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The Roles of Teaching Presence in Asynchronous and Synchronous Online Teaching Contexts

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ABSTRACT

Asynchronous and synchronous modes of learning are pivotal to the landscape of online education. To gain more insights into the effectiveness of online teaching practices, it is essential to investigate the teaching practice in online learning contexts, specifically how the teaching presence of instructors affect students' learning in asynchronous or synchronous situations. This study aims to find out if the teaching presence varies between the two modes of learning through the lens of Community of Inquiry (CoI) framework. Additionally, it seeks to compare the factors impacting learners' experiences in teaching presence. A total of 94 ESL tertiary learners answered the CoI questionnaire and 19 learners were interviewed. The results revealed that the perceived teaching presence between the two groups did not differ statistically. Findings from the interviews showed that the instructor's interactivity is a pertinent factor in increasing teaching presence in both groups. Additionally, it seems learners from the asynchronous group valued the instructor's feedback and positive characteristics while the instructor's facilitation was essential for those from the synchronous group. The outcome of the study could potentially provide insights and practical solutions in relation to the functions of teaching presence in enhancing the learning experience of learners attending online lessons.

KEYWORDS: online learning, teaching presence, asynchronous learning, synchronous learning, Community of Inquiry

Introduction

The role of teachers in online education is not limited to delivering content. It also involves creating a strong teaching presence. Anderson et al. (2001) posited teaching presence

encompasses the design, facilitation and direction of cognitive and social processes to achieve meaningful learning. It implies the role of the teachers to interact actively and support learning in an online setting. With both asynchronous and synchronous learning becoming integral components of online learning, teachers need to gain insights on how they can manage and improve their teaching practices in both modes of delivery. Additionally, their presence, or the teaching presence is necessary to ensure effective facilitation and engagements with students.

Past researchers have been referring to Community of Inquiry (CoI) as the framework when studying aspects related to teaching presence as it provides valuable insights to the process of online teaching and learning. Similarly, the present study utilises the CoI as a framework to examine teaching presence in both asynchronous and synchronous modes. The CoI framework, proposed by Garrison et al. (2000) was developed to structure the process of learning in an online learning context for learners and instructors of higher learning institutions. It assumes that effective learning is encapsulated within a community with its three interdependent elements: cognitive presence, social presence and teaching presence (Kanuka & Garrison, 2004). The quality of the educational experience and learning outcomes could be enhanced or limited by these elements of Community of Inquiry (Garrison et al., 2000). These elements enable the establishments of learning environments that engage students in meaningful learning tasks is essential to the success of the educational experience.

Studies have examined how the perceived levels of presence in accordance with the Community of Inquiry (CoI) framework relate to asynchronous and synchronous teaching and learning. These studies have examined the effects of asynchronous and synchronous technologies on cognitive, social, and teaching presence (Rockinson-Szapkiw & Wendt, 2015), the effects of asynchronous and synchronous video conferencing on teaching and social presence (Clark et al., 2015) and students' perceptions of asynchronous learning versus synchronous learning (Sharifrazi & Stone, 2019). However, within the framework of the Community of Inquiry (CoI), there has been a lack of study on how vocabulary course offered through an asynchronous mode via Massive Open Online Course (MOOC) and synchronous mode via Microsoft Teams affect the teaching presence as perceived by learners.

In view of the fact that both asynchronous and synchronous online learning are being widely implemented, it is essential to comprehend how these modes influence the element related to teaching presence. Through a comparative analysis of the two modes, educators may be able to leverage on the strengths and create a more student-centred learning experience. In line with this, this study aims to address the following research questions:

1. How do the adult ESL learners' perceptions of teaching presence differ between the asynchronous and synchronous groups?
2. What are the factors that influence the asynchronous and synchronous groups' learning experience in terms of teaching presence?

Literature Review

Teaching Presence

In the Community of Inquiry (CoI) framework, teaching presence is defined as the instructor's visibility, which influences students' engagements and participation (Caskurlu et al., 2020). It is comprised of three components, which are design and organisation, facilitation discourse, and direct instruction. These three components provide guidance to instructors on the structure and design of courses to enhance students' learning.

The first element of teaching presence, which is design and organization requires the instructors to plan and design approaches that optimize the potential of online learning (Garrison & Arbaugh, 2007). It relates to course objectives, the communication of course content, and all other course-related instructions, such as deadlines and learning activities (Caskurlu et al., 2020). As noted by Swan (2004), these activities are crucial because findings revealed that the most reliable indicator of successful online courses is a transparent and consistent course structure that supports engaged instructors and lively discussions.

