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Exploring students' perceptions and the significance of social and cognitive presence in their educational voyage

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Abstract

The purpose of this study is to examine students' perspectives on the importance of social and cognitive presence throughout their educational experience. Four hundred and fifty fourth-year education-major students from five universities in Southern Nigeria participated in the research. We adopted a correlational research design using the survey approach. A questionnaire of the four-point Likert variety was used for data collection. The data obtained were subjected to simple linear regression and Pearson product-moment correlation analysis. The study's findings demonstrate a positive relationship between students' evaluations of their social presence and their academic success. Also, a strong correlation between cognitive presence, student involvement and critical thinking was found. In addition, the current study revealed a significant association between students' total educational experiences and their degrees of social and cognitive presence. These findings have implications for educational methods, emphasising the value of encouraging social connection, cognitive engagement, and the fusion of educational opportunities. The knowledge acquired from this study will help researchers, educators, and policymakers develop more effective curricula and improve teaching methods, which will ultimately help students perform better overall.

Introduction

Students navigate the intricate landscapes of education, where the interplay of human interaction and intellectual engagement impacts their learning experiences as they embark on a journey of knowledge and self-discovery. The importance of social and cognitive presence within the educational arena has taken on new dimensions in this era of digital connection and developing pedagogical paradigms, altering the very nature of how students engage with their learning settings. As these young brains make their way through the halls of academia, it becomes increasingly important to delve into their views to unravel the fabric of thoughts and perceptions that underpin the critical roles of social connectedness and cognitive stimulation. This investigation of the subtle dance between social relationships and cognitive processes reveals a rich canvas of implications for improving teaching tactics, developing deeper comprehension, and nourishing learners' holistic growth. This article sets out on an exploratory quest to untangle the tangled web of students' ideas of the fundamental importance of social and cognitive presence in their educational journey.

Finding out how students view social and cognitive presence in the classroom provides useful information. It also improves pedagogical strategies and allows for more individualized teaching methods for more engaging learning experiences. When it comes to online learning, insights help with platform optimization, social and cognitive presence promotion for better quality, and closing engagement gaps. Individual preferences allow for personalized learning experiences that increase motivation and satisfaction. They also support initiatives for better student retention and create a supportive academic environment (Shafi & Middleton, 2023). Teachers gain from research-based professional development, which creates dynamic learning environments.

Background and rationale for the study

The idea of social presence, which stems from social psychology and communication, has received much attention in educational settings. The term "social presence" describes how much people in mediated communication environments, such as online classrooms and virtual learning environments, see and feel a sense of human contact and closeness. Understanding the significance of social presence in educational settings is essential for improving student engagement and overall learning outcomes as technology continues to change the educational landscape.

One of the main components of the Community of Inquiry (CoI) framework is cognitive presence, which is the active use of critical thinking by students in a variety of learning environments. These environments include traditional classrooms, online courses, and hybrid formats, and they require higher-order thinking skills like analysis and synthesis. Activities that encourage inquiry, questioning, and concept application are characteristics of effective cognitive presence. Teachers create a supportive yet challenging environment that promotes meaningful discussions and allows students to become reflective, independent learners.

The traditional classroom, which was once limited to physical institutions, has evolved into a dynamic virtual battleground (Ephraim et al., 2022). This transformation has resulted in a reconsideration of the importance of social interactions and cognitive processes in influencing students' learning experiences. While educational technology provides unprecedented opportunities for connectivity, it also raises concerns about the depth and quality of human engagement in these digital environments. Furthermore, as pedagogical techniques shift towards learner-centred paradigms, understanding how students perceive the fusion of social relationships and cognitive stimuli becomes increasingly important for informed instructional design.

Despite the growing emphasis on online and traditional educational experiences, there needs to be more understanding of how students perceive and value social and cognitive presence throughout their educational journey. The lack of comprehensive insights into the dynamics of these elements hinders educators and institutions in optimizing learning environments. Therefore, the research problem at hand is to explore students' perceptions and discern the significance of both social and cognitive presence in shaping their educational experiences, with the overarching goal of informing strategies that enhance student engagement, satisfaction, and academic outcomes.

