Exploring the Influence of Social, Teaching and Cognitive Presence in Online Learning: A Case Study of Learning Japanese

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ABSTRACT

Online learning has revolutionised education by providing flexibility and accessibility to students worldwide. Despite this, fostering meaningful engagement in virtual settings continues to be a significant challenge for educators and researchers. The influence of social presence on teaching and cognitive presence in online learning is based on the Community of Inquiry (CoI) framework. According to Garrison and Arbaugh (2007), there are three types of presences in online learning: (a) social presence, (b) teaching presence, and (c) cognitive presence. This study investigates the influence of social, teaching and cognitive presence in online learning for Japanese as a foreign language. A quantitative survey based on Garrison and Arbaugh (2007) was conducted, consisting of four sections: a demographic profile with four items and 34 items measured using a 5-point Likert scale via Google Forms. The questionnaire was answered by 184 students studying Japanese from three clusters, Science and Technology, Arts and Humanities, and Business and Administration at a public university in Malaysia. The findings reveal that learners highly value (a) social presence, (b) teaching presence, and (c) cognitive presence as integral to their learning experience. Additionally, the correlation analysis highlights significant relationships between these types of presence, emphasizing the need for a balanced and integrated approach to improve the overall online learning experiences. It also emphasizes the need for educators to incorporate these components into their course design and classroom environments to enhance Japanese language learner engagement, communication, and overall satisfaction. Future research should investigate the mechanisms through which social presence impacts teaching and learning outcomes in online settings.

Keywords: online learning, social presence, teaching presence, cognitive presence

INTRODUCTION

Online learning has transformed the educational landscape, offering flexibility and accessibility to learners worldwide. However, creating meaningful engagement in these virtual environments remains a pressing challenge for educators and researchers.

The influence of social presence on teaching and cognitive presence in online learning is rooted in the Community of Inquiry (CoI) framework, a widely accepted model for understanding online learning environments. Garrison and Arbaugh (2007) identify three types of presence in online learning: (a) social presence, (b) teaching presence, and (c) cognitive presence. These three elements interact to create positive and collaborative learning communities. According to Garrison and Arbaugh (2007), social presence involves the interactions that learners experience, including both face-to-face and online interactions, with peers, instructors, or others. Social presence is emphasized in online learning because experts consider social constructivism crucial for enhancing interpersonal communication and learning quality. It impacts learners' motivation, teacher satisfaction, and actual and perceived learning outcomes. Social presence also influences the design of training courses (Richardson et al., 2017), the retention rates and the willingness to enrol in online courses (Liu et al., 2022). Besides social presence, the instructor establishes teaching presence through

methods and activities, while cognitive presence refers to learners' ability to derive meaning and engage in critical thinking through class discussions (Garrison, 2007).

However, how do learners perceive these three aspects in a real learning environment? Based on the stated context, the present study aims to explore the influence of social, teaching and cognitive presence in online learning for Japanese language learning.

Statement Of Problem

Social presence is an essential element in online learning. It shapes social outcomes, learning, and the nature of social engagement on internet platforms. Rourke et al. (2001), defined social presence as the extent to which a student's true self is projected and perceived in an online course. A strong social presence is important in creating a supportive learning community. Meanwhile, cognitive presence refers to the capacity of the learners to create meaning from what is learnt through class discussions that encourage critical thinking. Kanuka and Garrison (2004), argue that cognitive presence is necessary for higher learning, such as critical thinking. Cognitive presence is crucial for fostering deep learning, knowledge construction, and intellectual development in online learning. On the other hand, teaching presence is manifested in the course materials, design, and teaching activities.

In online learning, the challenges faced by both teachers and learners are the lack of physical presence and poor communication between them. This could cause learners to be frustrated and discontented, reduce their participation, or even have higher dropout rates in online courses (Reio & Crim 2006). Thus, it is important to understand the social, cognitive, and teaching presence and their interactions to create a strong social, cognitive, and teaching presence in online learning, subsequently leading to a positive learning community.

