<研究ノート>
Enhancing Language Learning through the Community of Inquiry (CoI) Framework: A Systematic Literature Review
CoI フレームワークを活用した言語学習の向上：体系的文献調査

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This paper systematically reviews the Community of Inquiry (CoI) framework in blended language learning settings. We examine its components —Cognitive Presence, Social Presence, and Teaching Presence— to understand its role in optimizing language learning, fostering significant interactions, and promoting efficient teaching methods. This paper provides insights on the theoretical underpinnings, practical applications, and observed results of the CoI, emphasizing gaps in its application in blended language classrooms.

Keywords: Community of Inquiry, CoI, Language Learning Classroom, Three Presences

1. Introduction

In March 2023, Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) introduced guidelines for online university courses, stating that in 2022, roughly 40% of university classes had fully transitioned or were partially being delivered online, and that blended courses combining face-to-face and remote instruction can be considered face-to-face instruction courses, if remote instruction accounts for less than half of the total class hours（大学・高専における遠隔教育の実施に関するガイドラインについて（周知），2023）. Notably, this trend is not seen in language courses, which are encouraged to remain traditionally conducted face-to-face. Kuroda (2021) offers reasons given by scholars and educators for their reluctance to conduct remote classes, including concern for the social and mental wellbeing of students, belief that online learning is ineffective for discussions that are fundamental to a university level education, and Japanese style classes being heavily lecture-based, which doesn't translate well into an online format. Conversely, students desire to have online options. This desire has been reflected in a recent preference shift with 60% of students favoring online methods, prompting MEXT's promotion of blended education. The pandemic-induced surge in classroom technology, coupled with the post-pandemic normalization of blended learning, has amplified the relevance of the Community of Inquiry (CoI) framework.

2. Objective

The primary objective of this literature review is to examine the potential impact and efficacy of the CoI framework in blended online language learning settings.

3. Theoretical Background

In the evolving landscape of modern education, two prominent approaches emerge as especially influential in shaping online and face-to-face instructional methodologies: the Community of Inquiry (CoI) framework and the Blended Learning instruction. While the CoI model offers a comprehensive understanding of the collaborative online learning experience, by emphasizing the triad of social, cognitive, and teaching presences, Blended Learning bridges the traditional classroom with digital platforms to optimize learning outcomes. Together, these approaches encapsulate the synthesis of conventional educational practices with contemporary e-learning trends, setting the stage for an integrated, multifaceted approach to pedagogy.

3.1. Community of Inquiry (CoI)

Educational thought leaders John Dewey and Walter Lippmann paved the way for the importance of communal learning. Dewey, in *Democracy and Education* (1916), emphasized learning through social interactions, while Lippmann's *Public Opinion* (1922) underscored the essence of critical discourse. Building on their insights, Garrison, Anderson, and Archer introduced the Community of Inquiry (CoI) framework in the early 2000s. This framework focuses on three crucial presences: social, cognitive, and teaching. Together, they form the foundation for meaningful learning in collaborative settings (Garrison, Anderson, & Archer, 2001; Garrison, 2007; Akyol & Garrison, 2013). The CoI model thus serves as a critical lens to analyze and appreciate the factors defining the quality of online and blended learning experiences (Figure 1).

SOCIAL PRESENCE

According to Garrison & Vaughan (2012), Social presence enables students to freely express themselves and develop personal relationships necessary for academic commitment. It encompasses open communication, cohesive responses, and affective/personal connections. Social presence starts with open and secure communication, leading to personal and academic projection, trust-building, and emotional security. Social presence must coexist with cognitive and teaching presence for effective learning, dispelling early concerns about the limitations of online communication. In a CoI, social relationships promote belonging and expression, but alone cannot achieve academic goals, highlighting the need for purposeful discourse, known as cognitive presence, alongside teaching presence.

COGNITIVE PRESENCE

Cognitive presence, as defined by Garrison & Vaughan (2012), involves reflective and interactive elements. It follows a cyclical pattern from a triggering event to resolution, aligning with John Dewey's concept of inquiry. The practical inquiry model defines cognitive presence as encompassing two dimensions and four phases, including problem identification, exploration, sense-making, and solution testing. This process is not strictly linear, as it may involve shifts and leaps in thinking. Establishing and sustaining cognitive presence is crucial in CoIs, as it supports higher education outcomes that are continually evolving and can be unpredictable.

TEACHING PRESENCE

Teaching presence is outlined by Garrison & Vaughan (2012) as integrating all the CoI elements. It involves designing, facilitating, and guiding the educational experience and is essential for creating a productive CoI.