Research objectives

The purpose of this study is to dive into the many facets of students' perceptions of social and cognitive presence in their educational journey. The precise goals are as follows:

1. Examine whether students' perceived social presence correlates with their learning outcomes.

2. Investigate whether higher levels of cognitive presence lead to increased student engagement and critical thinking.

3. Investigate the relationship between levels of social and cognitive presence and their combined effects on students' overall educational experiences.

Significance

This study intends to contribute to both theoretical and practical realms by revealing students' opinions on the delicate interplay between social and cognitive presence. The findings will help us better understand how students interact with their learning environments, informing pedagogical practices that encourage meaningful connections and cognitive development. Furthermore, the outcome of this study has the potential to aid educators, curriculum innovators, and educational policymakers in improving the effectiveness of online and offline learning experiences. As technology continues to transform the educational landscape, a thorough understanding of students' views becomes an essential compass for guiding modern teaching.

Literature review

Related literature is reviewed based on the following headings and subheadings.

Theoretical backgrounds

Social constructivism and its relevance to social presence

Social constructivism emphasizes the collaborative construction of knowledge through social interactions, focusing on learning within a social context. It emphasizes the essence of social presence in educational settings, as it fosters meaningful and effective learning experiences. Vygotsky's (1978) Zone of Proximal Development suggests that learning is most effective when engaged with knowledgeable peers or mentors (Murphy et al., 2015). Akpan et al. (2020) highlight the importance of social constructivism and social presence in an educational environment. Social constructivist learning environments foster collaborative knowledge construction through discussions, debates, and joint problem-solving activities. Deri (2022) notes that student success is linked to prior achievements, witnessing others succeed, influential encouragement, and positive states. By recognizing the interplay between these concepts, educators can create learning environments that promote effective outcomes and meaningful interactions. Educators need to promote constructivist teaching methods for active student engagement and participation in the classroom (Ambe et al., 2023).

Cognitive engagement theories and their connection to cognitive presence

Cognitive engagement theories are crucial in understanding and enhancing cognitive presence in educational settings. Social Cognitive Theory, by Bandura (1977), emphasizes observational learning, self-regulation, and self-efficacy in cognitive engagement (Luszczynska & Schwarzer, 2015). Constructivist Learning Theory, by Vygotsky (1978), emphasizes social interaction and collaborative learning, stimulating higher-order thinking and cognitive presence (Stewart, 2018). Cognitive Apprenticeship Theory, by Collins et al. (1989) transfers cognitive skills and knowledge from experts to novice learners through authentic experiences (Imiere, 2019; Matsuo & Tsukube, 2020). By implementing these theories, educators can create environments that foster meaningful cognitive engagement and promote cognitive presence among learners.

Social presence in educational settings

Conceptual framework

Social presence is the degree to which individuals feel connected, engaged, and able to establish meaningful interactions in online or virtual educational environments (Oh et al., 2018). According to Richardson et al. (2017), social presence is defined as the capacity to recognize individuals in a virtual setting. It is challenging to develop a social presence, but it is an essential component of online learning (Akcaoglu & Lee, 2016). In educational settings, social presence plays a pivotal role in facilitating effective learning experiences, promoting student engagement, and building a sense of community among learners (Richardson et al., 2017).

Theoretical underpinnings

The cornerstone of this concept is Short, Williams, and Christie's 1976 Social Presence Theory, as detailed in Khan et al. (2017) and Weidlich et al. (2018). According to the hypothesis, the capacity of different communication channels to transmit social cues influences the degree of social presence felt by participants. When applied to educational contexts, various elements determine the degree of social presence, including communication tools, interaction design, teacher presence, and student-student interactions (Roque-Hernández et al., 2021; Gray & DiLoreto, 2016; Cunningham, 2015). The Community of Inquiry (CoI) concept, developed by Garrison (2016), is another set of theoretical foundations and dimensions of social presence. This structure acts as a basic framework for understanding social interaction in online education. Cognitive, educational, and social presences are the three interconnected presences that CoI suggests. This paradigm states that emotional expression, both verbally and nonverbally, plays a central role in social presence and promotes a sense of belonging and connection for both students and teachers.

Dimensions and importance of social presence in educational settings

In its ability to decrease the isolation that is frequently felt in virtual education contexts, social presence has significance. Richardson et al. (2017) underlined the impact of social presence on the satisfaction of students and their perceived success in studying. When students have a strong social presence, they are more likely to participate in meaningful interactions, share personal experiences, and create a sense of neighbourhood (Richardson et al., 2017). Social presence can be felt in the following ways.

