداخل ثقافتهم الأم، مما قد يعيق قدرتهم على التواصل الفعال عبر الحدود الثقافية. تستكشف هذه الدراسة كيف يمكن الاستفادة من الأدوات والمنصات التكنولوجية المختلفة لتعريض المتعلمين لسياقات ثقافية متنوعة، وتسهيل التفاعلات الأصيلة بين الثقافات، وتعزيز الوعي الثقافي النقدي. من خلال مراجعة الأدبيات الحالية وتحليل الحلول التكنولوجية الناشئة، نقترح إطار عمل لدمج التكنولوجيا في مناهج اللغة الإنجليزية كلغة أجنبية لتعزيز التواصل بين المتعلمين مع تقليل تداخل الثقافة الأم.

الكلمات المفتاحية: الكفاءة التواصلية بين الثقافات، تداخل الثقافة الأم، اللغة الإنجليزية كلغة أجنبية (EFL)، تعلم اللغة المعزز بالتكنولوجيا

Introduction

In an increasingly interconnected world, the ability to communicate effectively across cultures has become a crucial skill for personal, academic, and professional success. For English as a Foreign Language (EFL) learners, developing Intercultural Communicative Competence (ICC) is particularly challenging due to the pervasive influence of their mother culture on language use and interpretation (Byram, 1997). This phenomenon, known as mother culture interference, can significantly impede learners' ability to navigate diverse cultural contexts and engage in meaningful intercultural exchanges (Kramsch, 1993).

As technology continues to reshape the landscape of language education, it offers promising avenues for addressing the challenges posed by mother culture

interference. This paper explores the potential of various technological tools and platforms to mitigate such interference and enhance EFL learners' development of ICC. By examining current research and innovative practices, we aim to provide insights into effective strategies for leveraging technology to foster ICC in EFL contexts.

Literature Review

The Mother Culture Interference Effect on EFL Learners' Intercultural Communicative Competence is a significant area of study in second language acquisition and cross-cultural communication. This phenomenon explores how learners' native cultural norms, values, and communication styles can influence—and sometimes impede—their ability to effectively communicate in English across diverse cultural contexts.

As English continues to serve as a global lingua franca, the development of intercultural communicative competence (ICC) has become increasingly crucial for EFL learners. However, the deeply ingrained patterns of one's mother culture often create unconscious biases and assumptions that can lead to misunderstandings or inappropriate communication in intercultural settings.

In the twenty-first century, FL education typically aims to educate students for the challenges of adult life in the contemporary technologically advanced world, where proficiency in cross-cultural communication is essential. However, learners may need a stronger foundation in intercultural knowledge to conduct productive and successful cross-cultural interactions. Herschbach (1995) acknowledged that technology educators strongly believe that technology is a form of formal knowledge that can be reduced to curricular elements. This belief stems from the difficulty of imagining a twenty-first-century educational setting without some sort of technological device. According to Maimone (2018), “technology could play a crucial role in facilitating knowledge transfer and exchange inside and outside local communities and on a global scale. It can foster the creation, dissemination and sharing of intercultural knowledge, facilitating the creation of bridges across political, cultural, social and organizational boundaries” (p. 9). This suggests that TBI is a useful strategy that might enhance students' intercultural awareness because it provides an array of real materials for FL classrooms. Printed, audio, and visual resources that allow FL students to interact directly with the target culture are examples of authentic materials.

Intercultural Communicative competence

ICC has become a crucial aspect of language learning in our increasingly globalized world. Byram's (1997) seminal model of ICC emphasizes five key components: knowledge, skills of interpreting and relating, skills of discovery and interaction, attitudes, and critical cultural awareness. This model has been widely influential in shaping our understanding of what constitutes effective intercultural communication. Byram's (1997) model represents a holistic approach to intercultural competence, integrating cognitive, affective, and behavioral dimensions. The five components of the model are:

1. **Knowledge (savoirs):** This component encompasses knowledge of social groups, their products and practices in one's own and in one's interlocutor's country, as well as knowledge of the general processes of societal and individual interaction (Byram, 1997). It goes beyond mere factual knowledge to include understanding of how social identities are constructed and how social interaction operates within and across cultures.

