International Journal of Learning, Teaching and Educational Research
Vol. 23, No. 10, pp. 226-251, October 2024
https://doi.org/10.26803/ijlter.23.10.11
Received Aug 24, 2024; Revised Oct 11, 2024; Accepted Oct 23, 2024

A Systematic Review of Blended Learning in Higher Education: Second Language Acquisition through the Community of Inquiry Framework

Xin Li*, Nur Ainil Sulaiman and Azlina Abdul Aziz
Faculty of Education, Universiti Kebangsaan Malaysia
Bangi 43600, Malaysia

Abstract. This study examined the application of the Community of Inquiry (CoI) framework in blended learning environments for second language acquisition in higher education. A systematic literature review was conducted using the PRISMA protocol, analyzing 25 peer-reviewed articles published between 2014 and 2023 from Scopus, Web of Science, and ERIC databases. The review investigated CoI implementation characteristics, the interplay of CoI elements, research methodologies, challenges, and best practices. Findings revealed a predominance of studies on undergraduate English learners, with mixed-methods approaches being most common. The integration of social, cognitive, and teaching presence significantly enhanced language acquisition and student engagement. Key challenges included technological integration, maintaining online engagement, effective instructional design, and addressing varying language proficiency levels. Best practices emphasized the strategic use of mobile applications, fostering online communities, enhancing teaching presence, and implementing personalized learning approaches. Gaps identified in the research included a predominant focus on English language studies, limited exploration at the graduate level, and a scarcity of longitudinal investigations examining long-term outcomes of CoI-informed blended learning. This review provided valuable insights for researchers and practitioners in blended language learning, offering a foundation for future research and implementation strategies. However, the study was limited by its focus on peer-reviewed articles from specific databases.

Keywords: Systematic review, Community of Inquiry, blended learning, second language acquisition, higher education PRISMA

1. Introduction

The COVID-19 pandemic has significantly transformed global education, accelerating the adoption of information and communication technology (ICT) in

*Corresponding author: *Xin Li, p119469@siswa.ukm.edu.my*

higher education and shaping educational practices, particularly in blended learning (Dhawan, 2020). In second language acquisition, blended learning techniques, from occasional online activities to fully integrated blended courses, have become more popular (Su et al., 2020; Morsi, 2023). Numerous academic conferences and seminars on novel teaching approaches have recognised the importance of blended learning in improving student engagement and language acquisition (Albatti, 2023). Despite this growing attention, blended learning in second language acquisition is still being studied and refined, with scholars noting its gradual integration of online components to improve classroom teaching (Albiladi & Alshareef, 2019; Ramalingam et al., 2022).

Studies have demonstrated the effectiveness of blended learning approaches in improving language skills, including vocabulary acquisition, grammar comprehension, and overall communicative competence (Ahmad et al., 2023; Ramalingam et al., 2022). Online discussion forums and collaborative projects have been shown to promote active language use and peer learning (Kirsi et al., 2021; Ling & Huang, 2024). Blended learning in second language acquisition combines face-to-face with online learning for flexibility and possible improvement (Nguyen, 2024). The CoI framework, which emphasizes social, cognitive, and teaching presence, provides a valuable lens through which to examine and enhance blended learning experiences in language acquisition (Garrison et al., 2010).

However, how to leverage the principles of social presence (Rourke et al., 1999), cognitive presence (Garrison et al., 2001), and teaching presence (Anderson et al., 2001) effectively within blended learning environments to maximize students' language acquisition remains open (Hilliard & Stewart, 2019). The CoI framework has been instrumental in the development of online courses and programmes, as well as serving as a conceptual model for numerous research. The CoI framework posited that meaningful educational experiences occurs within a community of learners through the interaction of these three core elements, namely social presence, cognitive presence, and teaching presence (Garrison et al., 2001). This model underscores the importance of establishing a collaborative and supportive online learning environment that fosters critical conversation and reflection. The CoI framework, which was developed to assess online learning experiences, particularly inquiry-based learning, has been widely employed in online teaching and learning (Candace, 2019). Its widespread application has resulted in its integration into a variety of online education research, course designs, and learning experiences.

Recent studies explored the components of the CoI framework in language learning contexts. Parrish et al. (2021) examined how digital tools fostered cognitive presence in online English courses, while Bailey (2022) proved that social presence played a significant role in language learning, especially in online settings, by promoting interaction and mediating the relationship between presence and academic achievement. Nasrullah et al. (2024) explored teaching presence, emphasizing affective support, open communication, and group cohesion in blended learning. Wang and Nurhasmiza (2023) focused on instructor guidance and mobile application integration to enhance teaching presence in

English courses. However, these studies, while valuable, focused on isolated elements of the CoI framework or specific language learning contexts. A significant gap exists in the literature: the lack of a comprehensive synthesis of how the CoI framework in its entirety enhances engagement and learning outcomes across diverse blended language learning environments. The gap is especially significant considering the fast advancement of the blended learning approach in language education, as emphasized by two researchers, namely Wilson and Berge (2023), who underscored the need for comprehensive guidelines for implementing and evaluating the CoI framework in e-learning contexts. Specifically, there is a lack of comprehensive synthesis on how the CoI framework enhances engagement and learning outcomes across diverse blended language learning environments (Cheng, 2022).

This study aimed to conducting a systematic review to analyze and synthesize existing research findings on social presence, cognitive presence, and teaching presence in blended learning environments for second language acquisition. To guide this systematic review, a tailored conceptual framework was developed. Built upon the model revised by Hsu et al. (2012), this adapted blended learning framework addressed a significant gap in the literature by specifically targeting blended learning environments. This adaptation retained the original model's six key elements, slightly modifying them to participants, research methods, research focuses, adopted technologies, learning outcomes, application challenges, and best practices. The model's versatility, previously demonstrated in studies on flipped classrooms in medical education (Chung et al., 2021; Lin & Hwang, 2018) and foreign language instruction (Turan & Akdag, 2020), is now tailored to the unique dynamics of blended learning in second language acquisition. This framework provided comprehensive coverage of these six aspects (as shown in Figure 1) through four research questions:

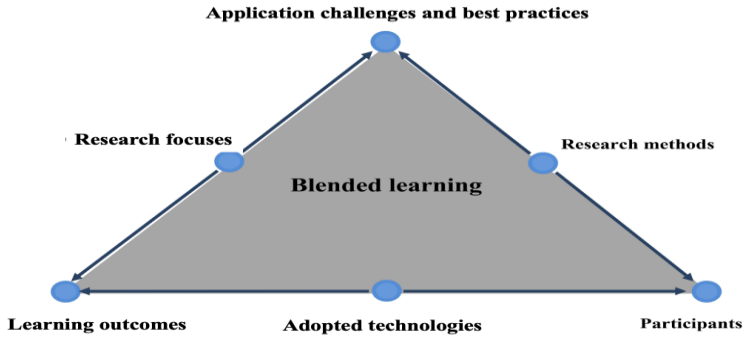

Figure 1: Blended Learning Model

i) What are the characteristics of studies that apply the CoI framework in blended learning environments for second language acquisition?

ii) How do the elements of the CoI framework (social presence, cognitive presence, and teaching presence) interact and contribute to effective language learning outcomes in blended learning environments?

iii) What are the predominant research approaches, designs, and data collection methods used in studies applying the CoI framework to blended second language acquisition environments?

iv) What are the main challenges and best practices identified in the implementation of the CoI framework for second language acquisition in blended learning environments?

This study employed a systematic literature review to synthesize and evaluate CoI-based blended learning studies in second language acquisition. Following the systematic review process (Xiao & Watson, 2019), a modified preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) technique was used, along with NVivo for qualitative analysis and Microsoft Excel for data management. The review focused on peer-reviewed articles from major databases such as Scopus, Web of Science, and ERIC, published between 2014 and 2023, to capture the most recent developments in the field. These databases were selected for their comprehensive coverage of high-quality, peer-reviewed education and language acquisition research. Scopus and Web of Science are recognized for their extensive interdisciplinary coverage and rigorous inclusion criteria (Mongeon & Paul-Has, 2016). ERIC as a database specifically focuses on education research and provides targeted coverage of relevant studies in language education (Bhattacherjee, 2012). These datasets reflect worldwide second language acquisition and blended learning research fairly (Clarivate, 2023).

2. Literature Review

The Community of Inquiry (CoI) framework provides a useful lens for understanding the relationship between engagement and blended learning in the context of language acquisition (Zhang, 2020). This model posits that meaningful learning occurs through the dynamic interaction of three core elements: cognitive presence, social presence, and teaching presence. Cognitive presence refers to the ability of students to construct meaning through sustained reflection and discourse (Harb & Krish, 2020). In blended language learning, this could involve integrating digital tools and online activities to provide opportunities for language practice, exploration, and problem solving (Ali et al., 2013). Social presence involves the ability to project oneself socially and emotionally as a real person (Armellini & DeStefani, 2016). This aspect could be supported through collaborative tasks, peer-to-peer interactions, and opportunities for authentic communication in the target language (Pham et al., 2022). Teaching presence encompasses the design, facilitation, and direction of cognitive and social processes to achieve meaningful learning outcomes (Hosler, 2009). Effective teaching presence guides the design and implementation of blended learning activities to optimize engagement and language learning (Nasrullah et al., 2024; Wang & Nurhasmiza, 2023).