Technological affordances and social presence.

Technology improvements have expanded the various ways that social presence might be encouraged in educational settings. The illusion of social presence is enhanced by real-time interactions and visual cues made possible through video conferencing technologies, discussion forums, and collaboration platforms (Lowenthal & Dunlap, 2018). Thomas et al. (2017) and Moran et al. (2020) found that visual and aural cues, as well as text-based communication, improve social interaction in online learning settings. The pattern of interactions and the experience of presence are shaped by the choice of communication tools (synchronous or asynchronous). Tools that influence social presence include video conferencing, discussion forums, and collaborative papers (Yoon & Leem, 2021; Khalil & Ebner, 2017).

The form and organization of online activities and debates, according to Nah et al. (2016), Shafi and Middleton (2023) determine the level of involvement and connectivity. Tasks that encourage meaningful interactions can improve social presence (Andel et al., 2020). According to Lowenthal and Dunlap (2018) and Matuzas (2021), students' comfort level with communication technologies affects their capacity to express themselves clearly and participate in dialogues. Students' verbal and written communication abilities influence their capacity to connect with others and express emotion (Gunasekara et al., 2022).

Instructor presence and social interaction.

The instructor must be present in order to encourage social presence and involvement. Dolan et al. (2017) highlighted the significance of teachers' active participation in creating a social presence through prompt feedback, conversation facilitation, and the creation of a welcoming online environment. Learners feel more socially present when their instructors are friendly, approachable, and available (Tackie, 2022). According to Martin et al. (2020), the active participation of instructors through prompt feedback, direction, and facilitation contributes to perceptions of social presence among learners.

Cultural considerations and social presence.

It is important to recognize cultural variety and how it affects social presence. How social presence is sensed and perceived is in turn influenced by cultural norms and communication techniques. The necessity for culturally inclusive tactics to improve social presence was highlighted by Anyichie and Butler (2023) and Gunawardena (2020), who recognized that various learners might interpret and engage with social cues differently. Individuals' interpretations of and attempts to develop a social presence in online educational situations may be influenced by their cultural origins and communication norms (Gunawardena, 2020).

The interactions between students.

Peer relationships promote a sense of community and social contact, hence boosting social presence (Akcaoglu & Lee, 2016). Examples of peer interactions include collaborative projects and group conversations (Peeters, 2019; Neh, 2018). Greater social presence in educational settings is associated with better learning results, higher engagement, and a sense of belonging. (Fabris et al., 2023). Educators may design environments that support social presence and improve the entire educational process by considering communication technologies, interaction design, instructor presence, and student interactions.

Cognitive presence in educational settings

Social presence affects both the cognitive and emotional facets of engagement, according to research. Researchers Ouyang and Chang (2019) and Guo et al. (2021) discovered that social presence significantly influenced cognitive engagement, which is defined by introspective debates and critical thinking. Moreover, social presence had a favorable impact on emotional involvement, including feelings of belongingness and rapport (Richardson et al., 2017). Effective learning and engagement in educational contexts depend heavily on cognitive presence. It includes the mental processes that students go through, whether they are learning in a regular classroom or online. Teachers and instructional designers can improve learning experiences and promote deeper cognitive engagement among learners by looking into the factors that influence cognitive presence.

Dimensions of cognitive presence

Cognitive engagement is sparked in the first stage by the introduction of demanding and thought-provoking stimuli. Designing triggering events that pique learners' interest and inspire them to learn more can be done using real-world challenges, authentic settings, or intriguing questions (Archer-Kuhn et al., 2020; Al Mamun & Lawrie, 2023). The learners then take part in exploratory activities to find resources and information to deal with the triggering event. Research assignments, group projects, and online debates encourage cognitive inquiry so that students can collect important information and different viewpoints (Martin & Bolliger, 2018). In the integration phase, learners synthesize the information acquired and connect it with prior knowledge. Integrative exercises promote linkages, pattern recognition, and the development of deep understanding in students. Examples include idea mapping, case studies, and reflective journaling (He et al., 2023).