Objective Of the Study and Research Questions

This study is done to explore the perception of learners on their use of learning strategies. Specifically, this study is done to answer the following questions:

1.   How do learners perceive social presence in online learning?

2.   How do learners perceive teaching presence in online learning?

3.   How do learners perceive cognitive presence in online learning?

4.   Is there a relationship between all types of presences in online learning?

LITERATURE REVIEW

Theoretical Framework

Types of Presences in Online Learning

Social presence refers to how students perceive themselves, their peers, and the instructor in an online learning community. It impacts participation, collaboration, and satisfaction (Lakin, 2005). Measuring social presence is challenging, as it involves concepts of immediacy (Wiener & Mehrabian, 1968) and intimacy (Argyle & Dean, 1965), both influencing closeness in communication. Immediacy, or psychological distance, enhances social presence (Gunawardena & Zittle, 1997). Additionally, Short et al. (1976) stated that social presence includes elements that influence the sense of closeness in a communication medium.

Cognitive presence, on the other hand, refers to the ability of learners to derive meaning from what they have learned through class discussions that promote critical thinking. According to Kanuka and Garrison (2004), cognitive presence is essential for higher learning, such as engaging in critical thinking. It plays a key role in facilitating deep learning, knowledge creation, and intellectual growth in online education. Conversely, teaching presence is evident in the course materials, design, and teaching activities.

Therefore, it is crucial to understand the social, cognitive, and teaching presences, along with their interactions, to build a robust presence in each of these areas in online learning, ultimately fostering a positive learning community.

Past Studies

Past Studies on the Advantages of Online Learning

Xu et al. (2021) examined the factors influencing college students' teaching, social, and cognitive presence in online learning. According to a nationwide study of 12,826 college students' experiences with online learning in China during the COVID-19 pandemic, the study's findings revealed that self-regulated learning and self-efficacy are the two most significant factors affecting the three types of presences. Furthermore, among all the demographic factors, the type of education had the greatest impact.

Richardson et al. (2017) performed a meta-analysis to examine these factors from the primary research and, by examining the variations among the studies, determine the pattern of student outcomes (such as perceived learning and satisfaction) to social presence. The findings indicated that social presence and perceived learning ($r = 0.51$, $k = 26$) and satisfaction ($r = 0.56$, $k = 26$) had a reasonably substantial positive average association. Significant variances in correlations (86.7% for satisfaction and 92.8% for perceived learning, respectively) further suggested that online course environments were the cause of these relationships' systematic differences. They discovered that (a) the course length, discipline area, and social presence scale moderated the strength of the relationship between social presence and satisfaction, and (b) the course length, discipline area, and target audience moderated the relationship between social presence and perceived learning.

Next, a study by Akcaoglu and Lee (2016) compared small group versus full class talks to examine how group size affected students' feelings of social presence in two graduate-level online courses. According to the findings, students felt more socially present during small group talks in terms of group cohesion ($t(32) = 3.550$, $p = .001$), social space ($t(29) = 3.074$, $p = .005$), and sociability ($t(32) = 3.507$, $p = .001$). They discuss how putting students in permanent, small discussion groups can improve their social presence. Online learning designers and instructors can deliberately change group size to encourage social presence in asynchronous online discussions.

Past Studies on Drawbacks of Online Learning

Although online learning offers significant benefits, students face challenges that often result in limited or negative outcomes. Several studies have highlighted the challenges online learning poses to student engagement and interaction. Arkorful and Abaidoo (2015) highlighted that e-learning, in certain cases, is held through remoteness and contemplation resulting in a lack of student interaction. In the e-learning method, assessments are generally held online which reduces the possibility of restricting illegitimate activities such as; cheating, plagiarism etc. Other than that, the absence of essential personal interactions is the most noticeable drawback of e-learning, not only among colleague learners but also between instructors and learners (Islam, Beer and Slack, 2015). The more students taking online courses, the less engaged in collaborative learning, student-faculty interactions, and discussions with diverse peers compared to traditional classroom settings. In a study conducted by Haranrithikorn (2019), 30 staff and faculty members from many different universities who were involved with various forms of online learning programs were interviewed to investigate the advantages and disadvantages of online learning. The findings of the study revealed that online learning programs were becoming a significant part of higher education learning but disadvantages included low success rate, students being easily distracted, and no class interaction.