Teaching presence encompasses various categories that are progressive and dynamic, adapting throughout the inquiry process. It establishes the curriculum, moderates discussions, and harmonizes social and cognitive presence effectively. In Blended learning, it faces the challenge of shaping cognitive and metacognitive processes, emphasizing the importance of students' awareness of the inquiry process and fostering metacognitive skills for self-regulated learning.
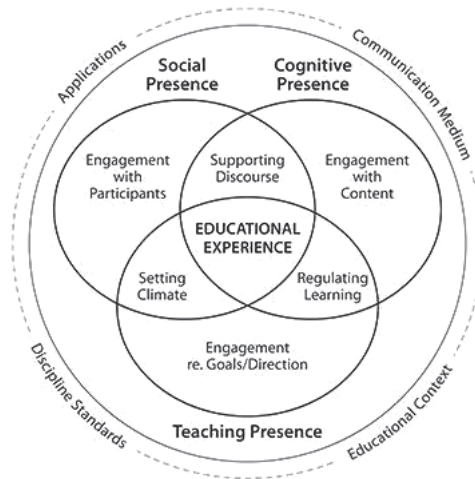

Figure 1 The Community of Inquiry framework.
(from: https://creativecommons.org/licenses/by-sa/4.0/).

3.2. Blended Learning

Blended learning combines online resources with in-person teaching. It blends the best of digital content with traditional classroom methods. While it requires both teachers and students to be physically present, students often have some freedom over when and where they learn. This approach is adaptable, so its exact definition can vary. Generally, it merges the benefits of online and face-to-face learning for a richer educational experience. Some popular blended learning styles include (National Education Association 2021) :

1) Rotation Model: Students switch between activities like online lessons, group work, and solo tasks.

2) Flipped Classroom: Students watch lectures online at home and use classroom time for discussions and hands-on work.

3) Flex Model: Students choose when and where to study but also have some in-person lessons.

4) Enriched Virtual Model: Most learning happens online, with occasional face-to-face sessions.

4. Literature Review

Building on the foundation of the blended learning framework, many scholars have turned their attention

to its practical implications, particularly within the context of the Community of Inquiry (CoI) framework. Rourke and Kanuka (2009) embarked on a mission to explore learning within CoI, grounded in the structure set out by Garrison, Anderson, and Archer (2001). Through a review of 252 studies spanning from 2000 to 2008 that engaged with this framework, they discovered that students' participation in critical discussions, mutual critiques, and debates within CoIs varied, ranging from a mere 5% to a significant 22%. However, they surmised that the CoI framework might not fully meet its promise of delivering profound, impactful learning, suggesting that the envisioned steps to reach these profound learning outcomes remain elusive. Yet, despite these reservations, the CoI model's influence remained undeterred. Its adoption has spread across various academic sectors, especially with the advent of online courses and the introduction of Arbargh et al. (2008)'s comprehensive 34-item CoI instrument in 2008. To further contextualization, Olpak (2022) offers a panoramic view, encapsulating two decades of CoI literature, from its early days in 2000 to its developments up to 2020.

4.1. Methodology

We systematically reviewed the CoI's role in blended language learning. Starting with keywords like "community of inquiry" "blended learning" "ESL or EFL", and "language learning". We searched peer-reviewed articles from ProQuest and ERIC, focusing on the past five years. From the initial 41 articles, we shortlisted 11 based on their relevance. We then grouped these papers by common themes, ensuring that they significantly involved CoI, and eliminating duplicates or mere mentions.

4.2. Literature Summaries and Comparative Analysis

Analysis 1

To better understand the application of the CoI framework in various digital platforms, we delve into some recent studies. The following four summaries highlight the platforms used, the objectives of the studies, and their main findings:

1) Duha et al. (2022)
Platform: Facebook
Aim: Investigate CoI in a Facebook group.
Findings: Beneficial for both the control and treatment groups, with CoI components prominent in the treatment group.

2) Fornara & Lomicka (2019)
Platform: Instagram
Aim: Enhance social presence in language classes.
Findings: Successful establishment of social presence, with challenges in traditional discussions.

3) Fischer and Yang (2022)
Platform: Flipped classroom technology
Aim: Refine out-of-class components using CoI.
Findings: Emphasized the need for all CoI components for better performance in a flipped classroom

approach.

4) Gruber et al. (2023)
Platform: General online tools (Padlet, Zoom)
Aim: Explore post-pandemic teacher expectations.
Findings: Preference for continued online teaching, but with mixed opinions on hybrid methods.

Common Features of the digital-platform centered studies:
Online Platforms: Four studies involved online platforms.
CoI Framework: Three out of the four used the CoI framework.
Pandemic Influence: One directly addressed it; others might imply it.
Methodology: Multiple used mixed methods.

Distinguishing Features:
Primary Focus: Varied across studies, from Facebook's CoI components to post-pandemic expectations.
Online Platforms: Ranged from Facebook to general tools.
Findings: Spanned from social presence on Instagram to mixed views on post-pandemic teaching.