The application of the CoI framework to blended language learning has shown promise in enhancing student engagement and learning outcomes (Honig & Salmon, 2021). Digital tools and online activities might boost cognitive presence in language learning, according to Ali et al. (2013). Pham et al. (2022) noted that social presence supported language skill development through authentic communication. Teaching presence could be used to create effective blended learning activities for language acquisition (Nasrullah et al., 2024; Wang & Nurhasmiza, 2023). Despite these insights, CoI-based blended learning optimization for second language acquisition needs further investigation. This study aims to address this gap by conducting a systematic review to analyze and

synthesize existing research findings on social presence, cognitive presence, and teaching presence in blended learning environments for second language acquisition.

3. Methodology

3.1 Systematic Literature Review

This study adopted a comprehensive systematic literature analysis to examine and incorporate existing research data (Gupta et al., 2021). To achieve this, precise research and analytical questions were formulated that aligned with the objectives of this study within the framework of blended learning. The review technique was well planned, including source identification, keyword creation, and strict selection criteria (Kitchenham, 2012). This technique included systematic searches and examination of retrieved papers using established inclusion, exclusion, and quality criteria. Data relevant to our statistical searches was extracted from relevant papers using a systematic approach.

3.2 Database and Search Strategy

Figure 2 showed the selection process of scientific publications for this systematic review. To identify relevant publications, a systematic search strategy was executed in the bibliographic databases such as Scopus, ERIC, and Web of Science. The search terms used in this study included 'blended learning', 'blended education', 'blended courses', 'integrated learning', 'hybrid learning', 'community of inquiry', 'cognitive presence', 'teaching presence', 'social presence', 'engagement', 'participation', 'involvement', 'language', 'EFL', 'English as a foreign language', 'English', 'higher education' 'undergraduates', 'college', 'university'.

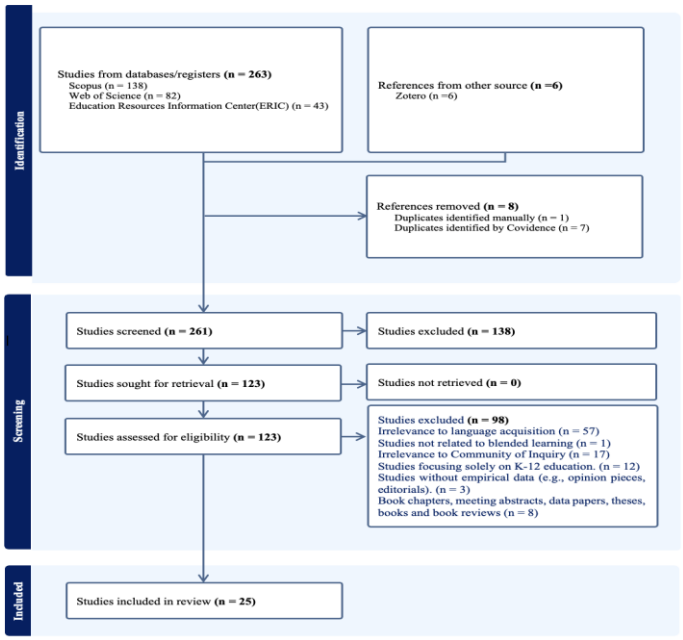

Figure 2: PRISMA Diagram Illustrating the Process of Selecting Analytical Papers

3.3 Criteria for Inclusion

The initial search yielded 263 publications, with eight (8) duplicates removed. Following a systematic screening process, publications underwent evaluation using predefined inclusion and exclusion criteria. This approach aimed to isolate research demonstrably pertinent to the investigation of blended learning's impact on language acquisition within higher education contexts. In conclusion, a total of 25 publications were incorporated into the analysis. The inclusion and exclusion criteria are presented in Table 1:

Table 1: Inclusion and Exclusion Criteria

Inclusion	Exclusion
Articles published between 2014 and 2023	Articles published before 2014 and after 2023
Articles focusing on language acquisition	Articles that focus on other subjects other than language learning
Articles related to blended learning	Articles that centre exclusively on other types of learning or comparison between blended learning and other types of learning (e.g., online learning, face-to-face learning)
Articles related to the Community of Inquiry framework	Articles without inclusion of the Community of Inquiry framework
Articles focusing on higher education contexts	Articles using solely addressing K-12 education
Studies presenting original empirical data	Theoretical articles and studies without empirical data
Peer-reviewed journal articles	Conference papers, theses, book chapters

3.4 Data Coding

A review procedure was developed to examine publications relating to the research topics. The protocol included six blended learning features in four phases. It focused on the characteristics of studies and the CoI framework's contribution to language acquisition. The characteristics of studies included participants and adopted technologies. Participants were crucial as they were the study subjects, and their traits could influence the CoI framework's effectiveness (Nesrallah et al., 2023). Technologies were essential as they mediated interactions and shaped learning experiences (Pavel, 2021). Regarding the CoI framework's contribution, research focuses determined which specific elements were being studied, such as social, cognitive, or teaching presence. These components worked together to examine how the CoI framework impacted language learning in blended environments. Learning outcomes were the results of the educational process and could include psychological and behavioural measures.

It is imperative to understand the research focuses in order to clarify the scope and objectives of each study (Oladipupo et al., 2020), while examining learning outcomes provide evidence of the effectiveness of the CoI framework in improving language acquisition (Alvi, 2022). The research design and methodologies used could influence the validity and reliability of the findings

(Mohd Salleh et al., 2023). Different methodologies may be more or less suitable for studying different aspects of the CoI framework. By examining the methodologies, it is vital for researchers to assess the strengths and weaknesses of the studies and determine which approaches are most effective for investigating the CoI framework (Heilporn & Lakhal, 2020), while identifying challenges and best practices provides actionable insights for educators, instructional designers, and researchers (Yongo, 2019). Table 2 presents a detailed description of the coding scheme that was used in this study to answer the aforementioned research questions.

Table 2. The Coding Scheme for Analysing the Collected Papers

Items	Description	Coding
Participants	Participants of the included studies	The scheme of participants was classified according to target languages, educational levels, and sample sizes
Adopted technologies	The various technologies used and the interventions to design the online and off-line versions in each blended learning model	The technologies used (e.g., online learning platform, videos, Facebook, video projector)
Research focuses	The specific language skills targeted and learners' perceptions of the three core components of the CoI framework—social presence, teaching presence, and cognitive presence	The exact aspect of language skills (e.g., speaking, listening, writing) and the coverage level of CoI (social presence, teaching presence, learning presence, or full coverage)
Learning outcomes	These refer to blended learning outcomes under CoI	Learning outcomes included psychological outcomes (e.g., perception, confidence, and self-efficacy, engagement) and behavioural outcomes (e.g., academic performance, interaction with the system)(Ani, 2019)
Research methods	These refer to three aspects, including, research approaches and designs, data collection	This category involved coding based on their overall research approach and

	methods, data analysis techniques	research design (e.g., qualitative and case study), techniques and tools used to gather data (e.g., survey), and statistical methods (e.g., descriptive statistics)
Application challenges and best practices	These refer to the challenges and best practices of implementing blended language teaching under the CoI framework.	The scheme of challenges and best practices was classified according to technological integration and social presence (TechSoc)(Garrison et al., 1999) cognitive and teaching presence in learning processes (CognTeach), pedagogical strategies and student engagement (PedStud)(Kahu, 2014), and contextual and design factors in language learning (ConDes)

4. Results and Discussion

4.1 What are the characteristics of studies that apply the CoI framework in blended learning environments for second language acquisition?

A total of 25 papers were included in this review, focusing on various aspects of blended learning experiences in higher education settings. The majority, namely 21 papers, concentrated on the undergraduate level. However, this was not surprising, since it was consistent with other reviews in second language acquisition. For example, several researchers have indicated that studies on second language acquisition tended to focus on undergraduate students, with little exploration into how these individuals progress to the higher levels of literacy required for graduate studies (Chater & Christiansen, 2018; Nelson & Damico, 2006). Among the 21 papers, 18 studies focused on English, one on Spanish, one each on German and Spanish, and one each on French and Italian. At the graduate level, three studies were identified: two focused on English, and one covered multiple languages. Additionally, one paper targeted both undergraduate and graduate levels, focusing on English (Table 3). This finding aligned with the findings of several researchers who believed that language studies have predominantly centred on English, with relatively less research

conducted on other languages, primarily due to the global ubiquity of English as a lingua franca (Onysko, 2016; Bylund et al., 2024).