Many studies have shown that the lack of class interaction and the potential for distractions were noted as significant disadvantages of online learning. After the outbreak of the Covid-19 pandemic, education institutions heavily rely on e-learning technologies and tools to shift from in-person classes to online learning. However, the success of online learning heavily depends on the availability of robust technical infrastructure and reliable internet connectivity. Alshamrani (2019) conducted a study to identify the advantages and disadvantages of online learning for a group of 11 students studying in New Zealand. The study was conducted

using a survey and interviews to delve into an understanding of the advantages and disadvantages of online education from the student's perspective. The study identified that the role of technical infrastructure and internet connectivity is paramount in ensuring the success of online learning. On the other hand, inadequate technical support can hinder the learning process, making it difficult for students to access course materials and participate in online activities effectively. The need for high-quality, interoperable solutions is crucial to overcoming these challenges and ensuring that online learning platforms can deliver consistent and reliable educational experiences. Therefore, ensuring high-quality, interoperable solutions is crucial for the effective delivery of online content across different institutions and departments. (Alshamrani, 2019)

A study aims to explore the perception of students regarding the benefits and challenges of online learning done by Sultana et. al (2024) using a predesigned validated questionnaire to collect data from 273 medical students in Bangladesh, shows that the health and well-being issue of students is another issue raised from the shift to online learning. Prolonged screen time and the sedentary nature of online learning can lead to physical health issues, while the lack of social interaction and increased stress levels can affect students' mental well-being. These health concerns highlight the need for balanced and well-structured online learning environments that promote both academic success and student well-being because long-term digital device use can negatively impact students' physical and mental health.

Past Studies on Types of Presences in Online Learning

Social presence, teaching presence, and cognitive presence are three dimensions of presences important for effective online learning.

Based on a national survey to identify factors influencing college students' teaching, social, and cognitive presence in online learning during the COVID-19 pandemic, the study results revealed that, among the influencing factors proposed, self-regulated learning had the greatest impact on the three presences, followed by self-efficacy (Xu et al., 2021).

Rahim et al. (2023) conducted a study to investigate how learners view and perceive their cognitive, teaching and social presence in an online learning environment and also determined whether there are correlations between the types of presences in online learning. This quantitative study has a purposive sample of 169 participants who responded to a survey designed to gauge their perception of the three key elements of online presence. The findings from the study suggest a significant relationship between all three types of presences during online learning in which the interconnectedness between the elements helps to create a conducive and positive online learning environment for students. Therefore, by being aware of the three presences, learners and instructors can ensure an online structure that is beneficial and meaningful.

In a case study to probe the posting patterns of students' social presence, cognitive presence, and teaching presence in an online learning setting, by using purposive sampling, qualitative data were collected from 91 students in a public university in Turkey. The data were analyzed through descriptive and deductive transcript analysis. The findings revealed students' posting behaviours of social presence, cognitive presence, and teaching presence were at a substantially high level and could be enhanced during treatment fairly significantly. The most important points behind a high level of social presence and cognitive presence were found to be the topics based on real-life cases and scenarios and reflective course activities. (Kilis & Yildirim, 2019)

A quantitative study with a purposive sample of 100 participants is done to explore the online presence among learners who attend online classes (Abidin et al., 2023). This study aims to address the relationship between teaching, cognitive presence and social presence in online learning. The findings of this study suggest that online learning environments require a balance of teaching, cognitive presence, and social presence to facilitate effective learning. The exploration of the relationship between teaching, cognitive presence, and social presence in online learning has important implications for the design and delivery of online courses.