Sercu (2004) expands on this concept, arguing that intercultural knowledge should be both culture-specific and culture-general "Intercultural competence requires both culture-specific knowledge (knowledge about a specific culture) and culture-general knowledge (knowledge about cultural differences in general, and about how cultures vary)." (p. 75)

2. **Skills of interpreting and relating (savoir comprendre):** These skills involve the ability to interpret documents or events from another culture, explain them, and relate them to documents or events from one's own culture (Byram, 1997). This component emphasizes comparative analysis and the ability to mediate between different cultural perspectives.

Houghton (2012) highlights the importance of these skills in developing intercultural citizenship "The skills of interpreting and relating are crucial for active participation in multicultural societies, allowing individuals to navigate complex cultural landscapes and build bridges between diverse perspectives." (p. 45)

3. **Skills of discovery and interaction (savoir apprendre/faire):** This refers to the ability to acquire new knowledge of a culture and cultural practices and the ability to operate knowledge, attitudes, and skills under the constraints of real-time communication and interaction (Byram, 1997). It emphasizes experiential learning and the capacity to engage effectively in intercultural encounters.

Liddicoat and Scarino (2013) expand on this concept, emphasizing the role of reflexivity "The skills of discovery and interaction involve not just acquiring new cultural knowledge, but also the ability to reflect on and adjust one's understanding and behavior in real-time intercultural contexts." (p. 57)

4. **Attitudes (savoir être):** This component involves curiosity and openness, readiness to suspend disbelief about other cultures and belief about one's own (Byram, 1997). It emphasizes the affective dimension of intercultural competence, highlighting the importance of empathy, respect, and a willingness to relativize one's own values, beliefs, and behaviors.

Deardorff (2006) emphasizes the foundational nature of attitudes in her Process Model of Intercultural Competence "Attitudes of openness, respect, and curiosity serve as the foundation for developing other aspects of intercultural competence. Without these attitudes, the development of knowledge and skills may be limited or superficial." (p. 255)

5. **Critical cultural awareness (savoir s'engager):** This involves an ability to evaluate critically and on the basis of explicit criteria, perspectives, practices, and products in one's own and other cultures and countries (Byram, 1997). This component emphasizes the importance of developing a critical stance towards both one's own and other cultures, moving beyond simple acceptance or rejection of cultural differences.

Guilherme (2002) further develops this concept, arguing for a critical pedagogy approach "Critical cultural awareness involves not just understanding cultural differences, but also questioning power relations and cultural hegemonies. It requires learners to engage with culture as a dynamic, contested space rather than a fixed set of characteristics." (p. 121)

Impact and Evolution of Byram's Model

Byram's model of Intercultural Communicative Competence has provided a comprehensive framework for understanding and developing the complex set of knowledge, skills, and attitudes necessary for effective intercultural communication. While the model continues to be influential, ongoing research and changing global contexts have led to refinements and expansions of the concept of ICC. As our world becomes increasingly interconnected and culturally diverse, the importance

of developing ICC in language learners remains paramount, with Byram's model continuing to serve as a foundational reference point in this endeavor.

Besides, Byram's model has significantly influenced both research and practice in intercultural communication and language education. Its comprehensive approach has provided a robust framework for understanding and developing ICC.

➤ **Integration with Language Education:**

The model has been particularly influential in foreign language education. Liddicoat and Scarino (2013) argue for an intercultural approach to language teaching that integrates Byram's ICC components with language proficiency development, "An intercultural approach to language teaching views language and culture as inextricably linked, with intercultural competence being an essential outcome of language learning alongside linguistic proficiency." (Liddicoat & Scarino, 2013, p. 45).

➤ **Assessment of ICC:**

Byram's model has informed approaches to assessing intercultural competence. The INCA project (Intercultural Competence Assessment) developed assessment tools based on Byram's model: "The INCA project operationalized Byram's model into assessable components, focusing on tolerance of ambiguity, behavioral flexibility, communicative awareness, knowledge discovery, respect for otherness, and empathy." (Prechtel & Lund, 2007, p. 472).