Analysis 2

Online tools are valuable for teachers to boost student involvement, while the CoI plays a crucial role in online and blended learning, even more so after the pandemic.

To provide a snapshot of the breadth of recent research exploring the CoI in various educational settings, the following seven summaries present key discoveries, methodologies, and insights from notable studies:

1) Lacaste et al. (2022):
Studied: Flipped Learning & CoI in diverse classrooms.
Discovery: Flipped Learning and CoI enhance student satisfaction.
Issue: Language barriers.
Key Takeaway: Tech support is essential in multicultural classrooms.

2) Huynh, T. L., & Nguyen (2019):
Studied: Revised CoI & Online Peer Assessment.
Discovery: Intrinsic motivation boosts perceived skill growth.
Key Takeaway: Intrinsic motivation ties closely to skill development online.

3) Wen-Chi et al. (2017):
Studied: LINE & CoI in flipped classrooms.
Discovery: LINE aids in collaboration and enhances engagement and skills.

4) Xiaoxing & Deris (2022):

Studied: CoI in Blended EFL Courses.

Discovery: Teaching presence is pivotal for online discussion engagement.

Key Takeaway: CoI is crucial for online discussion effectiveness.

5) Zhang (2020):

Studied: CoI in English for Agriculture/Forestry.

Discovery: Social presence influences cognitive presence.

Key Takeaway: Teaching presence is key in CoI for knowledge and motivation.

6) Zhou & Zhang (2022):

Studied: Online teaching after the pandemic.

Discovery: Majority of teachers support continued online teaching.

Issues: Tech literacy for teachers and limited student interaction.

7) Zhanni, O'Steen & Brown (2020):

Introduced: Flipped Learning Wheel (FLW).

Discovery: Nine CoI-based principles for flipped learning.

Key Takeaway: Peer feedback is crucial.

5. Discussion

As advancements in blended language learning continue, the Community of Inquiry (CoI) framework emerges as a pivotal tool in this domain. This section investigates the major themes identified in recent CoI research, subsequently pinpoints potential gaps, and suggests directions for future studies.

5.1. Thematic Overview of CoI Research

Various studies have expanded upon the CoI's foundational principles, highlighting key themes that emphasize its role in blended language learning. This subsection outlines these major themes and their implications.

1) Themes in CoI: Discussions around prominent themes that emerge from the literature will be presented, offering a holistic understanding of the framework's application in language learning contexts.

2) Social Presence in Online Platforms: Social connections in online environments, such as Facebook and Instagram, greatly enhance the learning experience.

3) Efficacy of the CoI Framework: The CoI framework, encompassing social, cognitive, and teaching presences, is effective in various educational settings.

4) Student Engagement and CoI: Proper implementation of the CoI components boosts student participation

in online activities.

5) CoI's role in Flipped Learning: The CoI model is valuable for enhancing flipped learning experiences.

6) Student Motivation: Perceptions of CoI elements directly influence student motivation and learning.

7) Course Design: Effective course design aligns with CoI components, promoting a richer online learning experience.

8) Social Media Use: Platforms like Facebook and Instagram, integrated with the CoI framework, optimize online education.

9) Online Learning Challenges: Issues like limited technology skills and distractions pose challenges in online settings.

10) Improved Social Media Activities: Incorporating the CoI framework in social media enhances online education.

11) Addressing Online Challenges: Addressing hurdles in online teaching, like tech literacy, is vital for better experiences.

5.2. Identified Gaps and Future Research

While the CoI framework's application has been extensive, certain research gaps remain. This section sheds light on these gaps and explores potential avenues for future research, ensuring a continuous refinement and expansion of our understanding of CoI in blended language learning contexts. However, a literature gap concerning its use in blended language settings, offering insights for educators and researchers is also to be noted. Further, there is a notable gap in understanding the complex cultural factors that impact interactions in blended language learning environments. This knowledge deficiency poses challenges in devising effective strategies for the application of the CoI framework, highlighting the need for further investigation.

6. Conclusion

The CoI framework has established itself as a cornerstone for successful blended language learning worldwide. Its unique combination of social, cognitive, and teaching presences provides a holistic approach, enhancing student engagement and learning outcomes. While there are inherent challenges, particularly in technology integration and support of consistent interaction, the framework offers comprehensive strategies to navigate them. As blended learning continues to evolve globally, the application and understanding of the CoI become increasingly paramount. In light of global trends, it's noteworthy to mention Japan's recent shift towards online education. This paper, rooted in the universal principles of the CoI, underscores its particular potential in places like Japan, where traditional pedagogies have been dominant. By emphasizing both the general significance and specific regional applications of the CoI, we aim to offer a versatile roadmap for

educators and students, ensuring enriched language learning experiences across diverse contexts.

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