Table 3. Distribution of Studies by Education Level and Language Focus

Level of Higher Education	Language Focus	Total
Undergraduate level	English (18); Spanish (1); German & Spanish (1); French & Italian (1)	21
Graduate level	English (2); Multiple languages (1)	3
Both undergraduate & graduate levels	English (1)	1

By categorizing the studies into various sample-size categories, a common trend emerged for similarly designed research with medium-to-large sample sizes. In studies focusing on undergraduate students, the largest group consisted of 5,531 participants who were English learners, while 90 participants were Spanish learners, 18 participants were studying both German and Spanish, and 39 participants were in French and Italian classes. Graduate-level studies included 101 participants learning English and 84 participants studying multiple languages. Additionally, there were 67 participants who were involved in studies encompassing both undergraduate and graduate levels, focusing on English. This finding coincided with the findings by Bylund et al. (2024), as they found 89.5 per cent of the 2,000 articles published in highly cited journals focused on English (Oladipupo et al., 2020). It might be due to its status as a global lingua franca and the extensive resources available for English language instruction and research. The underrepresentation of other languages pointed to a potential gap in understanding the unique challenges and strategies involved in acquiring these languages, which could inform more tailored and effective teaching approaches.

The reviewed studies also revealed a diverse range of technologies employed in blended learning environments for second language acquisition. These could be categorized into three main groups: learning management systems, communication tools, and interactive learning platforms. Learning management systems (LMS) formed the backbone of many blended learning setups. Several studies (Asoodar et al., 2014; Dona et al., 2014; Ling, 2022; Luz & Darlene, 2017; Rubio et al., 2018) utilized platforms such as Canvas, Blackboard, EMinus, Desire2Learn (Brightspace), and Moodle. These LMS provided a centralized hub for course material distribution, assignment submission, and grade management. They offered the advantage of organizing course content systematically and facilitating asynchronous learning. However, some studies noted that students and teachers might face a learning curve when adapting to these platforms.

The widespread use of LMS in blended language learning environments aligned with previous research highlighting their effectiveness in organizing course content and facilitating asynchronous learning. For example, a study by Albiladi and Alshareef (2019) emphasized the significant role of LMS in enhancing course organization and supporting self-paced learning in blended language contexts.

Similarly, another research study reported that LMS adoption led to improved student engagement and self-regulation, further supporting this study's observations on the benefits of these platforms (Zainuddin et al., 2019). Additionally, our research also revealed challenges in adapting to these platforms, a finding consistent with work identifying potential technical difficulties and learning curves associated with LMS adoption (Rasheed et al., 2020). In contrast to our results, another study proved that the effectiveness of LMS in blended learning depended heavily on instructors' technological proficiency and course design skills, suggesting that adaptation challenges may vary based on the specific implementation context (Bower et al., 2015).

Communication tools were extensively used to enhance interaction between students and instructors. Video conferencing platforms such as Zoom, Bongo Virtual Classroom, and Adobe Acrobat Meeting Pro were employed in multiple studies(Alger & Eyckmans, 2022; Dona et al., 2014; Ling, 2022; Morales et al., 2022; Rubio et al., 2018) for synchronous online classes. These tools allowed for real-time interaction, simulating face-to-face classroom experiences. Social media platforms also played a significant role in fostering communication. WhatsApp (Solimani et al., 2019), LINE (Wu et al., 2017), Twitter (Lord & Anderson, 2014), and Instagram (Fornara & Lara, 2019) were utilized to create online learning communities and facilitate informal learning interactions. These platforms offered the advantages of familiarity, ease of use, and the ability to share multimedia content.

However, concerns were raised about potential distractions and the depth of discussions possible on these platforms. The study by Wu et al. (2017) indicated that communication applications such as LINE, when used in learning, would cause distractions. Kurek and Andrea's (2019) research also pointed out that the depth of interaction in communication tools may be less than that of other educational tools and may not be conducive to focusing on completing tasks. This view was corroborated by other studies: Lord and Anderson's (2014) research found that Twitter's characteristics may hinder deep thinking and meaningful communication, while Fornara and Lara (2019) noticed that Instagram's platform did not naturally encourage in-depth discussion or reflection. These results corresponded with critical observations from Selwyn (2014), who warned about the potential pitfalls of leveraging social media for educational purposes, while Manca and Ranieri (2016) proposed a different opinion in this regard as they revealed after experiment that informal learning with social media platform encouraged engagement in second language learning process.

For asynchronous communication, several studies (Liu & Farhana, 2022; Merhi et al., 2021; Smidt et al., 2021) incorporated discussion forums, blogs, and email systems. These tools allowed for more reflective and in-depth exchanges, giving students time to formulate their thoughts. On the other hand, some researchers noted that asynchronous communication might lead to delayed feedback and a reduced sense of immediacy. The use of discussion forums, blogs, and email systems for reflective exchanges was consistent with research by Garrison and Arbaugh (2007), who highlighted the role of asynchronous communication in developing critical thinking skills. Our findings regarding the potential

drawbacks of delayed feedback, particularly its impact on student satisfaction and learning outcomes, aligned with concerns previously raised by Martin et al. (2018), who advocated caution about the timeliness of instructor responses in blended learning environments.

Interactive learning platforms and tools were employed to enhance engagement and facilitate specific language learning tasks. By delving into the analysis, results showed that chatbots (Hew et al., 2023) were used to support goal-setting and provide immediate feedback. Virtual reality (VR) technologies (Liaw, 2019) were explored to create immersive language learning environments, although some users reported physical discomfort with VR headsets. Web 2.0 tools such as Voki, VoiceThread, and Fakebook (Dona et al., 2014) were used to create interactive content and foster peer interaction. Online collaborative writing tools (Asoodar et al., 2014) facilitated group projects and peer feedback. The adoption of chatbots, VR technologies, and Web 2.0 tools reflected a growing trend in language education towards more interactive and immersive learning experiences. This aligned with research by Rusmiyanto et al. (2023) on the potential of AI in language learning and the research by Dooly et al. (2023) on the benefits of VR in creating authentic language environments. However, the physical discomfort reported with VR headsets underscored the need for careful implementation, as noted by Makransky and Petersen (2019).

Several other several studies (Dona et al., 2014; Luz & Darlene, 2017; Solimani et al., 2019; Wu et al., 2017) incorporated multimedia elements such as podcasts, educational videos, and interactive posters to cater to diverse learning styles and enhance engagement. These tools were generally well-received by students; however, they required careful integration into the curriculum to be effective. The incorporation of podcasts, educational videos, and interactive posters was consistent with research by Mathew and Alidmat (2013) on the positive impact of multimedia in language learning. Our findings emphasized the need for careful integration, supporting the cognitive theory of multimedia learning, which stressed the importance of thoughtful design to avoid cognitive overload (Mayer, 2017).

It is worth noting that while these technologies offered numerous benefits, such as increased flexibility, enhanced interaction, and diverse learning opportunities, they also presented challenges. Common issues included technical difficulties, the need for digital literacy skills, and in some cases, a lack of deep, meaningful interactions. Some studies (Alger & Eyckmans, 2022; Mehri & Izadpanah, 2017) highlighted the importance of proper instructional design and teaching presence to leverage these technologies effectively. The technical difficulties and need for digital literacy skills identified in our review aligned with findings by Rasheed et al. (2020), who highlighted these as common barriers in blended learning environments. The importance of proper instructional design and teaching presence, as stressed in some studies, was corroborated by research by Garrison and Kanuka (2004) on the critical role of these factors in successful blended learning implementations.

4.2. How do the elements of the CoI framework (social presence, cognitive presence, and teaching presence) interact and contribute to effective language learning outcomes in blended learning environments?

The analysis of 25 papers revealed significant insights into the application of the Community of Inquiry (CoI) framework in blended language learning environments. The studies covered various aspects of language skills and demonstrated different levels of engagement with the CoI elements: social presence, teaching presence, and cognitive presence. In terms of specific language skills, several studies focused on speaking and oral communication. Luz and Darlene (2017) found a positive correlation between teaching presence and the development of oral skills, including grammar, accuracy, and vocabulary. Therefore, speaking and oral communication benefitted significantly from the integration of CoI elements, particularly teaching and social presence. This aligned with previous research by Garrison and Vaughan (2008), who emphasized the importance of social presence in fostering a collaborative learning environment conducive to language practice. Liaw (2019) explored how VR environments enhanced speaking practice through immersive social interactions, primarily focusing on social presence. She suggested that the use of VR for speaking practice extend beyond traditional CoI applications, suggesting new avenues for enhancing social presence in language learning. Wu et al. (2017) examined how the combination of face-to-face and online learning created a dynamic cognitive presence supporting active language production. This was congruent with earlier research by Oztok and Brett (2011), who proved that social presence enhanced oral participation in online language courses. Our findings extended this understanding by demonstrating the potential of virtual reality in creating immersive speaking environments, a concept not explored in earlier CoI studies on language learning.