The second category is facilitating discourse. Teaching presence promotes relevant and appropriate responses through highlighting thoughtful comments and drawing connections to prior responses. Among the roles of the instructors' facilitation include setting the climate for learning, identifying areas of agreement / disagreement, encouraging and reinforcing participants' contribution and assessing the efficacy of the process of discussion (Garrison, 2017). In essence, the participants need to be facilitated in the discussion towards the direction of the learning goals in a timely manner. As Zhang et al. (2023) stated, teacher' capacity to facilitate discussions in online learning may be a key element in students' learning satisfaction and course grades. For instance, a study by Clark et al. (2015) revealed that teaching presence was enhanced when discussions were accompanied by video posts.

The third category in teaching presence is direct instruction. Teaching presence is not plausible without the skills of an expert teacher with pedagogical experience and knowledge who can select valuable content, plan learning activities, direct the discussion, provide additional sources of information and identify misconceptions (Garrison, 2017). Both students' sense of connectivity and learning are tied to the instructors' active presence, in which they guide the discussions.

Past studies have highlighted the indispensable roles of teachers in online learning. For instance, Caskurlu et al. (2020) found that teacher presence influenced students' perception of the course design and their level of learning satisfaction. Similarly, Law et al. (2019) demonstrated that the social and cognitive presence of students was directly impacted by the presence of teachers. Additionally, Szeto (2015) highlighted that while every element of CoI is significant in online classrooms, the presence of the teacher is the most prominent indication of an effective course outcome. While these studies underscored the vital roles that teachers play in online learning, it is essential not only to recognize the influence of teachers, but also to comprehend how various modes of online instruction such as asynchronous and synchronous modes affect teaching presence. By addressing this existing gap in the literature, this study seeks to identify and differentiate the factors that influence teaching presence in both platforms. Through the examination of both modes in this study, it will provide insights into on how teaching presence operates uniquely within each context in online teaching and learning.

Method

This study involves the use of the Community of Inquiry (CoI) questionnaire to seek learners' perception of teaching presence. The quantitative aspect of the study comprised 94 ESL undergraduate learners; 50 from the asynchronous group and 44 from the synchronous group. Table 1 shows the total number of participants involved in this study.

The asynchronous group answered the Community of Inquiry (CoI) questionnaire upon completion of a five-week vocabulary course on *OpenLearning* whilst the synchronous group completed a five-week lessons with the researcher on Microsoft Teams.

The CoI questionnaire is a research instrument used to evaluate the quality and effectiveness of online learning environments. It has been validated in various research studies (Abbitt &

Boone, 2021; Arbaugh et al., 2008; Heilporn & Lakhal, 2020; Kovanović et al., 2018) and are widely utilized by researchers (Garrison et al., 2010). The items are based on a 5-point Likert-type scale from 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree) to 5 (strongly agree). In this study, the CoI questionnaire was employed to investigate both asynchronous and synchronous groups' perception of the teaching presence of the course. There were 13 items in the teaching presence section of the questionnaire. The learners' responses were then analysed using Statistical Package for the Social Sciences (SPSS).

As for the qualitative section, it involved 19 undergraduate ESL students, comprising 11 learners from the asynchronous group and eight from the synchronous group. Semi-structured interviews were administered with these interviewees upon completion of the vocabulary course. The data was analysed using thematic analysis (Braun & Clarke, 2006).

Table 1: The total number of participants involved in the study

Groups	Participants in questionnaire	Participants in interviews
Asynchronous	50	11
Synchronous	44	8
Total	94	19

Results and Discussion

The Asynchronous and Synchronous Learners' Perceptions of Teaching Presence

As the data for teaching presence was not normally distributed, the Mann-Whitney U test was conducted instead of an independent-samples t-test. The Mann-Whitney U test was used to compare the differences between the asynchronous and synchronous groups' perception of teaching presence in the vocabulary course.

Table 2 shows the median scores and Mann-Whitney U test results for asynchronous (Median = 64.00) and synchronous (Median = 64.00) ESL learners' perception of teaching presence. The total score for this category is 65.00. The p value .48 shows that the Mann-Whitney U test is not significant ($Z = -0.704$, $p > .05$). This demonstrates that there was no significant difference in the perception of teaching presence between the asynchronous and synchronous groups.