To clarify their understanding and address any cognitive dissonance, learners engage in critical reflection and dialogue. Debates, peer evaluations, and Socratic questioning are all incorporated into resolution activities to encourage more in-depth critical thinking and metacognitive awareness. (Boa et al., 2018; Alsaleh, 2020). The elements that influence cognitive presence have been the subject of numerous studies. Learner readiness is one of these elements. It is defined as the cognitive, linguistic, behavioural, socio-emotional, motor, and physical traits that indicate preparedness for formal educational instruction (Dong et al., 2020). Another element is social connection, which enhances cognitive presence through meaningful communication with students and teachers through online forums or team projects (Joksimovi et al., 2015). Task design is a further element that, in accordance with Al Mamun and Lawrie (2023), fosters cognitive presence and engagement through realistic, well-structured tasks that are in line with learning objectives. Efficient instructor facilitation aids students in building cognitive presence through scaffolding and timely feedback.

A study on cognitive presence and group knowledge creation in online learning was done by Sadaf et al. (2021). After examining 30 publications, they discovered that the phases of exploration and integration were more helpful than the phases of triggering and resolution. These results offer guidance for educators to improve the calibre of online learning; researchers and curriculum designers are needed.

Olesova and Lim (2017) investigated how students' cognitive presence during asynchronous online threaded discussions was impacted by their role assignments. The learners participated in a virtual course, and changes in cognitive presence levels were investigated using a mixed-methods approach. This study showed proof that using scripted role assignments in asynchronous online discussions can be a successful teaching strategy.

Utilizing the Community of Inquiry paradigm, Kilis and Yildirim (2019) found that students' social, cognitive, and instructional posting habits in online learning environments are high and can be improved through treatment. Factors like real-life scenarios and reflective course activities were found to be significant. However, media articles still need to be more adequately reflected in the voices of students up until now (Sullivan et al., 2023). According to a study by Law et al. (2019), student enrolment and learning motivation have a beneficial effect on students' ability to learn in blended learning environments. Whereas learning motivation just affects social presence, immersion has a positive effect on one's presence both socially and cognitively, teaching presence benefits both cognitive and social presence directly and indirectly.

Methodology

This study benefited from a correlational research design using the survey approach, which is a non-experimental approach that focuses on investigating the statistical association between two or more variables without intervening or manipulating them. Its primary goal is to discern whether alterations in one variable coincide with changes in another and to what degree. Correlational studies are instrumental in uncovering relationships, recognizing patterns, and facilitating predictions (Asamoah, 2014). Nevertheless, it is crucial to note that these studies do not establish causation. In other words, they cannot definitively assert that changes in one variable directly lead to changes in another. We sought to find out the relationship between students' perceived social and cognitive presence and their learning outcomes and critical thinking. For data collection, we conducted surveys using a questionnaire so that the students could express their opinions. The instrument was a 36-item survey questionnaire; it was made up of the learning outcome questionnaire (LOQ) and the students' perception of social and cognitive presence questionnaire (SPSCPQ), which were compressed into one and administered to the participants. It was constructed using a four-point Likert scale with Strongly Agree (SA, 4-points), Agree (A, 3-points), Disagree (D, 2-points), and Strongly Disagree (SD, 1-point).

This approach provided profound, nuanced insights into the significance of these presences and how students perceive them. These researchers created the questionnaire, and the Cronbach alpha reliability (Bonett & Wright, 2015) method was employed to evaluate for consistency after it was validated for content and goodness of fit by specialists in test assessments. The outcomes demonstrated that the tools were suitable for gathering the necessary data for this investigation.

Participants

Students from Southern Nigeria in their fourth year in the faculties of education at five public universities participated in this study. The selection criteria were developed since, in year four, students had enough university experience to recognize the social and cognitive presence in their academic journey. Records from the Deans' offices of the Faculties of Education at the Universities of Calabar, Port Harcourt, Uyo, Nsukka, and Alex Ekwueme Federal University in Ndufu-Alike, Ikwo-Ebonyi State revealed that there are 622, 566, 340, 464, and 320 fourth-year students overall in all departments, respectively. Four hundred fifty students were utilized as the sample size for the study, which is roughly the average number of students in the population. Ninety students were selected as study participants from each university.

Ethical consideration

This research was approved by the University of Calabar's Ethical Committee on Research and Patents. We submitted an application letter to the committee along with the article title, abstract, participant list, and research instrument. After careful review, the committee approved our team's request. We then presented the same approval letter to the other four sampled universities, who also permitted us to collect data.