Listening skills were explored in two studies: Hew et al. (2023) examined chatbots for interactive listening exercises, primarily addressing social and teaching presence, while Rubio et al. (2018) investigated how blended course components affected listening comprehension, involving all three CoI elements. Both studies highlighted the importance of CoI elements in enhancing listening comprehension, supporting Garrison and Kanuka's (2004) assertion of a balanced CoI approach in blended learning. Similarly, findings on writing skills by Asoodar et al. (2014) and Fornara and Lara (2019) underscored the significance of cognitive and social presence in improving written language production. The former research focused on using blogs for reflective writing, while the latter explored Instagram for cultural writing tasks, both emphasizing cognitive and social presence. These findings aligned with Shea and Bidjerano's (2009) work, which showed that teaching and cognitive presence significantly impacted students' perceived learning and satisfaction in online writing courses. Additionally, Chen (2022) identified the influence of teaching presence on writing tasks and peer interactions in online environments, while Yang and Mohd (2020) investigated how all three CoI elements supported written language production.

The analysis of the selected studies found that no studies focused exclusively on reading skills, while several incorporated reading as part of overall language proficiency. Ling (2022) proved how the integration of CoI elements affected

overall language proficiency, including reading comprehension, and Smidt et al. (2021) discussed how cognitive presence supported critical reading and higher-order knowledge acquisition in language learning. There were several studies that provided a comprehensive examination of all CoI elements in language learning (Almusharraf, A., & Almusharraf, N., 2021; Kurek & Andreas, 2019; Morales et al., 2022), which explored the interplay of social, cognitive, and teaching presence in supporting overall language acquisition. Other researchers, namely Alger and Eyckmans (2022) and Liu and Farhana (2022), examined how the three CoI elements collectively contributed to student engagement and critical thinking in language learning contexts. This relative lack of emphasis on reading comprehension contrasted with earlier CoI research, such as the study by Arbaugh et al. (2008), which placed significantly more focus on this aspect of learning. This discrepancy suggested a potential gap in current research on applying the CoI framework to reading skill development in blended language learning environments.

Our review also revealed significant psychological benefits of CoI integration in language learning, including enhanced student perceptions, confidence, and self-efficacy (Dona et al., 2014; Ling, 2022). These findings aligned with earlier research, which stressed the importance of social presence in online learning (Rourke et al., 1999). This understanding was extended by demonstrating how modern technologies enhanced social presence and, consequently, student engagement and self-efficacy in language learning contexts (Lord & Anderson, 2014). For instance, studies have shown how Web 2.0 technologies could be used to build strong levels of CoI in language courses (Dona et al., 2014), and how social media platforms such as Twitter and Instagram could be leveraged for language pedagogy and practice (Fornara & Lara, 2019; Lord & Anderson, 2014). The behavioural outcomes in our review particularly improved academic performance associated with enhanced teaching and cognitive presence (Alvi, 2022; Mehri & Izadpanah, 2017), supporting Akyol and Garrison's (2011) findings on the positive relationship between cognitive presence and perceived learning outcomes. Our analysis emphasized the interplay among all three CoI elements, as highlighted by (2021) and Liu and Deris (2022), aligning with Fiock's (2020) advocacy for balanced integration of all CoI elements. While our findings largely supported previous research on the CoI framework, they also revealed unique applications and outcomes specific to blended language learning environments. For example, studies have shown distinctive ways of applying the CoI framework in blended EFL courses to promote student engagement in online discussions (Liu & Farhana, 2022) and in academic English courses using blogs and collaborative online tools (Asoodar et al., 2014). The integration of modern technologies and social media platforms in enhancing CoI elements represented a significant advancement in the field of language education.

4.3. What are the predominant research approaches, designs, and data collection methods used in studies applying the CoI framework to blended second language acquisition environments?

Following McKinley and Rose's definition (2019), the approach was defined as the overarching strategy that guides the research process, encompassing both the design and the methods for data collection and analysis. In the review of 25

studies examining the CoI framework within second language acquisition contexts, a diverse range of research approaches was observed. Research approaches were grouped as quantitative, qualitative, or mixed methods (Plano & Vicki, 2017). The majority of studies (k = 14) employed a mixed-methods approach, combining qualitative and quantitative elements at various stages of the research process. This trend reflected a growing recognition of the complex nature of language learning in online and blended environments. Purely quantitative approaches were the second most common (k = 7), while qualitative studies were less prevalent (k = 4). Figure 3 shows a breakdown of the research approaches and designs:

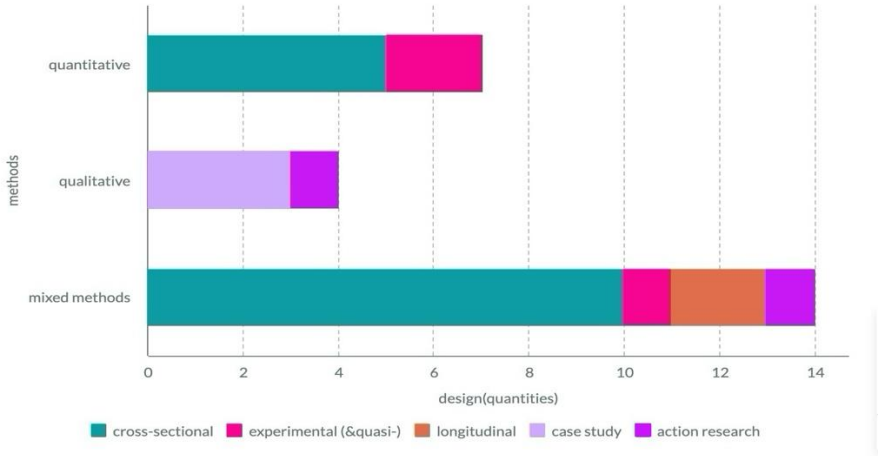

Figure 3: Research Approaches and Designs

Research designs are categorized as experimental, longitudinal, cross-sectional, and case study (McKinley & Rose, 2019). Cross-sectional designs dominated our sample (k = 15), typically involving questionnaires or surveys to capture learner perceptions and experiences at a single point in time. Experimental and quasi-experimental designs were employed in three studies, allowing for comparative analyses of different instructional approaches within the CoI framework. For instance, Yang and Mohd (2020) used a quasi-experimental design to compare the effectiveness of two different teaching interventions on language learning outcomes. Longitudinal design was incorporated in two studies, offering insights into the evolution of CoI dynamics over time. Research conducted by Asma and Norah (2021), for example, followed learners over a semester to examine the development of their language skills. Case studies (k = 3) and action research designs (k = 2) provided in-depth explorations of CoI implementation in specific educational contexts. Hew et al. (2023) conducted a study, for instance, to explore the implementation of a particular online learning platform in a single educational institution.

The studies in our sample employed a wide array of data collection methods, often combining multiple techniques to capture the multifaceted nature of the Community of Inquiry (CoI) framework in language learning contexts. Figure 4 provides a breakdown of these methods. Surveys and questionnaires were by far the most common methods, used in 21 out of the 25 studies. This prevalence likely reflected their efficiency in gathering large-scale data on learner perceptions and

experiences with CoI elements. For instance, Morales et al. (2022) utilized surveys to assess student satisfaction with an online learning platform, finding a significant correlation between platform usability and student engagement. To gain deeper insights, many researchers complemented survey data with various types of interviews as both semi-structured interviews (k=4) and general interviews (k=4) allowed for a more nuanced understanding of student experiences. In Alger and Eyckmans's study (2022), for example, they combined surveys with semi-structured interviews to explore the impact of a blended learning environment on language acquisition, revealing that students appreciated the flexibility but struggled with time management.

Additionally, open-ended surveys (k=4) provided more detailed responses from participants. Oral report (k=2) was used to capture spoken reflections of students, while recordings (k=4) adopted in experiment were normally used to analyze spoken and interactional data in detail. Student comments (k=3), a data collection method, especially in the context of mixed methods, allowed students to provide additional subjective insights and feedback. A study undertaken by Kurek and Andreas (2019) employed this data collection method to capture the participants' own words and perceptions, which provided a richer understanding of the quantitative data obtained from the survey. Observational methods (k=9) captured real-time interactions in CoI-informed environments, offering an in-depth view of the learning dynamics. Dona et al. (2014) used observations to examine student engagement in a virtual classroom, finding that interactive elements such as polls and quizzes significantly enhanced participation. These observational findings were often corroborated by student comments (Liaw, 2019; Wang & Nurhasmiza, 2023), which provided direct feedback on their learning experiences. Content analysis (k=4) of online interactions, discussion posts, or social media was (2012) adopted, reflecting the digital nature of many CoI implementations. Almusharraf, A. and Almusharraf, N. (2021) conducted a content analysis of forum posts in a blended learning course, identifying themes

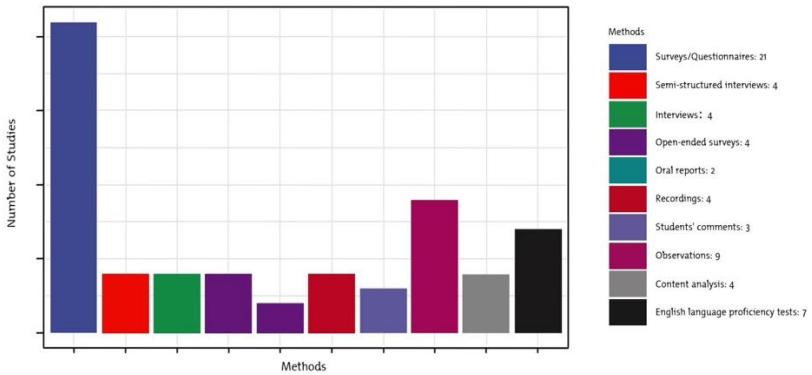

Figure 4: Date Collection Methods

of peer support and collaborative learning as key benefits. This method highlighted the digital nature of many learning environments and the ways in which students engaged with course content and each other. To measure learning

outcomes, English language proficiency test (k=7) normally seen in pre- and post-tests (Luz & Darlene, 2017) was used in experiment to provide quantitative measures of language proficiency gains in CoI-informed instruction, which could assess the effectiveness of an online grammar tool, reporting significant improvements in student scores. These diverse data collection methods underscored the complexity of studying CoI in language learning and highlighted the importance of using multiple approaches to fully understand the impact and effectiveness of CoI-informed pedagogy.