Conceptual Framework

Figure 1 illustrates the conceptual framework of the study, which examines the relationship between different types of presences in online learning. Online learning can provide both positive and negative experiences for learners (Rahmat et al., 2021). Garrison and Arbaugh (2007) identify three types of presences: (a) social presence, (b) teaching presence, and (c) cognitive presence. Social presence involves interactions with peers, instructors, or others, regardless of whether the lesson is face-to-face or online. Teaching presence is established through the instructor's methods and activities in the online classroom. Cognitive presence refers to the learners' ability to construct meaning through class discussions that promote critical thinking. This study also explores the relationship between social presence in teaching and cognitive presence in online learning.
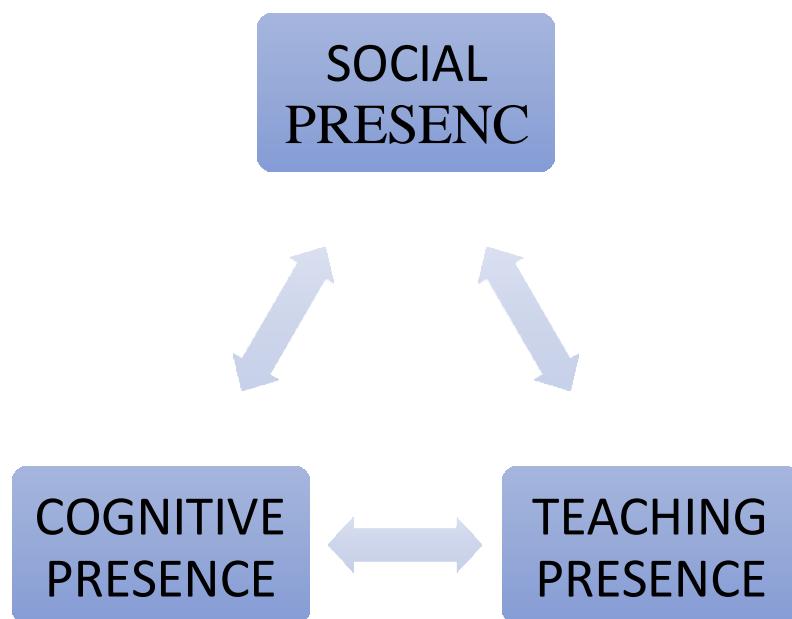

Figure 1- Conceptual Framework of the Study-Influence of Social Presence on Teaching and Cognitive Presence

METHODOLOGY

This study is conducted to explore the influence of social presence on teaching and cognitive presence in the online learning of the Japanese language as a foreign language. A purposive sample of 184 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted in Garrison & Arbaugh (2007) to reveal the variables in Table 1 below. The survey has 4 sections. Section A has items on the demographic profile. Section B has 13 items on teaching presence. Section C has 9 items on social presence. Section D has 12 items on cognitive presence.

Table 1- Distribution of Items in the Survey

Section	Type Of Presence	No Of Items	Cronbach Alpha
B	Teaching	13	.954
C	Social	9	.913
D	Cognitive	12	.946
		34	.962

Table 1 also shows the reliability of the survey. The analysis shows a Cronbach alpha of .954 for teaching presence, .913 for social presence and .946 for cognitive presence. The overall external reliability for all 34 items is .962; thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Limitation

One limitation of this research methodology is its reliance on a 5-point Likert-scale survey administered through Google Forms, which may limit the depth and complexity of the responses. Additionally, the survey does not account for factors such as technical support or psychological influences, which could significantly impact the results. As a result, the findings may not fully capture the broader context or underlying variables that could affect the research outcomes.

FINDINGS AND DISCUSSION

Findings for Demographic Profile

Table 2-Percentage for Q1- Gender

No	Item	Percentage
1	Male	45%
2	Female	55%

Based on Table 2 above, the gender distribution consists of 55% male and 45% female.

Table 3-Percentage for Q2- Faculty

No	Item	Percentage
1	Science And Technology	41%
2	Social Science And Humanities	37%
3	Business And Administration	22%

Table 3 above shows the distribution by discipline. The majority of respondents (41%) are from Sciences and Technologies, followed by 37% from Social Sciences and humanities, and 22% from business and administration.

