

Exploring the Use of Technology to Promote Intercultural Language Learning: A Literature Review

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Abstract

The advancement of technology facilitates easier communication among individuals of diverse cultures, leading to the necessity of possessing intercultural competence in today's interconnected world. This competence is crucial for effectively engaging and communicating across cultural divides. Consequently, preparing future intercultural-competent students has become a new educational objective. However, recent studies have reported that many students still have insufficient intercultural competence, and one of the reasons is the teachers' reluctance to incorporate intercultural learning due to many factors, such as materials, time, and understanding constraints. This study aimed to review articles on intercultural language learning supported by technology. The researcher intended to evaluate the current state of knowledge concerning (a) the most frequently employed technology and their effectiveness in improving students' intercultural communication competence and (b) learning activities. The researcher utilized keywords such as "Intercultural," "competence," and "technology" to locate relevant articles. These articles underwent filtering based on their titles, abstracts, and complete content. To this end, 15 articles on intercultural language learning supported by technology published between 2019 and 2024 were selected and reviewed. The findings of this study showed that Virtual Reality and Online Collaboration platforms were the most frequently used tools. The platforms could effectively facilitate students' intercultural development by conducting a learning collaboration program with others from different cultural backgrounds. Based on the problems stated, this study is expected to be a reference for teachers to integrate technology-based

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intercultural language learning in facilitating students with intercultural development and experience.

Keywords: Intercultural language learning, Technology-enhanced language learning, Virtual reality, Online collaboration

Introduction

The need to integrate intercultural competence (IC) into language teaching has grown due to globalization, which connects people worldwide (Gunay, 2016). Nowadays, people can easily find representatives of foreign cultures on the internet and communicate with them. As a result, knowing about one's culture and other cultures and effectively engaging in social interactions are essential. Schenker (2012, as cited in Avgousti, 2018), stated that proficiency in a language does not guarantee success in communicating with people from other cultural backgrounds. Accordingly, today's L2 (second language) or FL (Foreign Language) learners aim to be an intercultural speaker. However, many teachers and students are now reported as having low intercultural competence (Hapsari et al., 2022).

Technological advancement has helped us increase learning effectiveness and efficiency in many subjects, including language learning. Several scholars, such as Ciftci (2016), Avgousti (2018), and Shadiev and Sintawati (2020), have undertaken review studies on intercultural learning supported by technology and reported its effectiveness. This study also intends to review empirical studies about the use of technology to promote intercultural language learning. However, it differs from the published works because it covers different time frames and databases. The study aims to fill gaps in rapidly evolving technology-enhanced language learning over the past five years, focusing on (a) the most used technologies and their effectiveness in improving IC and (b) the employed learning activities.

Methods

This study employed a systematic literature review (Grant & Booth, 2009) following the PRISMA procedure (Moher et al., 2009) and general guidelines by Avgousti (2018). The steps included identification, screening, eligibility, and inclusion, as illustrated in Figure 1 below.

Lipsey and Wilson (2001) suggested using multiple sources to find relevant studies. Therefore, the writer collected relevant research articles from two databases, Scopus and Springer Link. From these databases, the writer discovered