4.4. What are the main challenges and best practices identified in the implementation of the CoI framework for second language acquisition in blended learning environments?

After a thorough analysis of the 25 papers provided, four key themes emerged as central of the implementation of the CoI framework for second language acquisition in blended learning environments. These themes were identified based on their recurring presence across multiple studies, the emphasis placed on them by researchers, and their significant impact on the effectiveness of the CoI framework in this specific context. The four main areas of focus were: (a) Technological Challenges and Solutions, (b) Student Engagement and Cultural Considerations, (c) Instructional Design and Teacher Presence, and (d) Language Proficiency and Differentiation. Each of these themes represented a crucial aspect of the CoI framework's application in blended language learning, encompassing both challenges faced and best practices identified by researchers in the field.

Significant challenges identified across multiple studies were the integration and effective use of technology in blended learning environments. Hew et al. (2023), Dona et al. (2014), Wang and Nurhasmiza (2023), and Alvi (2022) highlighted various technological issues, including unstable Internet connections, inequitable access to resources, and difficulties adapting to new technologies. These challenges disrupted the learning process, particularly affecting crucial language acquisition activities such as listening exercises and real-time interactions. The selected studies also proposed presented innovative solutions to these technological challenges. Wu et al. (2017), Fornara and Lara (2019), as well as Wang and Nurhasmiza (2023) advocated for the strategic integration of mobile applications and social media platforms to enhance language learning. For instance, Wu et al. (2017) recommended using applications such as LINE to facilitate communication and collaboration, while Fornara and Lara (2019) suggested leveraging Instagram to create secure and focused communities for language practice.

Wang and Nurhasmiza (2023) went further, proposing six design principles for integrating mobile applications to enhance teaching presence in blended English teaching. Interestingly, while technological barriers were frequently cited as challenges, Alvi's (2022) study found no significant association between technological barriers and learning experiences. This suggested that when implemented effectively, technology could overcome its own limitations in blended language learning environments. The key seemed to lie in thoughtful integration and clear guidance on technology use, as emphasized by Wang and Nurhasmiza (2023), and Fornara and Lara (2019). These findings aligned with a

recent study on technology integration in language learning as that of Zhou et al (2023), similarly highlighted the potential of mobile technologies in overcoming barriers in blended language learning environments. The emphasis on creating secure and focused online communities for language practice, as suggested by Fornara and Lara (2019), corresponds with the work done by Olaf et al. (2018), which stressed the importance of fostering online learning communities. However, the current studies extended this understanding by specifically applying these principles within the CoI framework in blended environments for language acquisition. The emphasis on creating secure and focused online communities for language practice, as suggested by Fornara and Lara (2019), built upon earlier work by Garrison and Arbaugh (2007) on the importance of social presence in online learning environments.

Another major theme emerging from the literature was the challenge of maintaining student engagement, particularly in the online components of blended courses. This issue was compounded by cultural and educational background factors. Rubio et al. (2018), Liu and Deris (2022), as well as Mehri and Izadpanah (2017) emphasized the difficulty of ensuring effective student participation in online discussions and activities. The study undertaken by Liu and Deris (2022) provided particularly valuable insights into the cultural dimensions of this challenge in the Chinese context. Their research highlighted how China's examination-oriented culture and high reliance on teachers undermined students' autonomous learning in online environments. This finding was echoed to some extent in Kurek and Andreas's research (2019), which noted conflicts among different educational cultures affecting collaborative task design processes. To address these challenges, several best practices emerged from the literature. Liu and Deris (2022), Ling (2022), as well as Fornara and Lara (2019) all emphasized the importance of fostering a strong sense of community and social presence. Liu and Deris (2022) recommended using meaningful discussion prompts and assigning roles in discussions to spark more interaction. Ling (2022) found that promoting interaction was crucial for fostering community awareness in blended learning environments. Fornara and Lara (2019) suggested encouraging students to share authentic, personal content to build stronger community ties. These findings both confirmed and extended recent research on cultural considerations in online learning. For example, the cultural challenges identified by Liu and Deris (2022) echoed Girik's research on the impact of cultural factors on online learning behaviours during the COVID-19 pandemic (Girik, 2020). The strategies suggested for fostering community and social presence aligned with the recent review by Castellanos-Reyes (2020) of social presence in online learning environments, while extending it to the specific context of blended language learning environments.

The challenge of effective instructional design in blended language learning environments was a recurring theme across the literature. Morales et al. (2022), Kurek and Andreas (2019), and Chen (2022) all highlighted the complexity of designing pedagogically-sound tasks that effectively integrated online and face-to-face components while catering to diverse student needs. A key aspect of successful instructional design, as emphasized in multiple studies, was the enhancement of teacher presence. Liu and Deris (2022), Wang and Nurhasmiza

(2023), as well as Asoodar et al. (2014) stressed the crucial role of timely teacher feedback and guidance. Liu and Deris (2022) noted that prompt responses from teachers significantly enhanced the learning experience, while Wang and Nurhasmiza (2023) proposed specific design principles for enhancing teaching presence through mobile applications. Best practices for instructional design and teacher presence included deliberate practice tasks for cognitive presence (Chen, 2022), blogs and online tools for reflection and collaboration (Asoodar et al., 2014), and clear guidelines for online participation (Liu & Deris, 2022). These findings aligned with and extended recent research on the importance of instructional design and teacher presence in online learning. For instance, the emphasis on timely feedback and guidance corresponded with the research findings by Rapanta et al. (2020), which focused on teaching presence in online learning during the COVID-19 pandemic. The current studies provided new insights into how these principles could be applied specifically in blended language learning contexts. The use of deliberate practice tasks to enhance cognitive presence, as suggested by Chen (2022), represented an innovative application of recent work on deliberate practice in language learning, such as that by Suzuki et al. (2019).

Several papers identified students' varying levels of language proficiency as a significant challenge in implementing the CoI framework in blended language learning environments (Liu & Deris, 2022; Smidt et al., 2021). This variability could affect students' ability to participate effectively in online discussions and collaborative activities, potentially leading to inequitable learning experiences. To address this challenge, best practices emerging from the literature focused on differentiation and personalized learning approaches. Almusharraf, A. and Almusharraf, N. (2021) emphasized the importance of developing interactive online courses that consider individual learning styles and preferences. This aligned with the findings by Hew et al. (2023), which suggested using AI-powered chatbots to provide personalized language practice opportunities. Moreover, Wu et al. (2017) and Fornara and Lara (2019) proposed leveraging technology to create diverse opportunities for language practice that could cater to different proficiency levels. The two studies on the use of mobile applications and on Instagram, respectively, demonstrated how digital tools were used to create inclusive language learning environments that enabled students to engage at their own pace and level. All these findings built upon earlier work by Phuong et al. (2017) about teaching differently to different students in higher education. However, the current studies extended this understanding by applying these principles within the CoI framework and in blended learning environments. The use of AI-powered chatbots for personalized practice, as suggested by Hew et al. (2023), aligned with recent developments in AI for language learning, as discussed by Shadiev and Yang (2020).

These studies confirmed many findings from recent research in online and blended learning. They also extended our understanding by applying and adapting these principles to the specific context of language acquisition. The innovative practices emerging from this research, such as the strategic use of mobile applications, the creation of secure online communities, and the implementation of AI-powered personalized learning tools, offered promising directions for enhancing the effectiveness of the CoI framework in blended

language learning environments. However, the persistent challenges identified, particularly those related to cultural factors and varying language proficiencies, underscored the need for continued research and adaptive strategies in this rapidly evolving field. As technology continues to advance and global circumstances shape educational practices, the insights gained from these studies provide a valuable foundation for future developments in blended language learning within the CoI framework

5. Conclusion

A systematic review of research on second language acquisition was conducted through the CoI framework in blended learning environments. It revealed several key findings: (a) Most studies focused on undergraduate students learning English, highlighting a need for more diverse language studies; (b) The integrated CoI framework positively impacted language acquisition, enhancing skills and psychological outcomes; (c) Mixed-methods approaches dominated research designs, reflecting the complex nature of blended language learning; and (d) Key challenges included technological integration, maintaining student engagement, effective instructional design, and addressing varying language proficiency levels. Best practices focused on mobile applications, fostering online communities, enhancing teacher presence, and implementing personalized approaches. These findings could create a roadmap for future research and more effective implementation of blended language learning worldwide, potentially increasing access to quality language education.