Three hypotheses shaped the study and the analysis of the data. These are listed below:

- Hypothesis 1: Students' perceived social presence does not positively influence their learning outcomes.
- Hypothesis 2: Higher levels of cognitive presence do not lead to increased student engagement and critical thinking.
- Hypothesis 3: The levels of social and cognitive presence and their combined effects on students' overall educational experiences are not significantly correlated.

The data obtained were analysed using the Statistical Package for Social Sciences (SPSS) software. Hypothesis 1 was evaluated through the application of simple linear regression, as we had a solitary predictor (perceived social presence) and a single outcome variable (learning outcomes).

To examine Hypothesis 2, a multiple regression analysis was employed. This analysis aimed to investigate the connection between cognitive presence (an independent variable) and student engagement, as well as critical thinking (a dependent variable). Pearson's product-moment correlation coefficient analysis was used to measure the strength and direction of linear correlations between social presence, cognitive presence, and students' educational experiences.

Results

Hypothesis 1: Students perceived social presence does not positively influence their learning outcomes

The two factors in this hypothesis were learning outcomes and perceived social presence. Continuous measurements were made of both variables. Simple Linear Regression analysis was employed to evaluate this hypothesis. Table 1 displays the findings of the analysis. The summary of the simple linear regression analysis for the correlation between students' perceived social presence and academic results is also shown in Table 1. With a crucial F-ratio of 3.84 and 1: 448 degrees of freedom, Table 1's result reveals that the regression output's analysis of variance produced an F-ratio of 78.304 (p. 05), which is statistically significant at the .05 level of probability. This result proves that the predictor of the model, perceived social presence, significantly contributes to explaining the variation in the dependent variable (Learning Outcomes).

The computed F-ratio is significantly higher than the necessary F-ratio of 3.84, confirming the model's statistical significance. A regression coefficient (R) of .386 and a coefficient of determination (R2) of .149 are also displayed in Table 1's result. This result suggests that changes in perceived social presence are responsible for 38.6% of the variation in learning outcomes results and that perceived social presence strongly predicted the size of learning outcomes.

Results in the same Table 1 indicate positive unstandardized and standardized Beta coefficients (B and Beta) of 1.234 and .386, respectively, as the result of the regression weights of the predictor variable (perceived social presence). Research indicates that perceived social presence and learning outcomes results are positively correlated. As a result, Table 1's result displays a t-value of 8.849 (p< .05). This suggests that perceived social presence was a significant predictor of learning outcome result variation. So, Hypothesis One is disproved because of this finding. This finding means that students' perceived social presence positively influences their learning outcomes.

Table 1. An overview of the results of a simple linear regression study on the relationship between students' perceived social presence and learning outcomes.

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.386	.149	.147	.89756		
Model		Sum of squares	df	Mean square	F-ratio	Sig.
Regression		63.083	1	63.083	78.304	.000
Residual		360.917	448	.806		
Total		424.000	449			
Variable		B	Std. Error	Beta	T	Sig.
(Constant)		21.709	.675		32.183	.000
Learning Outcomes		1.234	.047	.386	8.849	.000

a. Predictors: (Constant), perceived Social Presence
b. Dependent Variable: Learning Outcomes

Hypothesis 2: Higher levels of cognitive presence do not lead to increased student engagement and critical thinking

This hypothesis included two variables: cognitive presence as well as student engagement and critical thinking. Continuous measurements were made of both variables. A simple linear regression analysis was employed to evaluate this hypothesis. Table 2 displays the findings of the analysis. The findings from a simple linear regression study of the correlation between students' cognitive presence and their engagement and critical thinking are summarized in Table 2. With a crucial F-ratio of 3.84 and 1:448 degrees of freedom, Table 2's result reveals that the regression output's analysis of variance produced an F-ratio of 8.679 (p.05), which is statistically significant at the .05 level of probability.

As a result, the data for cognitive presence fit the model more closely than they would have if cognitive presence had not been included in the model, indicating that cognitive presence strongly predicted the overall variance in student engagement and critical thinking. A regression coefficient (R) of .138 and a coefficient of determination (R2) of .019 are also displayed in Table 2's result. This result suggests that cognitive presence strongly predicted the level of student engagement and critical thinking and that changes in cognitive presence are responsible for 13.8% of the variation in student engagement and critical thinking.