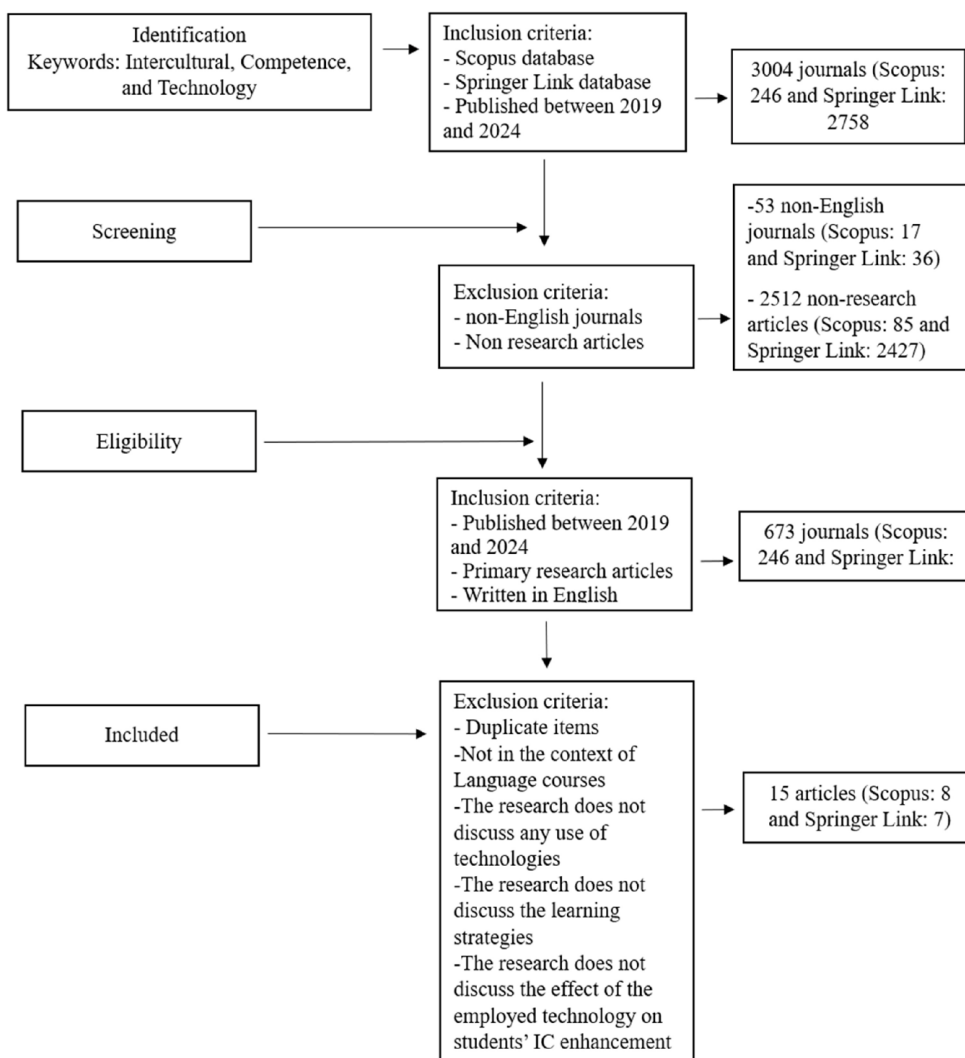


Figure 1. Schematic of data search and retrieval.

246 items from Scopus and 2758 items from Springer Link. The writer then filtered the research articles based on the inclusion and exclusion criteria in Figure 1 above. After her search, 15 articles were chosen for review.

This study employed content analysis using open coding (Creswell, 2014) to comprehend key research questions and categorize data related to the phenomena under study (Avgousti, 2018). Coding schemes were developed based on recommendations from prior studies (Avgousti, 2018; Shadiev & Sintawati, 2020), focusing on (a) technology devices used by participants for intercultural language learning and (b) learning activities which are teacher-guided instructional tasks or assignments for participants.

Results and Discussion

Technologies

In this study, the writer categorized each technology based on definitions from Shadiev and Sintawati (2020). The most common technologies were Virtual Reality (VR) ($n = 5$) and online collaborative tools ($n = 5$). Other technologies included translation tools ($n = 1$), learning management systems ($n = 2$), and digital storytelling ($n = 3$). This finding contrasts with Shadiev and Sintawati (2020), who reported videoconferencing and e-mail as the most frequently used tools. They found that e-mail effectively enhanced students' IC because it is flexible and fits the everyday online practice. Conversely, videoconferencing enabled students to increase interaction through real-time communication (Shadiev & Sintawati, 2020).

Unlike the previous works, the findings of this study showed that VR and online collaborative tools are the most frequently used and highlighted for their effectiveness in intercultural language learning. VR, for instance, offers an immersive environment that enhances participants' sense of presence in different cultural contexts (Hester & Lu, 2023), promoting intercultural learning experiences. This capability is supported by findings from Shadiev et al. (2023), Li et al. (2024), DeWitt et al. (2022), and Shadiev et al. (2024), who documented significant improvements in intercultural competence following VR integration. Additionally, online collaboration tools have emerged as a viable alternative in the absence of usual physical study-abroad opportunities due to post-COVID-19 restrictions (Dunn-Jensen et al., 2021). Scholars such as Chau et al. (2024), Hackett et al. (2023), Toscu and Erten (2020), Calvo and Hartle (2024), Kirchmeyer and Knauff (2023), and Okasana et al. (2021) have identified online collaboration's efficacy in providing intercultural experiences and enhancing language skills. Moreover, although less frequently used than VR and online collaborative tools, technologies like translation tools, learning management systems, and digital storytelling have been recognized for their contributions to improving language skills and IC (Agustin et al., 2022; Cui, 2024; Kahanurak et al., 2023; Sergeeva et al., 2021; Shadiev et al., 2024). Various studies also note these tools for enhancing listening skills, discourse competence, vocabulary acquisition, and translation abilities.

Learning Activities

The usage of technologies in the reviewed studies can be grouped into two categories: (1) content creation and (2) communication. For instance, in the studies by Shadiev et al. (2023), DeWitt et al. (2022), and Shadiev et al. (2024),

students created virtual tours of their local culture. They developed VR environments related to specific cultures (category 1). In Agustin et al. (2022), students created artistic digital stories. Category 2 included Vietnamese students in Chau et al. (2024) engaging in online collaborative learning with Taiwanese students, American and Brazilian students in Calvo and Hartle (2024), as well as Chinese and Russian students in Shadiev et al. (2024), who also participated in similar activities.

The results indicated that the most frequently employed learning activities were collaboration ($n = 8$) and interaction ($n = 4$), followed by introducing local cultures ($n = 2$), discussing domain knowledge ($n = 2$), intercultural training ($n = 2$), reflection ($n = 2$), and experiencing foreign cultures ($n = 1$). Collaborative learning, involving multiple students working together to solve problems or create products, is a widely used educational approach (Dillenbourg, 1999). Therefore, it aligns with the predominant use of technology for creation and communication purposes. Scholars affirm that these activities enhance students' IC (Agustin et al., 2022; Calvo & Hartle, 2024; Chau et al., 2024; Cui, 2024; DeWitt et al., 2022; Hackett et al., 2024; Kahanurak et al., 2023; Kirchmeyer & Knauff, 2023; Li et al., 2024; Oksana & Ruzana, 2021; Sergeeva et al., 2021; Shadiev et al., 2023; Shadiev et al., 2024; Yaniafari et al., 2021) by fostering openness to diversity (Cabrera et al., 2002).

Conclusion

The results showed that VR and online collaborative tools effectively enhance students' IC through collaboration and interaction. Moreover, the results of this study echo previous research (Avgousti, 2018; Shadiev & Sintawati, 2020), yet it also reveals significant differences. For instance, there is a shift in frequently used technologies before and after 2019. Furthermore, this study explores database resources not covered in earlier research. These findings offer new insights for educators and researchers engaged in contemporary intercultural language learning studies using the latest technologies and finding more practical projects. Because this study only used two databases, scholars are suggested to integrate a broader range of literature in their research.

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