However, this study had several limitations that should be considered. Firstly, the predominance of English language studies may limit the generalizability of findings to other languages. Secondly, the focus on undergraduate students, with few studies on graduate-level language acquisition, narrowed the scope of our conclusions. The reliance on specific databases and inclusion of only peer-reviewed articles may have excluded some relevant studies. While protocols such as PRISMA were adopted to ensure validity, potential biases in the original studies could impact the findings. Future research should address these limitations to provide a more comprehensive understanding of blended learning in second language acquisition across diverse contexts and educational levels.

6. Recommendations

6.1 Practical Recommendations

Educational institutions should prioritize the integration of all three CoI elements (social, cognitive, and teaching presence) in blended language learning environments, given their demonstrated benefits for language skills and student engagement. To address identified challenges, institutions should invest in technological integration strategies and focus on maintaining online engagement, potentially through instructor professional development. Language learning programmes should explore personalized approaches within the CoI framework to accommodate varying proficiency levels, leveraging technologies such as AI-powered chatbots and mobile applications. Additionally, educators should focus on fostering strong online communities and enhancing teacher presence in blended environments to maximize the effectiveness of language acquisition.

6.2 Research Recommendations

Future research should expand beyond undergraduate English learning to diverse languages and educational levels, testing the CoI framework's effectiveness across varied contexts. There is a pressing need for more studies at the graduate level and on languages other than English to broaden the applicability of findings. Longitudinal studies are recommended to examine the long-term effects of CoI-informed blended learning on language acquisition. Researchers should also explore the specific impacts of emerging technologies, such as VR and AI, on the three presences of the CoI framework in language learning contexts. Finally, studies investigating the cultural dimensions of CoI implementation in diverse global settings would provide valuable insights for improving blended language learning worldwide.

7. References

Ahmad, A., Iqbal, B., & Rao, I. S. (2023). Efficacy of blended learning technique in enhancing ESL students' linguistic skills. *Global Language Review*, *VIII*(II), 9-21. https://doi.org/10.31703/glr.2023(VIII-II).02

Akyol, Z., & Garrison, D. R. (2011). Understanding cognitive presence in an online and blended community of inquiry: Assessing outcomes and processes for deep approaches to learning. *British Journal of Educational Technology*, *42*(2), 233-250. https://doi.org/10.1111/j.1467-8535.2009.01029.x

Albatti, H. (2023). Blended learning in English language teaching and learning: A focused study on a reading and vocabulary building course. *World Journal of English Language*, *13*(5), 121. https://doi.org/10.5430/wjel.v13n5p121

Albiladi, W. S., & Alshareef, K. K. (2019). Blended learning in English teaching and learning: A review of the current literature. *Journal of Language Teaching and Research*, *10*(2), 232. https://doi.org/10.17507/jltr.1002.03

Alger, M., & Eyckmans, J. (2022). "I took physical lessons for granted": A case study exploring students' interpersonal interactions in online synchronous lessons during the outbreak of COVID-19. *System*, 105, 102716. https://doi.org/10.1016/j.system.2021.102716

Ali, M. F., Joyes, G., & Ellison, L. (2013). Using blended learning to enhance students' cognitive presence. *2013 International Conference on Informatics and Creative Multimedi*a, 202-208. https://doi.org/10.1109/ICICM.2013.42

Alvi, I. (2022). A comprehensive Community of Inquiry framework for exploring technology enhanced language learning. *IAFOR Journal of Education*, *10,* 71-90. https://doi.org/10.22492/ije.10.2.04

Anderson, T., Liam, R., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, *5*(2), 1-17. https://doi.org/10.24059/olj.v5i2.1875

Ani, A. (2019). Positive feedback improves students' psychological and physical learning outcomes. *Indonesian Journal of Educational Studies*, *22*(2), 134-143. https://doi.org/10.26858/ijes.v22i2.11776

Armellini, A., & DeStefani, M. (2016). Social presence in the 21st century: An adjustment to the Community of Inquiry framework. *British Journal of Educational Technology*, *47*(6), 1202-1216. https://doi.org/10.1111/bjet.12302

Almusharraf, A., & Almusharraf, N. (2021). Socio-interactive practices and personality within an EFL online learning environments. *Education and Information Technologies*, *26*(4), 3947-3966. https://doi.org/10.1007/s10639-021-10449-8

Asoodar, M., Atai, M. R., Vaezi, S., & Marandi, S. S. (2014). Examining effectiveness of communities of practice in online English for academic purposes (EAP)

assessment in virtual classes. *Computers & Education*, *70,* 291-300. https://doi.org/10.1016/j.compedu.2013.08.016

Bailey, D. (2022). Interactivity during COVID-19: Mediation of learner interactions on social presence and expected learning outcome within videoconference EFL courses. *Journal of Computers in Education*, *9*(2), 291-313. https://doi.org/10.1007/s40692-021-00204-w

Bhattacherjee, A. (2012). *Social science research: Principles, methods, and practices.* Global Text Project. https://digitalcommons.usf.edu/oa_textbooks/3

Bower, M., Dalgarno, B., Kennedy, G. E., Lee, M. J. W., & Kenney, J. (2015). Design and implementation factors in blended synchronous learning environments: Outcomes from a cross-case analysis. *Computers & Education*, *86,* 1-17. https://doi.org/10.1016/j.compedu.2015.03.006

Bylund, E., Khafif, Z., & Berghoff, R. (2024). Linguistic and geographic diversity in research on second language acquisition and multilingualism: An analysis of selected journals. *Applied Linguistics*, *45*(2), 308-329. https://doi.org/10.1093/applin/amad022

Candace, R. N.G. (2019). The Community of Inquiry framework as learning design model: A case study in postgraduate online education. *Research in Learning Technology*, *27*(0). https://doi.org/10.25304/rlt.v27.2240

Castellanos-Reyes, D. (2020). 20 Years of the Community of Inquiry framework. *TechTrends*, *64*(4), 1-4. https://doi.org/10.1007/s11528-020-00491-7

Chater, N., & Christiansen, M. H. (2018). Language acquisition as skill learning. *Current Opinion in Behavioral Sciences*, *21,* 205-208. https://doi.org/10.1016/j.cobeha.2018.04.001

Chen, R. H. (2022). Effects of deliberate practice on blended learning sustainability: A Community of Inquiry perspective. *Sustainability*, *14*(3), 1758. https://doi.org/10.3390/su14031785

Cheng, G. (2022). Using the community of inquiry framework to support and analyse BYOD implementation in the blended EFL classroom. *The Internet and Higher Education*, *54*, 100854. https://doi.org/10.1016/j.iheduc.2022.100854

Chung, C. J., Lai, C. L., & Hwang, G.-J. (2021). Roles and research trends of flipped classrooms in nursing education: A review of academic publications from 2010 to 2017. *Interactive Learning Environments*, *29*(6), 883-904. https://doi.org/10.1080/10494820.2019.1619589

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, *49*(1), 5-22. https://doi.org/10.1177/0047239520934018

Dona, E., Stover, S., & Broughton, N. (2014). Modern languages and distance education: thirteen days in the cloud. *Turkish Online Journal of Distance Education*, *15*(3), Article 3. https://doi.org/10.17718/tojde.91273

Dooly, M., Thrasher, T., & Sadler, R. (2023). 'Whoa! Incredible!': Language learning experiences in virtual reality. *RELC Journal*, *54*(2), 321-339. https://doi.org/10.1177/00336882231167610

Fiock, H. (2020). Designing a Community of Inquiry in online courses. *The International Review of Research in Open and Distributed Learning*, *21*(1), 135-153. https://doi.org/10.19173/irrodl.v20i5.3985

Fornara, F., & Lara, L. A. (2019). Using visual social media in language learning to investigate the role of social presence. *CALICO Journal*, *36*, 184-203. https://doi.org/10.1558/cj.37205

Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *The Internet and Higher Education*, *10*(3), 157-172. https://doi.org/10.1016/j.iheduc.2007.04.001

Garrison, Anderson, T., & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, *2*(2-3), 87-105. https://doi.org/10.1016/S1096-7516(00)00016-6

Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, *15(*1), 7-23. https://doi.org/10.1080/08923640109527071

Garrison, D. R., Anderson, T., & Archer, W. (2010). The first decade of the community of inquiry framework: A retrospective. *The Internet and Higher Education*, *13*(1-2), 5-9. https://doi.org/10.1016/j.iheduc.2009.10.003

Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *The Internet and Higher Education*, 10(*3*), 157-172. https://doi.org/10.1016/j.iheduc.2007.04.001

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, *7*, 95-105. https://doi.org/10.1016/j.iheduc.2004.02.001

Garrison, D. R., & Vaughan, N. (2008). Blended learning in higher education: Framework, principles, and guidelines. In *Blended Learning in Higher Education: Framework, Principles, and Guidelines*. Jossey-Bass. https://doi.org/10.1002/9781118269558