Table 2: Mann-Whitney U test comparing asynchronous and synchronous groups' perception of teaching presence

Element	Asynchronous		Synchronous		Mann-Whitney U	Z	p
	n	Median	n	Median			
Teaching Presence	50	64.00	44	64.00	1011.5	-.70	.48

The results reflected that learners from asynchronous and synchronous platforms had similar views in terms of the support and the facilitation of the course given by the instructor in their online learning. Both groups also had the same regard for the ways the instructor had created learning experiences that assisted them towards achieving the learning goals.

There are two possible explanations why there was no significant differences in the perceived teaching presence for the asynchronous and synchronous groups. Firstly, videos of the instructor delivering the lessons was provided for the asynchronous group. Viewing the instructor teaching through videos would prompt students to see the instructor as a real person. This was indicated in Clark et al.'s (2015) study, which learners revealed that watching the instructors' videos made them feel as if they were conversing with the instructors. Therefore, the visuals depicting the instructor increases the teacher presence. Through the video-based communication, most learners indicated that this mode of communication made their instructors seem more familiar, and almost similar to face-to-face instruction (Borup et al., 2012). As for the synchronous group, learners were able to see the instructor's expressions and listen to the tone of her voice, which enhanced the sense of teacher's presence. In addition, class discussions were carried out live using verbal and text-based modes. As such, similar to those in the asynchronous group, learners in synchronous group would have experienced the presence of the teacher.

Secondly, the timely feedback by the instructor, generally within 24 hours after the asynchronous learners had posted their answers on the discussion board will contribute toward teaching presence. As for the synchronous group, learners also received instantaneous feedback during lessons. Hence, these are the plausible reasons why there was no significant difference in terms of perceived teaching presence between both groups. The findings of the study concur with Hilli and Åkerfeldt's (2020) study, which revealed that frequent teacher-student interaction such as feedback is vital to establish teaching presence among adult students. In this study, feedback from the instructor in both asynchronous and synchronous platforms are important factors contributing to the establishment of teaching presence.

Generally, the results of this study partially echoed the findings of a study by Rockinson-Szapkiw (2012). The data revealed that students who used a combination of synchronous and asynchronous computer mediated communication did not differ in their perception of teaching presence in comparison to students who used only asynchronous systems. However, the study involved a group that used both synchronous and asynchronous mode of learning versus another group that only involved asynchronous mode. Thus, it is unclear whether the insignificant difference was a result of asynchronous systems being used in both groups. In this study, the asynchronous and synchronous groups were distinctively differentiated; the results were compared based on two separate learning modes.

Even though the results of this study partially echoed the findings of a study by Rockinson-Szapkiw (2012), the findings of this study are inconsistent with Ratan et al.'s (2022) study. It demonstrated that the utilization of a combination of synchronous and asynchronous learning platforms with video posts have resulted in higher perceived teaching presence than the text-based platform. In this study, the videos of the instructor teaching in the asynchronous group, as well as continuous interaction with the learners could have improved the presence of the teacher. In view of the integration of videos as part of the instruction for the asynchronous group, it might explain why the findings revealed that there was no significant difference in teaching presence among those in the asynchronous and synchronous groups.

Factors that Influence the Asynchronous and Synchronous Groups' Learning Experience in Terms of Teaching Presence

Table 3 shows the factors that influence the asynchronous and synchronous groups' online learning experience. The factors impacting asynchronous learners' learning experience in terms of teaching presence will be first presented, followed by the synchronous group.

Table 3: Factors that impact asynchronous and synchronous groups' learning experience in terms of teaching presence

Elements of presence	Factors impacting learners' online learning experience	
	Asynchronous group	**Synchronous group**
Teaching Presence	• Instructor's interactivity • Instructor's feedback • Instructor's positivity	• Instructor's interactivity • Instructor's facilitation

Asynchronous Group

Upon deciphering the interview data, three main themes concerning the factors impacting asynchronous learners' learning experience in terms of teaching presence emerged, and they are instructor's interactivity, instructor's feedback, and instructor's positivity.

Instructor's interactivity

Asynchronous learners recognized the essential role of the instructor engagement in the online classes for enhancing learning experience. For instance, participants A8 and A7 stated:

> "You kept the participants engaged and involved, especially when you started a forum or discussion board for students to share their ideas in order to help others. It's very helpful. And also we can like and comment on the posts to support them and then they will feel appreciated." (A8)

> "In the discussion board, there were times when students didn't understand the activities, you tried to help, by not giving the answers directly. Instead, you gave hints. You asked them to try answering first based on the clues and hints. If they still couldn't get the answers, you asked them to communicate with you again." (A7)

By being interactive, the instructor could create an engaging learning experience and encourage student participation. This fosters a sense of community and support teaching presence.