➤ **Expansion and Refinement:**

Subsequent researchers have expanded and refined Byram's model. For instance, Deardorff's (2006) Process Model of Intercultural Competence emphasizes the developmental nature of ICC: "Intercultural competence should be viewed as an ongoing process rather than a fixed state. It involves continuous learning, reflection, and adaptation." (Deardorff, 2006, p. 257)

➤ **Application to Digital Contexts:**

With the rise of digital communication technologies, researchers have explored how Byram's model applies to online intercultural interactions. Helm (2009) argues for the need to develop "cyberpragmatic competence" as part of ICC: "Digital communication platforms present unique challenges and opportunities for intercultural communication, requiring the development of specific competences for effective online intercultural interaction." (Helm, 2009, p. 91)

➤ **Critical Perspectives:**

Some scholars have critiqued and expanded on Byram's model from critical and postcolonial perspectives. Holliday (2011) argues for a more fluid understanding of culture in ICC models: "ICC models must avoid reductive cultural stereotypes and recognize the fluid, contested nature of cultural identities and practices." (Holliday, 2011, p. 35)

However, EFL learners often face significant challenges in developing these ICC components due to the pervasive influence of their mother culture (Liddicoat & Scarino, 2013). This phenomenon, known as mother culture interference, can manifest in various ways and significantly impact learners' ability to navigate diverse cultural contexts effectively. As Deardorff (2015) argues, "Intercultural competence development is a lifelong process; there is no point at which one becomes fully interculturally competent" (p. 3). This underscores the need for ongoing, targeted interventions to help learners recognize and mitigate the influence of their mother culture on their intercultural communication.

1. Linguistic Transfer

One of the most noticeable forms of mother culture interference is linguistic transfer. Odlin (1989) defines transfer as "the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired" (p. 27). This transfer can occur at various linguistic levels:

- a) Phonological transfer: Learners may apply the sound systems of their native language to English, resulting in accent issues or difficulty perceiving certain English phonemes (Flege, 1995).
- b) Syntactic transfer: Grammatical structures from the mother tongue may be inappropriately applied to English, leading to errors in sentence construction (Jarvis & Pavlenko, 2008).
- c) Lexical transfer: Learners might use false cognates or translate idiomatic expressions literally, causing misunderstandings (Ringbom, 2007).

Recent research by Crossley et al. (2021) has employed natural language processing techniques to identify and quantify linguistic transfer in learner corpora, providing new insights into the pervasiveness and nature of this phenomenon.

2. Pragmatic Transfer

Pragmatic competence, a crucial component of ICC, is particularly susceptible to mother culture interference. Kasper and Blum-Kulka (1993) define pragmatic transfer as "the influence exerted by learners' pragmatic knowledge of languages and cultures other than L2 on their comprehension, production and learning of L2 pragmatic information" (p. 10). Pragmatic transfer can affect various aspects of communication:

- a) Speech acts: The way learners perform speech acts such as requests, apologies, or compliments may be influenced by their native cultural norms (Ishihara & Cohen, 2014).
- b) Politeness strategies: Learners may apply politeness norms from their mother culture, which can be perceived as inappropriate in the target culture (Brown & Levinson, 1987; Taguchi, 2015).
- c) Conversational management: Turn-taking, topic management, and other discourse-level features may be influenced by mother culture norms (Iwasaki, 2015).

Recent studies have highlighted the persistence of pragmatic transfer even at advanced levels of language proficiency. For instance, Economidou-Kogetsidis (2016) found that even highly proficient Greek learners of English displayed pragmatic transfer in their email requests to faculty.

3. Nonverbal Communication

Nonverbal aspects of communication, deeply rooted in cultural norms, are often unconsciously transferred from the mother culture. Matsumoto and Hwang (2013) argue that nonverbal behaviors are particularly resistant to change due to their largely automatic and unconscious nature. Areas of nonverbal communication affected by mother culture interference include:

- a) Proxemics: Cultural norms regarding personal space and physical contact may be inappropriately applied in intercultural contexts (Hall, 1966).
- b) Kinesics: Gestures, facial expressions, and body language can be misinterpreted or misused across cultures (Poyatos, 2015).
- c) Chronemics: Attitudes towards time, punctuality, and the pacing of interactions may be influenced by mother culture norms (Levine, 2006).

Recent research by Gregersen et al. (2017) has employed eye-tracking technology to examine how learners from different cultural backgrounds interpret and produce nonverbal cues, providing new insights into the complexities of nonverbal communication in intercultural contexts.