Results in Table 2 reveal positive unstandardized and standardized Beta coefficients (B and Beta) .120 and .138, respectively, for the regression weights of the predictor variable (cognitive presence). Hence, student engagement and critical thinking are positively correlated with cognitive presence, and an increase in cognitive presence will result in increases in both variables of more than one unit. As a result, Table 2's outcome displays a t-value of 2.946 (p<.05). This suggests that differences in student engagement and critical thinking were significantly predicted by cognitive presence. So, hypothesis two is disproved because of this finding. Thus, higher degrees of cognitive presence promote critical thinking and greater levels of student engagement.

Table 2. An overview of the results of a basic linear regression study on the relationship between students' cognitive presence and student engagement and critical thinking.

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.138	.019	.017	.75278		
Model		Sum of squares	df	Mean square	F-ratio	Sig.
Regression		4.918	1	4.918	8.679	.003
Residual		253.873	448	.567		
Total		258.791	449			
Variable		B	Std. Error	Beta	T	Sig.
(Constant)		11.803	.718		16.441	.000
Student Engagement		.120	.041	.138	2.946	.003

a. Predictors: (Constant), Cognitive Presence.
b. Dependent Variable: Student Engagement and critical thinking.

Hypothesis 3: The levels of social and cognitive presence and their combined effects on students' overall educational experiences are not significantly correlated

According to the analyses shown in Table 3, the critical r-value is .092. The calculated r-value (.227) is much greater than the critical value established against 448 degrees of freedom at .05 level of significance, indicating that the observed correlation is statistically significant. The observed link is not likely to have occurred by random chance, according to the evidence. The results show a positive correlation between students' total educational experiences and social and cognitive presence. It is typically true that as a student's social and cognitive presence increases, so do their overall educational experiences, even though the association's

strength is generally seen as being mild. Hence, the null hypothesis was refuted. This result suggests a significant correlation between students' levels of social and cognitive presence and their overall educational experiences.

Table 3. A description of the levels of social and cognitive presence and how they interact to affect students' overall educational experiences according to a Pearson product-moment correlation analysis (N=450).

Variables	Mean	SD	Cal- value	Sig.
Social and cognitive presence	35.05	1.39	.227**	.000
Students' overall educational experiences	27.67	.972		

**Significant at 0.05 level, df 448, critical r-value = .092

Discussion

The first hypothesis, which posited that students' perceived social presence does not have a positive influence on their learning outcomes, was rejected. This finding demonstrates that the way students view their social presence does have an impact on how well they study. According to the identified positive association, changes in perceived social presence are responsible for variations in learning outcome results and perceived social presence was a reliable predictor of learning outcome magnitude. This result supports the viewpoint put forth by Richardson et al. (2017), which highlights the critical role that social presence plays in generating effective learning experiences in educational situations. This phenomenon covers the enhancement of student participation and the formation of a communal ambience among learners. Furthermore, congruence with the findings of Fabris et al. (2023) is evident, as they underscored the association between heightened social presence in educational environments and enhanced learning outcomes, heightened engagement levels, and an augmented sense of belonging.

The second hypothesis, which states that higher levels of cognitive presence do not lead to increased student engagement and critical thinking, was also rejected. This result shows that cognitive presence has a strong potential to predict student engagement and critical thinking, and it emphasizes the fact that variations in cognitive presence are responsible for the observed diversity in student engagement and critical thinking levels. The results show a strong relationship between student involvement, critical thinking, and cognitive presence, with increases in cognitive presence being accompanied by increases in both engagement and critical thinking. This finding is in line with previous research that highlights the critical role that cognitive presence plays in promoting efficient learning and increased engagement in educational situations. It is consistent with Kilis and Yildirim's (2019) research, which showed that students' posting behaviours, encompassing pedagogical presence, social presence, and cognitive presence, have significant improvement potential. Similar to Ouyang and Chang (2019) and Guo et al. (2021) who came to similar conclusions, the current research supports the importance of social presence for cognitive engagement, which is characterized by reflective discussions and critical thinking.