Instructor's feedback

Feedback from the instructor is another factor influencing asynchronous learners' learning experience. Feedback helps learners improve their understanding of the subject. Participant A9 shared her view:

> "The facilitator also gave comments on our posts. So, the students will know their mistakes and they can also make the corrections." (A9)

Additionally, providing feedback fosters open discussion. For example, participant A5 mentioned:

> "Actually, I feel that the way Miss responded to our answers in the forum is the thing that actually influenced us to engage in the discussion." (A5)

The asynchronous learners' perspectives on the significance of instructor's feedback showed that it is a crucial factor that promotes learning and provides learners with a sense of learning

satisfaction. Furthermore, the instructor plays an important role as a subject matter expert in elucidating any doubts that arise regarding the topic among learners.

Instructor's positivity

The instructor's positive attitude can create a support and encouraging learning environment for learners. When the instructor demonstrated this through her interactions and feedback, learners felt more comfortable participating in course activities and seeking assistance. Participant A2 expressed her thoughts on the instructor's positivity:

> "Although you (instructor and researcher) don't meet us face-to-face, you are so supportive, cheerful, and responsive to all the questions that we asked. You responded patiently, so you make me feel comfortable and I enjoyed completing all the modules without stress." (A2)

The instructor's encouragement to learners is another factor that creates a positive learning environment, and this increases learner satisfaction in online learning. For example, participant A9 commented:

> "The facilitator was amiable and always encouraged students; when they were lost, or when they made any mistake in the practices. So, I think it can improve our self-confidence." (A9)

The responses from asynchronous learners showed that the instructor's role in creating a positive environment could further increase learner satisfaction in online learning.

Synchronous Group

From the interview data, there are two factors that contribute to the synchronous learners' satisfaction in their online learning experience, which are instructor's interactivity, and instructor's facilitation.

Instructor's interactivity

Similar to the asynchronous group, synchronous learners felt that the instructor's active involvement in the online classes is crucial for enhancing learning experience. This is particularly important in getting learners to be involved in the class activities. For example, participant S5 expressed her contentment because the instructor tried to involve the entire class through a variety of activities:

> "You involved the students with activities, like the *Jamboard, Kahoot*!. So, we could participate in it, and we could learn from there." (S5)

Participant S4 also echoed the same view. She added the instructor tried to draw in the class participation by calling out names so that learners would share their views or answer the questions.

> "The facilitator really kept us engaged and involved in any tasks or activities that we need to do in the class. Yeah, so we learn more deeply. Everyone can access the activities and also sometimes you would call out people to answer." (S4)

These responses highlight the necessity for instructors to be active and interactive to encourage learners' involvement in online activities. By spurring learners to be involved in activities, the instructor may establish teaching presence and foster learners' understanding of the topic.

Instructor's facilitation

Instructor's facilitation is another factor that enhances synchronous group's perceived level of teaching presence. Learners found the lessons easier to be understood when topics were separated into modules. It was helpful when the instructor clearly explained what were needed to be done in each lesson towards achieving the learning outcomes. For instance, participant S2 also found the lessons to be well-paced so he did not find them to be overwhelming:

> "I understand your course actually because it's not so heavy. You told me step by step on how to complete the lesson. First, context clues. Then, next week, we moved to module 2. It's not heavy, so we can learn a little bit. So, it's not like too heavy to learn for that day." (S2)

Learners also found the lessons to be beneficial when the instructor provided some scaffolding. For instance, participant S6 reported that it was helpful in her learning when the instructor showed the class how to find out more features in a dictionary:

> "I can find some word meanings in *Google*, but I'm not really sure how, where to find it. So like, Ms. Wee Ling, you showed us Cambridge dictionary. You shared your screen and showed us how you can find the words and where to see the meaning, where to see the synonyms. So, I think that's quite helpful for me." (S6)

Overall, learners found the instructor's facilitation had aided their understanding of the concept of the lessons. They found that the instructor's explanations were clear. Additionally, the constructive comments and feedback were also helpful in their learning process.