4. Cultural Values and Beliefs

Perhaps the most pervasive and challenging aspect of mother culture interference relates to deeply ingrained cultural values and beliefs. Hofstede's (2001) cultural dimensions theory provides a framework for understanding how fundamental cultural differences can impact communication and behavior. Key areas where cultural values can interfere with ICC development include:

- a) Individualism vs. Collectivism: This dimension can affect communication styles, decision-making processes, and perceptions of self and others (Triandis, 2018).
- b) Power Distance: Attitudes towards hierarchy and authority can influence communication in academic and professional contexts (Merkin, 2018).
- c) Uncertainty Avoidance: Tolerance for ambiguity and attitudes towards rules and structure can affect learners' approach to novel intercultural situations (Gudykunst, 2004).

Recent work by Hammer (2015) on the Intercultural Development Continuum highlights how learners' worldviews evolve as they develop ICC, moving from monocultural to intercultural mindsets. However, this process is often non-linear and can be significantly impacted by mother culture interference.

Proposed Frameworks for Technology-Enhanced Language Learning and ICC Development

The intersection of technology and language learning has opened up new avenues for developing Intercultural Communicative Competence (ICC) in EFL contexts. Recent studies have highlighted the potential of various technological tools and approaches to support ICC development while addressing the challenges posed by mother culture interference. Chun (2011) argues that computer-mediated communication (CMC) tools can provide learners with authentic intercultural experiences, fostering the development of ICC components. Similarly, Godwin-

Jones (2016) emphasizes the role of mobile technologies in facilitating informal, situated learning of cultural knowledge and practices.

1. Computer-Mediated Communication (CMC) Tools

Chun (2011) argues that CMC tools provide learners with authentic intercultural experiences, fostering the development of ICC components. More recent research has further substantiated this claim:

- a) Synchronous CMC: Video conferencing platforms like Zoom and Skype have been shown to enhance learners' intercultural awareness and communication skills (O'Dowd & O'Rourke, 2019). These tools allow for real-time interaction with individuals from diverse cultural backgrounds, providing immediate feedback and opportunities for negotiation of meaning.
- b) Asynchronous CMC: Platforms such as discussion forums and collaborative writing tools (e.g., Google Docs) enable learners to engage in more reflective intercultural exchanges. Çiftçi (2016) found that asynchronous CMC can lead to deeper cultural analyses and more thoughtful responses, as learners have time to process and research cultural differences.

2. Mobile Technologies and Situated Learning

Godwin-Jones (2016) emphasizes the role of mobile technologies in facilitating informal, situated learning of cultural knowledge and practices. This approach has gained further traction:

- a) Location-Based Learning: Apps like Geocaching and ARIS (Augmented Reality and Interactive Storytelling) allow learners to engage with cultural content in real-world contexts. Holden and Sykes (2011) demonstrated how such apps can enhance learners' understanding of local cultures and practices.
- b) Just-in-Time Cultural Information: AI-powered mobile apps like Google Lens and Microsoft Translator now offer real-time cultural information and translation, supporting learners in navigating intercultural situations as they arise (Shadiev et al., 2020).

3. Virtual and Augmented Reality

Immersive technologies have shown significant promise in simulating authentic cultural environments. To broaden learners' understanding of diverse cultural contexts and communication styles, reducing the dominance of mother culture perspectives:

- a) Virtual Reality (VR): Lin and Lan (2015) found that VR environments can provide safe spaces for learners to practice intercultural communication without the anxiety often associated with real-world interactions. More recent studies, such as Xie et al. (2019), have shown that VR can significantly enhance learners' cultural empathy and perspective-taking abilities.
- b) Augmented Reality (AR): Godwin-Jones (2016) highlighted the potential of AR for situated cultural learning. Recent applications, like the Google Arts & Culture app, overlay cultural information onto real-world objects and locations, enriching learners' cultural experiences (Cheng & Tsai, 2019).
- c) Curated Multimedia Libraries: Compile a diverse collection of videos, podcasts, and articles representing various English-speaking cultures. Use AI-driven recommendation systems to suggest content based on learners' interests and ICC development needs.