Girik, A. M. D. (2020). Is the online learning good in the midst of COVID-19 Pandemic? The case of EFL learners. *Jurnal Sinestesia*, *10*(1), 1-10. https://sinestesia.pustaka.my.id/journal/article/view/24

Gupta, Y., Khan, F. M., & Agarwal, S. (2021). Exploring factors influencing mobile learning in higher education – A systematic review. *International Journal of Interactive Mobile Technologies (iJIM), 15*(12), 140. https://doi.org/10.3991/ijim.v15i12.22503

Harb, J., & Krish, P. (2020). Cognitive presence in a blended learning environment at Jordanian universities. *Arab World English Journal*, *11*(1), 44-51. https://doi.org/10.24093/awej/vol11no1.4

Heilporn, G., & Lakhal, S. (2020). Investigating the reliability and validity of the community of inquiry framework: An analysis of categories within each presence. *Computers & Education*, *145,* 103712. https://doi.org/10.1016/j.compedu.2019.103712

Hew, K. F., Huang, W., Du, J., & Jia, C. (2023). Using chatbots to support student goal setting and social presence in fully online activities: Learner engagement and perceptions. *Journal of Computing in Higher Education*, *35*(1), 40-68. https://doi.org/10.1007/s12528-022-09338-x

Hilliard, L. P., & Stewart, M. K. (2019). Time well spent: Creating a community of inquiry in blended first-year writing courses. *The Internet and Higher Education*, *41*, 11-24. https://doi.org/10.1016/j.iheduc.2018.11.002

Honig, C. A., & Salmon, D. (2021). Learner presence matters: A learner-centered exploration into the Community of Inquiry framework. *Online Learning*, *25*(2), 95-119. https://doi.org/10.24059/olj.v25i2.2237

Hosler, K. A. (2009). Examining the effects of teaching presence on student satisfaction in fully online learning environments. *2009 Annual Proceedings-Louisville*. https://www.semanticscholar.org/paper/Examining-the-Effects-of-Teaching-Presence-on-in-Hosler/6692521133a2ababf29217437349349994daddc0

Hsu, Y. C., Ho, H. N., Tsai, C. C., Hwang, G. J., Chu, H. C., Wang, C., & Chen, N. S. (2012). Research trends in technology-based learning from 2000 to 2009: A content analysis of publications in selected journals. *Educational Technology and Society*, *15*, 354-370. https://www.learntechlib.org/p/75084/

Kahu, E. (2014). Increasing the emotional engagement of first-year mature-aged distance students: Interest and belonging. *The International Journal of the First Year in Higher Education*, *5*(2), 45-55. https://doi.org/10.5204/intjfyhe.v5i2.231

Kashinath, K., & Raju, R. (2023). An empirical research on the effectiveness online and offline classes of English language learning based on student's perception in Telangana schools. *International Journal of Modern Education and Computer Science*, *15*, 40-53. https://doi.org/10.5815/ijmecs.2023.02.04

Kirsi, K., Lakkala, M., & Toom, A. (2021). Enrolled or engaged? Students' perceptions of engagement and oral interaction in a blended learning language course. *JALT CALL Journal*, *17*(1), 1-22. https://doi.org/10.29140/jaltcall.v17n1.268

Kitchenham, B. (2012). Systematic review in software engineering: Where we are and where we should be going. *Proceedings of the 2nd International Workshop on Evidential Assessment of Software Technologies,* 1-2. https://doi.org/10.1145/2372233.2372235

Kitchenham, B., & Charters, S. (2007). Guidelines for performing systematic literature reviews in software engineering. *EBSE Technical Report*, *5*, Version 2.3. EBSE.https://edisciplinas.usp.br/pluginfile.php/4125673/mod_resource/content/1/Guidelines%20for%20performing%20Systematic%20Literature%20Reviews%20in%20CS.PDF.

Kreijns, K., Van Acker, F., Vermeulen, M., & Van Buuren, H. (2014). Community of Inquiry: social presence revisited. *E-Learning and Digital Media*, *11*(1), 5-18. https://doi.org/10.2304/elea.2014.11.1.5

Kurek, M., & Andreas, M.-H. (2019). The formative role of teaching presence in blended virtual exchange. *Language Learning & Technology*, *23*(3), 52-73. http://hdl.handle.net/10125/44696

Liaw, M.-L. (2019). EFL learners' intercultural communication in an open social virtual environment. *Educational Technology & Society*, *22*(2), 38-55. https://www.proquest.com/openview/99c49554e65d17c56628f2478fa405da/1?pq-origsite=gscholar&cbl=1586335

Lin, H. C., & Hwang, G. J. (2019). Research trends of flipped classroom studies for medical courses: A review of journal publications from 2008 to 2017 based on the technology-enhanced learning model. *Interactive Learning Environments*. https://www.tandfonline.com/doi/abs/10.1080/10494820.2018.1467462

Ling, L. (2022). Teaching presence predicts cognitive presence in blended learning during COVID-19: The chain mediating role of social presence and sense of community. *Frontiers in Psychology*, *13,* 950687. https://doi.org/10.3389/fpsyg.2022.950687

Ling, L., & Huang, C.-Q. (2024). The incorporation of peer learning into mosoteach-supported flipped language class: Effects on student motivation, participation, feedback and test performance. *Journal of Computer Assisted Learning*, *40*(2), 557-572. https://doi.org/10.1111/jcal.12898

Liu, X., & Farhana, D. D. (2022). CoI-based teaching practices to promote EFL learners' online discussion in China's blended learning context. *Asian Journal of University Education*, *18*(2), 477-488. https://doi.org/10.24191/ajue.v18i2.18000

Lord, G., & Anderson, L. (2014). Twitter as a tool to promote community among language teachers. *Journal of Technology and Teacher Education*, *22*(2), 187-212. https://www.learntechlib.org/primary/p/49768/.

Luz, E. H. D., & Darlene, G. M. (2017). Developing the oral skill in online English courses framed by the Community of Inquiry. *PROFILE Issues in Teachers' Professional Development*, *19*(1), 73. https://doi.org/10.15446/profile.v19n1.55957

Makransky, G., & Petersen, G. B. (2019). Investigating the process of learning with desktop virtual reality: A structural equation modeling approach. *Computers & Education*, *134*, 15-30. https://doi.org/10.1016/j.compedu.2019.02.002

Manca, S., & Ranieri, M. (2016). Facebook and the others: Potentials and obstacles of social media for teaching in higher education. *Computers & Education*, *95*, 216-230. https://doi.org/10.1016/j.compedu.2016.01.012

Martin, F., Wang, C., & Sadaf, A. (2018). Student perception of helpfulness of facilitation strategies that enhance instructor presence, connectedness, engagement and learning in online courses. *The Internet and Higher Education*, *37*, 52-65. https://doi.org/10.1016/j.iheduc.2018.01.003

Mathew, N. G., & Alidmat, A. O. H. (2013). A Study on the usefulness of audio-visual aids in efl classroom: implications for effective instruction. *International Journal of Higher Education*, 2(2), 86–92. https://doi.org/doi:10.5430/ijhe.v2n2p86

Mayer, R. E. (2017). Using multimedia for e-learning. *Journal of Computer Assisted Learning*, *33*(5), 403-423. https://doi.org/10.1111/jcal.12197

McKinley, J., & Rose, H. (Eds.). (2019). *The Routledge handbook of research methods in applied linguistics*. Routledge. https://doi.org/10.4324/9780367824471

Mehri, S., & Izadpanah, S. (2017). The effect of computer-mediated communication tools in online setting on Iranian EFL learners' teaching, social and cognitive existence. *Journal of Language Teaching and Research*, *8*(5), 978. https://doi.org/10.17507/jltr.0805.20

Merhi, M., Hone, K., Tarhini, A., & Ameen, N. (2021). An empirical examination of the moderating role of age and gender in consumer mobile banking use: A cross-national, quantitative study. *Journal of Enterprise Information Management*, *34*(4), 1144-1168. https://doi.org/10.1108/JEIM-03-2020-0092

Mohd Salleh, K., Sulaiman, N. L., & Gloeckner, G. (2023). Exploring test concept and measurement through validity and reliability process in TVET research: guideline for the novice researcher. *Journal of Technical Education and Training*, *15*(1). https://doi.org/10.30880/jtet.2023.15.01.022

Mongeon, P., & Paul-Has, A. (2016). The journal coverage of Web of Science and Scopus: A comparative analysis. *Scientometrics*, *106*(1), 213-228. https://doi.org/10.1007/s11192-015-1765-5

Morales, R., Frenzel, M., & Bravo, P. R. (2022). Teaching presence vs. student perceived preparedness for testing in higher education online English courses during a global pandemic? challenges, tensions, and opportunities. *Frontiers in Psychology*, *13*, 891566. https://doi.org/10.3389/fpsyg.2022.891566

Morsi, W. K. (2023). The impact of the blended learning approach on sustainable EFL learning in an Egyptian context. *Cultural Management: Science and Education*, *7*(1), 69-83. https://doi.org/10.30819/cmse.7-1.05