Table 4-Percentage for Q3-Level of Japanese Language

No	Item	Percentage
1	Level 1	36%
2	Level 2	41%
3	Level 3	23%

Table 4 shows the distribution by language level. 36% of the respondents are from level 1, followed by 41% of level 2 and 23% of level 3 respondents.

Table 5- Percentage for Q4-Internet Access

No	Item	Percentage
1	Slow	4%
2	Medium	61%
3	Strong	35%

Table 5 shows that most respondents have medium internet access (61%), while 35% have strong internet access, and only 4% have slow internet access.

Findings For Social Presence

This section presents data to answer research question 1-How do learners perceive social presence in online learning? In the context of this study, this is measured by (i) affective expression, (ii) open communication,

(iii) and group cohesion.

Table 6- Mean for (i) Affective Expression

Item	Mean	SD
SPQ1 Getting to know other course participants gave me a sense of belonging in the course.	4.1	.83511
SPQ2 I was able to form distinct impressions of some course participants.	4	.80162
SPQ3 Online or web-based communication is an excellent medium for social interaction.	4	1.07412

The mean for affective expression is presented in Table 6. The results show that all items have a mean score of 4 and above. The highest mean recorded is 4.1 for the item, "getting to know other course participants gave me a sense of belonging in the course". This is followed by a mean of 4.0 for "I was able to form distinct impressions of some course participants" and "online or web-based communication is an excellent medium for social interaction."

Table 7- Mean for (ii) Open Communication

Item	Mean	SD
SPQ4 I felt comfortable conversing through the online medium.	4	.98895
SPQ5 I felt comfortable participating in the course discussions.	4.1	.87524
SPQ6 I felt comfortable interacting with other course participants.	4	.94040

Table 7 shows the mean for open communication. All three items recorded a mean value of 4 and above, with the highest mean being "I felt comfortable participating in the course discussions" (4.1). The other two items, "I felt comfortable conversing through the online medium" and "I felt comfortable interacting with other course participants," recorded the same mean value (4.0).

Table 8- Mean for (iii) Group Cohesion

Item	Mean	SD
SPQ7 I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.	3.7	.94815
SPQ8 I felt that my point of view was acknowledged by other course participants.	3.9	.82655
SPQ9 Online discussions help me to develop a sense of collaboration.	4	.97679

The mean for group cohesion is presented in Table 8. The results indicate that the highest mean (4.0) is for "online discussions help me to develop a sense of collaboration". The second highest mean (3.9) is for "I felt that my point of view was acknowledged by other course participants" and "I felt comfortable disagreeing with other course participants while still maintaining a sense of trust" recorded the lowest mean (3.7).

Findings For Teaching Presence

This section presents data to answer research question 2-How do learners perceive teaching presence in online learning? In the context of this study, this is measured by (i) design & organization, (ii) facilitation, and (iii) direct instruction.

Table 9- Mean for (i) Design & Organization

Item	Mean	SD
TPQ1 The instructor clearly communicated important course topics.	4.6	.55831
TPQ2 The instructor clearly communicated important course goals.	4.6	.56886
TPQ3 The instructor provided clear instructions on how to participate in course	4.6	.59046

learning activities.		
TPQ4 The instructor clearly communicated important due dates/time frames for learning activities.	4.7	.56084

Table 9 shows the distribution by Design and Organization. The highest mean score (4.7) is shared by the item "the instructor clearly communicated important due dates/time frames for learning activities". This was followed by mean scores (4.6), which were shared with three items: "the instructor clearly communicated important course topics", "the instructor clearly communicated important course goals", and "the instructor provided clear instructions on how to participate in course learning activities".