4. Social Networking and Online Communities

Platforms like Facebook, Twitter, and language exchange websites enable learners to engage in genuine intercultural interactions:

- a) Social Media for Intercultural Learning: Lomicka and Lord (2016) discussed how social media can be leveraged for intercultural education. Recent studies have explored the use of Instagram for developing visual literacy in intercultural contexts (Dugartsyrenova & Sardegna, 2019) and the role of Twitter in fostering intercultural dialogues (Bali & Caines, 2018).
- b) Dedicated Language Learning Social Networks: Platforms like HelloTalk and Tandem have gained popularity, offering structured opportunities for language exchange and cultural learning. These apps often incorporate features like translation tools and cultural notes to support intercultural communication (Kukulaska-Hulme et al., 2017).

5. Telecollaboration and Virtual Exchange

Structured online collaborations between learners from different cultural backgrounds have proven effective in promoting intercultural awareness and communication skills:

- a) Evolving Models of Telecollaboration: O'Dowd (2018) outlines how telecollaboration has evolved from simple email exchanges to complex, multi-modal projects. Recent initiatives like EVOLVE (Evidence-Validated

Online Learning through Virtual Exchange) demonstrate the potential of large-scale, institution-level virtual exchanges (The EVALUATE Group, 2019).

- b) Intercultural Citizenship Projects: Porto et al. (2018) describe how telecollaboration can be used to develop not only linguistic and intercultural skills but also critical cultural awareness and global citizenship competences.

6. Corpus Linguistics and Data-Driven Learning

Analyzing authentic language use across cultures can help learners identify and understand cultural differences in communication patterns:

- a) Multimodal Corpora: Flowerdew (2015) discusses the potential of corpus linguistics in ICC development. Recent advancements include the use of multimodal corpora that incorporate visual and auditory data, providing a more comprehensive view of intercultural communication (Adolphs & Carter, 2013).
- b) Learner Corpora for Intercultural Analysis: The compilation and analysis of learner corpora from diverse L1 backgrounds allow for the identification of mother culture interference patterns in English usage (Granger et al., 2015).

7. Gamification and Serious Games

Language learning applications that incorporate cultural content and intercultural scenarios can increase learner engagement and cultural awareness:

- a) Commercial Games for Cultural Learning: Thorne et al. (2012) explored the use of commercial off-the-shelf games for intercultural learning. More recent studies have examined the potential of popular games like Assassin's Creed for historical and cultural education (Courthoys, 2019).
- b) Purpose-Built Intercultural Games: Developers are creating games specifically designed to enhance ICC, such as "Intercultural Horizons" (Guillén-Nieto & Aleson-Carbonell, 2012) and "RealLives" (Ware, 2018), which simulate life in different cultural contexts.

All in all, the rapid evolution of technology continues to offer new possibilities for enhancing ICC development in EFL contexts. While these tools and approaches show great promise, it is crucial to note that technology alone is not a panacea for the challenges of intercultural communication. Effective integration of technology in ICC development requires careful consideration of pedagogical approaches, learner needs, and potential limitations.

1. Cultural Exposure

Objective: To broaden learners' understanding of diverse cultural contexts and communication styles, reducing the dominance of mother culture perspectives.

Implementation:

a) Virtual Reality (VR) Cultural Immersion: Develop VR experiences that simulate everyday scenarios in various English-speaking cultures. For example, learners could navigate a British pub, an American workplace, or an Australian beach, interacting with virtual characters and observing cultural norms in action.

b) Augmented Reality (AR) Cultural Overlays: Create AR applications that provide cultural information overlays in real-world settings. Learners could use their smartphones to scan objects or environments, receiving information about their cultural significance or use in different English-speaking contexts.

c) Curated Multimedia Libraries: Compile a diverse collection of videos, podcasts, and articles representing various English-speaking cultures. Use AI-driven recommendation systems to suggest content based on learners' interests and ICC development needs.

2. Authentic Interaction

Objective: To provide opportunities for genuine cross-cultural communication, allowing learners to practice ICC skills in real-world contexts.