Nami, F., Marandi, S. S., & Sotoudehnama, E. (2018). Interaction in a discussion list: an exploration of cognitive, social, and teaching presence in teachers' online Collaborations. *ReCALL*, *30*(2), 375-398. https://doi.org/10.1017/S0958344017000349

Nasrullah, N., Rosalina, E., Mariani, N., Rezma S. A., Alfisah, M., Rahmadina, N., & Ainah, N. (2024). Scrunitizing social presence of in-service EFL teachers' instruction in the enactment of blended learning. *International Journal of Educational Research & Social Sciences*, *5*(1), 160-165. https://doi.org/10.51601/ijersc.v5i1.765

Nelson, R. L., & Damico, J. S. (2006). Qualitative research in literacy acquisition: A framework for investigating reading in children with language impairment. *Clinical Linguistics & Phonetics*, *20*(7-8), 631-639. https://doi.org/10.1080/02699200500266760

Nesrallah, S., Klepp, K. I., Budin, L. I., Luszczynska, A., Brinsden, H., Rutter, H., Bergstrøm, E., Singh, S., Debelian, M., Bouillon, C., & Katanasho, M. B. (2023). Youth engagement in research and policy: The CO-CREATE framework to optimize power balance and mitigate risks of conflicts of interest. *Obesity Reviews*, *24*(S1), 13549. https://doi.org/10.1111/obr.13549

Nguyen, L. A. P. (2024). A systematic review on the effects of blended learning in EFL higher education contexts. *International Journal of Academic Research in Progressive*

Education and Development, *13*(1), 1867-1876. https://doi.org/10.6007/IJARPED/v13-i1/20812

Oladipupo, O., Afolabi, I., Adubi, S., & Sowunmi, O. (2020). Discovering the research focus of higher academic institutions. *African Journal of Science, Technology, Innovation and Development*, *12*(6), 679-687. https://doi.org/10.1080/20421338.2020.1721635

Onysko, A. (2016). Modeling world Englishes from the perspective of language contact. *World Englishes*, *35*(2), 196-220. https://doi.org/10.1111/weng.12191

Oztok, M., & Brett, C. (2011). Social presence and online learning: A review of research. *International Journal of E-Learning & Distance Education*, *25*(3), 1-10. http://hdl.handle.net/1807/32440.

Parrish, C. W., Guffey, S. K., Williams, D. S., Estis, J. M., & Lewis, D. (2021). Fostering cognitive presence, social presence and teaching presence with integrated online—team-based learning. *TechTrends*, *65*(4), 473-484. https://doi.org/10.1007/s11528-021-00598-5

Pavel, N. (2021). Designing and learning by technological mediation: adoption, adaptation, attainment. *FormAkademisk*, *14*(3). https://doi.org/10.7577/formakademisk.3620

Pham, C. K., Chong, S. L., & Wan, R. (2022). Students' experience of social presence in online learning. *Proceedings of the 14th International Conference on Education Technology and Computers*, 299-303. https://doi.org/10.1145/3572549.3572597

Phuong, A. E., Nguyen, J., & Marie, D. (2017). Conceptualizing an adaptive and data-driven equity-oriented pedagogy. *Transformative Dialogues: Teaching and Learning Journal*, *10*(2), 1-20. https://journals.psu.edu/td/article/view/911

Plano, C., & Vicki, L. (2017). Mixed methods research. *The Journal of Positive Psychology*, *12*(3), 305-306. https://doi.org/10.1080/17439760.2016.1262619

Ramalingam, S., Yunus, M. M., & Hashim, H. (2022). Blended learning strategies for sustainable English as a second language education: A systematic review. *Sustainability*, *14*(13), 8051. https://doi.org/10.3390/su14138051

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the COVID-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science and Education*, *2*(3), 923-945. https://doi.org/10.1007/s42438-020-00155-y

Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers & Education*, *144*, 103701. https://doi.org/10.1016/j.compedu.2019.103701

Rourke, L., Anderson, T., Garrison, D., & Archer, W. (1999). Assessing social presence in asynchronous text-based computer conferencing. *The Journal of Distance Education* *14*(2), 50-71. https://core.ac.uk/download/pdf/58774853.pdf

Rubio, F., Thomas, J. M., & Li, Q. (2018). The role of teaching presence and student participation in Spanish blended courses. *Computer Assisted Language Learning*, *31*(3), 226-250. https://doi.org/10.1080/09588221.2017.1372481

Rusmiyanto, Nining, H., Nining, Novita, K. T., Agus, R., & Mike, N. S. (2023). The role of artificial intelligence (ai) in developing English language learner's communication skills. *Journal on Education*, *6*(1), 750-757. https://doi.org/10.31004/joe.v6i1.2990

Selwyn, N. (2011). Social media in higher education. *European Journal of Higher* Education, *1*(1), 1-10. http://sites.jmu.edu/flippEDout/files/2013/04/sample-essay-selwyn.pdf

Shadiev, R., & Yang, M. (2020). Review of studies on technology-enhanced language learning and teaching. *Sustainability*, *12*(2), 524. https://doi.org/10.3390/su12020524

Shea, P., & Bidjerano, T. (2009). Community of inquiry as a theoretical framework to foster 'epistemic engagement' and 'cognitive presence' in online education. *Computers & Education*, *52*(3), 543-553. https://doi.org/10.1016/j.compedu.2008.10.007

Smidt, E., Chau, M. H., Rinehimer, E., & Leever, P. (2021). Exploring engagement of users of global Englishes in a community of inquiry. *System*, *98*, 102477. https://doi.org/10.1016/j.system.2021.102477

Solimani, E., Ameri, G. A., & Lotfi, A. (2019). Flipped vs. unplugged instructions: Sailing EFL learners' oral proficiency through virtual and real learning communities. *International Journal of Instruction*, *12*(3), 459-480. https://doi.org/10.29333/iji.2019.12328a

Su, P., Rebecca, L., Verezub, E., Adibadiozaman, I. F., & Chen, W. S. (2020). Tracing EFL students' flipped classroom journey in a writing class: Lessons from Malaysia. *Innovations in Education and Teaching International*, *57*(3), 305-316. https://doi.org/10.1080/14703297.2019.1574597

Suzuki, Y., Nakata, T., & Dekeyser, R. (2019). Optimizing second language practice in the classroom: Perspectives from cognitive psychology. *The Modern Language Journal*, *103*(3), 551-561. https://doi.org/10.1111/modl.12582

Turan, Z., & Akdag, C. B. (2020). Flipped classroom in English language teaching: A systematic review. *Computer Assisted Language Learning*, *33*(5–6), 590-606. https://doi.org/10.1080/09588221.2019.1584117

Wang, X., & Nurhasmiza, S. (2023). Design principles for integrating mobile applications to enhance teaching presence: Based on the survey of the problems in English learning in Chinese universities. *International Journal of Advanced Research in Education and Society*. https://doi.org/10.55057/ijares.2023.5.3.39

Wilson, E., & Berge, Z. L. (2023). Educational experience and instructional design effectiveness within the Community of Inquiry framework. *The International Review of Research in Open and Distributed Learning*, *24*(1), 159-174. https://doi.org/10.19173/irrodl.v24i1.6751

Wu, W., Chen H. J., & Yang, J. C. (2017). Creating an online learning community in a flipped classroom to enhance EFL learners' oral proficiency. *Educational Technology & Society*, *20*, 142-157. https://www.proquest.com/openview/7b10039c9e4807baae5ec16b32d0b3a7/1?pq-origsite=gscholar&cbl=1586335

Xiao, Y., & Watson, M. (2019). Guidance on conducting a systematic literature review. *Journal of Planning Education and Research*, *39*(1), 93-112. https://doi.org/10.1177/0739456X17723971

Yang, L., & Mohd, S. M. R. (2020). The relationship between critical thinking and the community of inquiry model: A quantitative study among EFL university students in China. *International Journal of Adolescence and Youth*, *25*, 965-973. https://doi.org/10.1080/02673843.2020.1814359

Yongo, C. (2019). Instructional design considerations, challenges, and best practices on cross-cultural adult web-based learning experiences in higher education. In J. Keengwe & K. Kungu (Eds.), *Handbook of research on cross-cultural online learning in higher education* (pp. 335-363). IGI Global. https://doi.org/10.4018/978-1-5225-8286-1.ch017

Zainuddin, Z., Habiburrahim, H., Muluk, S., & Keumala, C. M. (2019). How do students become self-directed learners in the EFL flipped-class pedagogy? A study in higher education. *Indonesian Journal of Applied Linguistics*, *8*(3), Article 3. https://doi.org/10.17509/ijal.v8i3.15270

Zhang, R. (2020). Exploring blended learning experiences through the Community of Inquiry framework. *Language Learning & Technology*, *24*(1), 38-53. https://doi.org/10125/44707

Zhou, Q., Hashim, H., & Sulaiman, N. A. (2023). A systemic review (2014–2023) on the mobile-assisted blended learning for English as a foreign language education with a focus on empirical studies. *International Journal of Interactive Mobile Technologies (iJIM)*, *17*(24), Article 24. https://doi.org/10.3991/ijim.v17i24.42019