Table 10- Mean for (ii) Facilitation

Item	Mean	SD
TPQ5 The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.	4.6	.61395
TPQ6 The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.	4.7	.57891
TPQ7 The instructor helped to keep course participants engaged and participating in productive dialogue.	4.6	.61775
TPQ8 The instructor helped keep the course participants on task in a way that helped me to learn.	4.6	.61673
TPQ9 The instructor encouraged course participants to explore new concepts in this course.	4.6	.59774
TPQ10 Instructor actions reinforced the development of a sense of community among course participants.	4.5	.63585

Table 10 shows the distribution of facilitation. The highest was for "the instructor was helpful in guiding the class toward understanding course topics in a way that helped me clarify my thinking" with a mean score of (4.7) followed by a mean score of (4.6) which were shared with four items "the instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn", "the instructor helped to keep course participants engaged and participating in productive dialogue", "the instructor helped keep the course participants on the task in a way that helped me to learn", and "the instructor encouraged course participants to explore new concepts in this course". The lowest mean score for this skill was (4.5) for the item "instructor actions reinforced the development of a sense of community among course participants".

Table 11- Mean for (iii) Direct Instruction

Item	Mean	SD
TPQ11 The instructor helped to focus discussion on relevant issues in a way that helped me to learn.	4.6	.63088
TPQ12 The instructor provided feedback that helped me understand my strengths and weaknesses relative to the course's goals and objectives.	4.4	.74287
TPQ13 The instructor provided feedback in a timely fashion.	4.4	.67591

Table 11 shows the mean scores for Direct Instruction. The highest mean score was when the instructor helped to focus the discussion on relevant issues in a way that helped learners learn (4.6). Interestingly, the second lowest means are when the instructor provided feedback that helped learners understand their strengths and weaknesses relative to the course's goals and objectives and when the instructor provided feedback in a timely fashion (4.4).

Findings for Cognitive Presence

This section presents data to answer research question 3- How do learners perceive cognitive presence in

online learning? In the context of this study, this is measured by (i) triggering events, (ii) exploration, (iii) integration, and (iv) resolution.

Table 12- Mean for (i) Triggering Events

Item	Mean	SD
CPQ1 Problems posed increased my interest in course issues.	4	.82163
CPQ2 Course activities piqued my curiosity	4.3	.71641
CPQ3 I felt motivated to explore content-related questions.	4.3	.66575

Table 12 shows the mean for triggering events. The highest mean score is 4.3, which means "course activities piqued my curiosity" and "I felt motivated to explore content-related questions". Problems posed increased learners' interest in course issues has achieved a slightly lower mean score (4.0) compared to the first two items but still considered high overall.

Table 13- Mean for (ii) Exploration

Item	Mean	SD
CPQ4, I utilized a variety of information sources to explore problems posed in this course.	4.2	.66926
CPQ5 Brainstorming and finding relevant information helped me resolve content-related questions.	4.3	.71229
CPQ 6 Online discussions were valuable in helping me appreciate different perspectives.	4.1	.88354

Table 13 shows the mean for exploration. The highest mean score goes to "brainstorming and finding relevant information helped me resolve content-related questions" (mean score 4.3), followed by "I utilize a variety of information sources to explore problems posed in this course" (mean score 4.2). The online discussion was valuable in helping appreciate different perspectives and obtained the lowest mean score, 4.1.

Table 14- Mean for (iii) Integration

Item	Mean	SD
CPQ7 Combining new information helped me answer questions raised in course activities.	4.3	.73674
CPQ8 Learning activities helped me construct explanations/solutions.	4.4	.65877
CPQ9 Reflection on course content and discussions helped me understand fundamental concepts in this class.	4.3	.68430

As shown in Table 14 above, the highest mean score for integration is 4.4, where learners believe that learning activities help construct explanations or solutions. The remaining 2 items from integration have obtained the same mean score (4.3), which combines new information to help answer questions raised in course activities, and reflection on course content and discussions to help understand fundamental concepts in class.

Table 15- Mean for (iv) Resolution

Item	Mean	SD
CPQ10 I can describe ways to test and apply the knowledge created in this course.	4.2	.76214
CPQ11, I have developed solutions to course problems that can be applied in practice.	4.2	.76214
CPQ12 I can apply the knowledge created in this course to my work or other non-class-related activities.	4.2	.81778

Table 15 presents the mean for resolution. All items from the resolution have received a mean score of 4.2.