Implementation:

a) Structured Telecollaboration Projects: Partner with educational institutions in English-speaking countries to create joint online projects. Use video conferencing tools and collaborative platforms (e.g., Google Workspace, Microsoft Teams) to facilitate regular interactions between EFL learners and native English speakers.

b) Moderated Intercultural Online Communities: Establish or utilize existing online forums or social media groups focused on intercultural exchange. Implement AI-powered moderation tools to ensure respectful and productive interactions while providing real-time language and cultural guidance.

c) Language Exchange Apps with ICC Focus: Develop or adapt language exchange applications (e.g., Tandem, HelloTalk) to include specific ICC-oriented activities and prompts, encouraging users to discuss and compare cultural practices and perspectives.

3. Reflective Practice

Objective: To promote critical reflection on intercultural experiences and mother culture influence, fostering metacognitive awareness of ICC development.

Implementation:

a) Digital Cultural Journey Portfolios: Implement e-portfolio platforms where learners document and reflect on their intercultural experiences, insights, and challenges. Include prompts that encourage comparison between mother culture and target culture norms.

b) AI-Assisted Reflective Journaling: Develop an AI-powered journaling tool that provides prompts and questions based on learners' recorded experiences, guiding them to deeper cultural insights and awareness of mother culture influence.

c) Peer Feedback and Discussion Forums: Create online spaces for learners to share their reflections, receive peer feedback, and engage in guided discussions about cultural differences and ICC development.

4. Linguistic and Pragmatic Awareness

Objective: To highlight cultural differences in language use and pragmatics, reducing mother culture interference in communication patterns.

Implementation:

a) Corpus-Based Cultural Language Analysis: Utilize corpus linguistics tools to analyze and compare language use across different English-speaking cultures. Develop interactive activities that allow learners to explore cultural variations in vocabulary, idioms, and discourse patterns.

b) Pragmatics Training Chatbots: Create AI-powered chatbots that simulate conversations in various cultural contexts, providing immediate feedback on the appropriateness of learners' language use and pragmatic choices.

c) Cross-Cultural Communication Style Analyzer: Develop a tool that analyzes learners' written or spoken English, identifying features that may be influenced by mother culture communication styles and suggesting culturally appropriate alternatives.

5. Simulated Practice

Objective: To provide low-stakes environments for learners to apply ICC skills and strategies, building confidence and competence in intercultural communication.

Implementation:

a) Gamified Intercultural Scenarios: Design role-playing games or interactive simulations that present learners with realistic intercultural communication challenges. Include branching narratives that adapt based on learners' choices, demonstrating the consequences of different communication approaches.

b) Virtual Reality Job Interviews: Create VR simulations of job interviews with employers from various English-speaking countries, allowing learners to practice professional communication while navigating cultural differences in interview expectations and etiquette.

c) AI-Driven Cultural Misunderstanding Resolution: Develop an AI system that generates culturally complex scenarios and engages learners in dialogue to resolve misunderstandings, providing feedback and guidance on effective intercultural communication strategies.

Integration and Assessment

To maximize the effectiveness of this framework, we recommend:

1. **Holistic Integration:** Incorporate elements from each component throughout the EFL curriculum, rather than treating ICC development as a separate module.
2. **Adaptive Learning Paths:** Utilize learning analytics and AI to create personalized ICC development journeys for each learner, addressing their specific areas of mother culture interference.
3. **Continuous Assessment:** Implement a multi-faceted assessment approach, including technology-enhanced ICC simulations, peer evaluations, and reflective assignments to track learners' progress in developing ICC and reducing mother culture interference.
4. **Teacher Training:** Provide comprehensive professional development for EFL educators on effectively using these technological tools and approaches to support learners' ICC development.

By implementing this framework, EFL programs can create a technology-rich environment that systematically addresses mother culture interference while fostering the development of robust Intercultural Communicative Competence.

Conclusion

As EFL learners continue to face challenges in developing ICC due to mother culture interference, technology offers promising solutions for enhancing cultural awareness, providing authentic intercultural experiences, and promoting critical reflection. By integrating a range of technological tools and approaches into EFL curricula, educators can create more effective learning environments that support the development of ICC while mitigating the influence of learners' mother culture. Future research should focus on longitudinal studies to assess the long-term impact of technology-enhanced ICC instruction, as well as investigations into how different technologies can be combined synergistically to create comprehensive ICC development ecosystems. Additionally, as AI and machine learning continue to advance, exploring their potential in providing personalized, adaptive ICC training will be crucial for the next generation of technology-enhanced language learning.

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