The third hypothesis, which declares that the levels of social and cognitive presence and their combined effects on students' overall educational experiences are not significantly correlated, was rejected. The findings indicate a connection between students' social and cognitive presence levels and their overall educational experiences. This result is in line with the viewpoint advanced by Richardson et al. (2017), which emphasizes the critical role that social presence and cognitive presence play in enabling successful educational experiences, encouraging learner engagement, and developing a sense of community among learners in educational environments. The current discovery also accords with Law et al. (2019)'s findings, which supported the idea that student enrolment and learning motivation both have a favorable impact on students' ability to learn in blended learning environments. While learner immersion has a favorable impression on presence, both social and cognitive, learning motivation only has an impact on social presence. Also, it turns out that teaching presence is a positive element that directly and indirectly improves both cognitive and social presence.

Implications for educational practice

The first finding has implications for educational practice in that it should prioritize increasing social interaction, building relationships, fostering a supportive environment, using student-centered approaches, encouraging peer feedback, and supporting collaborative learning experiences. By encouraging student participation, motivation, and a sense of community, these tactics can improve learning results. Tools and platforms that encourage social participation might be useful in blended learning settings when face-to-face encounters may be scarce. Other ways to improve social presence include developing a supportive environment, using student-centered strategies, establishing connections, encouraging peer feedback, and planning cooperative learning activities. Educational practices can enhance overall learning experiences and increase learning outcomes by identifying and fostering students' perceived social presence.

The second finding demonstrates how critical thinking and student engagement are both greatly influenced by cognitive presence. Teachers should give higher-order cognitive abilities like analysis, synthesis, evaluation, and problem-solving a higher priority in order to increase student involvement. Structured learning activities, inquiry-based learning activities, discussions and debates, feedback that encourages reflection, cooperative learning communities, tailored learning pathways, the development of metacognition, and integrated assessment systems can all help achieve this. Educators can improve both student engagement and the growth of complex cognitive skills by creating an environment where students are encouraged to think critically, reflect on their learning processes, and interact fully with the materials.

It has important ramifications for educational practice that there is a favorable association between students' overall educational experiences and their social and cognitive presence. A longitudinal learning strategy can be used by educators, with a focus on scaffolding learning activities,

integrating prior knowledge, interdisciplinary learning, reflective practice, peer mentoring, holistic curriculum design, growth evaluation, and student-centered assistance. These techniques support students' long-term development and improvement of their social and cognitive presence. Teachers can create a more enriching and significant learning environment for their students by incorporating scaffolded learning activities, integrating prior knowledge, fostering interdisciplinary learning, encouraging reflective practice, leveraging peer mentorship and collaboration, holistic curriculum design, and incorporating assessments.

Conclusion

Important conclusions from the study were drawn regarding students' educational experiences and perceptions of cognitive presence and social presence. Firstly, it was shown that learners' perceived social interaction had a big impact on how well they learned. Secondly, it was indicated that cognitive presence had a strong capacity for predicting student engagement and critical thinking. The discovery of cognitive presence as a variable causing changes in the levels of student engagement and critical thinking served to emphasize this relationship even more. The findings of the study also revealed a favorable and positive relationship between students' degrees of social and cognitive presence and the cumulative nature of their educational experiences.

The study emphasizes the importance of social connections and interactions in educational settings, emphasizing social presence's effects on education outcomes. It emphasizes the need for instructional strategies that promote higher-order cognitive processes, student engagement, and analytical thinking. The research recommends creating curricula that capitalize on pupil relationships and cognitive engagement, promoting academic advancement and individual growth. This knowledge can influence pedagogical approaches, instructional design, and educational policy, enabling educators, researchers, and policymakers to develop more effective teaching methods and curricula.

Despite the abovementioned pedagogical implications, it is noteworthy that the demographics, cross-sectional design, self-report bias, one method of data collection, and contextual factors may all have impacts on the study's conclusions. For our future research, it is necessary to focus on several main approaches such as longitudinal studies, comparative studies, mixed-methods investigations, instructor perspectives, intervention studies, online vs. offline comparisons, cultural aspects, technology integration, learning outcomes, and comparing disciplines. These methods will give a more thorough knowledge of how students feel about their social and cognitive presence during their educational experience. It will be possible to gain a more nuanced knowledge of students' views of social and cognitive presence in their educational journey by addressing these considerations and following these paths.

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