There are "I can describe ways to test and apply the knowledge created in this course.", "1 have developed solutions to course problems that can be applied in practice", and "I can apply the knowledge created in this course to my work or other non-class-related activities." This shows that all items from the resolution are equally valued for learners.

Findings for Relationship Between All Types of Presences in Online Learning

This section presents data to answer research question 4- Is there a relationship between all types of presences in online learning?

To determine if there is a significant association in the mean scores between all types of presences in online learning, data is analyzed using SPSS for correlations. Results are presented separately in Tables 16, 17 and 18 below.

Table 16- Correlation between Social and Teaching Presence in Online Learning

Correlations

		SOCIAL	TEACHING
SOCIAL	Pearson Correlation	1	.505**
	Sig. (2–tailed)		.000
	N	183	183
TEACHING	Pearson Correlation	.505**	1
	Sig. (2–tailed)	.000	
	N	183	183

**. Correlation is significant at the 0.01 level (2–tailed).

Table 16 shows there is an association between social and teaching presence in online learning. Correlation analysis shows that there is a highly significant association between social and teaching presence in online learning (r=.505**) and (p=.000). According to Jackson (2015), the coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between social and teaching presence in online learning. A key factor influencing the relationship between social and teaching presence is likely the instructor's ability to foster social connections within the learning community. Instructors who exhibit strong interpersonal skills such as empathy, approachability, and active listening are likely to build a positive social presence that encourages students to engage with the course and one another. When students feel socially supported, they are more likely to participate actively in the course, which enhances their overall learning experience.

Table 17- Correlation between teaching and cognitive presence in online learning

Correlations

		TEACHING	COGNITIVE
TEACHING	Pearson Correlation	1	.595**
	Sig. (2–tailed)		.000
	N	183	183
COGNITIVE	Pearson Correlation	.595**	1
	Sig. (2–tailed)	.000	
	N	183	183

**. Correlation is significant at the 0.01 level (2–tailed).

Table 17 shows there is an association between teaching and cognitive presence in online learning. Correlation analysis shows that there is a highly significant association between teaching and cognitive presence in online learning (r=.595**) and (p=.000). According to Jackson (2015), the coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between teaching and cognitive presence in online learning.

However, it is important to delve into potential causal mechanisms and mediating factors that may influence this relationship. A key mediator in this relationship probably is the instructor's ability to facilitate engaging and intellectually stimulating discussions. Teaching presence, as defined by Garrison et al. (2000), includes the design, organization, and facilitation of learning activities that help structure and guide learners' cognitive processes. Instructors who create opportunities for critical dialogue, such as through guided discussions, thought-provoking prompts, or collaborative activities help learners engage in deeper cognitive processes, thus enhancing cognitive presence. Another important mediator could be learner characteristics such as motivation, self-regulation, and prior knowledge. Motivated learners who have an intrinsic interest in the subject matter are more likely to engage with the course materials critically. Besides, the technological tools and instructional design used in online learning environments can significantly mediate the relationship between teaching and cognitive presence. Well-designed online platforms that incorporate multimedia, interactive features, and clear navigation can support both teaching presence and cognitive presence.

Table 18- Correlation between cognitive and social presence in online learning

Correlations

		COGNITIVE	SOCIAL
COGNITIVE	Pearson Correlation	1	.684**
	Sig. (2-tailed)		.000
	N	183	183
SOCIAL	Pearson Correlation	.684**	1
	Sig. (2-tailed)	.000	
	N	183	183

**. Correlation is significant at the 0.01 level (2-tailed).

Table 18 shows there is an association between cognitive and social presence in online learning. Correlation analysis shows that there is a highly significant association between cognitive and social presence in online learning (r=.684**) and (p=.000). According to Jackson (2015), the coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between cognitive and social presence in online learning.