To discuss the findings of the interview data, it can be concluded that both asynchronous and synchronous groups exhibited a similarity in one theme: instructor's interactivity. Firstly, the instructor's interactivity directly influences both groups' perception of teaching presence. Instructors play a crucial role in encouraging meaningful interactions among learners. Based on the feedback from asynchronous learners, the instructor was actively engaged in the course, particularly on the discussion board. Learners also noted that the instructor's ongoing communication assisted them to think of possible solutions to tasks. Instead of providing the learners the answers, the instructor encouraged them to think of the answers. This facilitated them to construct explanations and reflect on the lessons. These findings align with Law et al.'s (2019) study, which highlighted that the instructor's skills promote cognitive and social presence of students. This further underscores the crucial role of the instructor in online learning environments.

The synchronous group also acknowledged that the instructor's active engagement and interactivity during lessons. Employing collaborative learning activities via platforms like *Google Jamboard* and games such as *Kahoot!* encouraged active participation and facilitated learning among all learners. Consistent with Oyarzun et al.'s (2021) study, structured

collaborative tasks serve as an effective method for instructors to increase their presence. These tasks promote more interaction between the instructor and learners, hence increasing the presence of the instructor.

In addition to the shared similarity, both groups showed there are distinct factors influencing the online learning experience concerning teaching presence. The asynchronous group revealed instructor's feedback is the second significant factor affecting their online learning experience. Learners in the asynchronous group noted that instructor's feedback assisted them in enhancing their understanding and skills in the topics studied. Consistent with findings from previous studies by Berry (2017) and Steele et al. (2017), instructor's feedback was instrumental in students' knowledge construction. Moreover, constructive feedback, as highlighted by Caskurlu et al. (2020), identifies errors while indicating areas for improvement. In this study, when the instructor pointed out mistakes in asynchronous learners' responses, they acknowledged that they had learned from them and improved their knowledge on the topic.

Thirdly, the instructor's positivity helped asynchronous learners to progress with their learning. When the instructor displayed a positive outlook, it created a relaxed and enjoyable environment that learners could participate in. As opposed to traditional or synchronous learning, asynchronous learners did not meet their instructors face-to-face; therefore, the instructor's positivity and enthusiasm increased learners' motivation to actively engage in online discussion. The instructor proactively fostered communication by encouraging learners to ask questions and communicate with her. This was to ensure that the learners would have had a deeper understanding of the topics.

For the synchronous group, apart from the factor related to instructor's interactivity that increases the teaching presence, another factor that influences the group's learning experience is the instructor's facilitation. Unlike the asynchronous group, synchronous group was able to communicate with the instructor in real time. Learners had the opportunities to obtain immediate feedback from the teacher during synchronous lessons. Additionally, each week, the instructor informed the synchronous learners about the objectives of the lesson. Learners were given a clear direction on the learning goals and tasks involved. As argued by Garrison and Arbaugh (2007) in the function of teaching presence, there was a need for the instructor to provide crucial information. Teaching presence provides the facilitation and directions required for effective interaction.

Conclusion

There are several practical implications that can be derived from the study. Firstly, the study has provided valuable information concerning the crucial role of the instructor in increasing learners' online learning experience. The instructors should be active and interactive in both asynchronous and synchronous settings. In asynchronous settings, the instructor should actively participate in forums and provide timely response or feedback to the learners. As revealed in the findings, teaching presence was viewed favourably when the instructor was available to respond to queries, give timely feedback, and was perceived by students to be encouraging and positive. The instructor's guidance is critical in aiding learners to understand the lessons.

When considering the mode of delivery for a course, the stakeholders need to examine the resources needed to provide a meaningful online learning experience to learners. Apart from addressing the students' needs, instructors also require the support to conduct an effective course, especially on an asynchronous platform such as MOOC. As noted by Lowenthal et al. (2018), one of the main challenges that instructors face is offering individual feedback to a

large number of students. While the instructor in this course managed to give individual feedback to learners promptly from the asynchronous group, it would have been more challenging had the number of students been higher. In an asynchronous course with large class of learners, instructors may have to consider designing automatic feedback related to in-class activities. Instructors also require the assistance from the technical team in setting up and providing technical support while the course is executed. This support serves to alleviate the feeling of being overwhelmed while managing the course. When instructors receive support and assistance in teaching, they are more likely to feel more motivated to teach the course. This will lead to a more engaging learning experience overall for the learners.

While this study has given insights on the crucial role of the instructors in increasing teaching presence, it is not without its limitation. The data was obtained from a specific Malaysian public tertiary institution. Therefore, the insights and findings may not be applicable to all the institutions of higher learning in Malaysia.

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