One possible mediating factor is the level of instructor facilitation. Instructors who actively create opportunities for social interaction, such as through group discussions or peer reviews, may help foster a sense of community and increase social presence. Another potential mediator could be learner characteristics, such as self-regulation and motivation. Learners who are intrinsically motivated to engage with course material may be more likely to seek out social interactions and actively participate in online discussions, leading to both higher social and cognitive presence. Technological factors also play a critical role in mediating this relationship. The design and functionality of the online learning platform can impact how effectively learners interact with each

other and with the instructor. For instance, platforms that offer discussion forums, real-time video chats, or collaborative tools like shared documents or whiteboards may enhance social presence, which could then contribute to deeper cognitive engagement. Additionally, institutional support and peer interactions are additional external factors that could influence the relationship between cognitive and social presence.

DISCUSSION

These findings are consistent with Richardson (2017), who emphasizes that social presence, the ability to perceive others in an online setting plays a crucial role in online learning by influencing student motivation, participation, perceived learning, and satisfaction with courses and instructors. Rourke et al. (2001) defined social presence as the degree to which a student's authentic self is expressed and recognized in an online course. Learners who feel socially connected are more likely to engage in critical thinking and deeper understanding. Social interactions promote discussions, diverse perspectives, and problem-solving activities. A strong sense of social presence also improves teacher-student interactions, making teaching more effective (Rourke, et al., 2001). Furthermore, it enables instructors to connect with students personally, leading to better facilitation and guidance (Garrison & Arbaugh 2007).

According to the findings, teaching presence, including design, organization, facilitation, and instruction, is shown to be highly significant. The findings reveal a strong relationship between all types of presences, with each influencing the others to a high degree. These results align with Kozan et al. (2024), Rahim, et al. (2023), and Kilis & Yildirim (2019), who emphasized that the presences are strongly and positively interconnected. Each presence also influences the relationship between the other two to some degree.

Finally, cognitive presence, which refers to the ability of learners to create meaning from what is learned through class discussions that encourage critical thinking, is also highly significant in this study. Kanuka and Garrison (2004) argue that cognitive presence is essential for higher learning, including critical thinking, and plays a key role in promoting deep learning, knowledge construction, and intellectual development in online learning.

Moreover, this study indicates that effective online learning environments require a balance of teaching, cognitive, and social presence. Investigating the relationship between these three types of presences has significant implications for the design and delivery of online courses. This is further supported by the research findings obtained by Abidin et al. (2023). Effective teaching and learning occur when learners have a sense of closeness, feel comfortable engaging in online conversations and course discussions, and interact with peers (Garrison, 2007; Short et al., 1976).

CONCLUSION

In conclusion, learners strongly perceive social, teaching, and cognitive presence in online learning environments for Japanese language learning. The correlation analysis reveals highly significant associations between these types of presences, emphasizing the need for a balanced and integrated approach to optimize the online learning experience. These findings highlight the crucial role of fostering a sense of community, effective teaching strategies, and cognitive engagement in digital learning spaces. As online learning continues to evolve, especially with the rapid advancements in educational technology, this integrated approach will be essential in shaping future digital pedagogy. Leveraging these insights can help educators design more engaging, responsive, and effective online courses, ensuring that learners are supported in all aspects of their educational journey. As technological tools such as AI, virtual reality, and adaptive learning systems become more prevalent, understanding and enhancing these presences will be key to addressing the diverse needs of learners and advancing the quality of online education globally.

Pedagogical Implications and Suggestions for Future Research

This study highlights the importance of balancing teaching, cognitive, and social aspects to create comprehensive online learning experiences. Thus, for successful online learning, educators must ensure that these three elements are carefully considered in course design and the learning environment to foster

comfortable interactions among learners. Instructors should support learners by guiding them and helping them feel a sense of belonging while allowing them to form distinct impressions of other course participants.

Future research should investigate the mechanisms by which social presence affects teaching and learning

outcomes in online settings. It could focus on strategies like peer interactions, instructor-student communication, and multimedia tools to assess their impact on engagement and performance. Additionally, incorporating qualitative methods, such as interviews or focus groups, alongside Likert-scale surveys would provide deeper insights into the learning environment and psychological factors, offering a more comprehensive understanding of the variables influencing outcomes. Combining both qualitative and quantitative approaches would strengthen the depth and interpretation of the findings.

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