INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 12, Issue 10, (2022) E-ISSN: 2222-6990

Exploring Online Education Experience through the Teaching, Social and Cognitive Presences

Norhafini Hambali[1], Siti Nurul 'Ain Hj Zaiton[2], Norbaiti Sidik[3], Nurul Hazwani Hanib[4], Fazlinashatul Suhaidah Zahid[5], Norin Hafizah Rahim[6]

[1,3,4,5,6]College of Engineering Studies, Universiti Teknologi MARA Cawangan Johor, Kampus Pasir Gudang, [2]Faculty of Applied Science, Universiti Teknologi MARA Cawangan Johor, Kampus Pasir Gudang

Email: norhafini@uitm.edu.my, siti6687@uitm.edu.my, sidiknorbaiti@uitm.edu.my, hazwanihanib@uitm.edu.my, fazlina7803@uitm.edu.my, norinhafizah@uitm.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v12-i10/14871 DOI:10.6007/IJARBSS/v12-i10/14871

Published Date: *06* October 2022

Abstract

The shift from traditional face-to-face classes to virtual learning influences the students' happiness and decreases their motivation to learn. Students may find it difficult to perceive cognitive, social, and teaching presences in online learning systems, making learning virtually difficult. This quantitative survey study investigates how teaching, social, and cognitive presences affect students' learning experiences. A thirty-four-item survey with three primary sections: teaching, social, and cognitive presence, was completed by 69 students from local university in Malaysia. The respondents ranged in age from 15 to 59 years old and held degrees ranging from matriculation/foundation/certificate to doctorate level in social science and technical fields. Results indicated that the course design and organisation as well as the facilitation provided by the instructors frequently helped keep the students on task in a way that helped the students learn in the setting of teaching presence. Among the three items measured in teaching presence, direct instruction scored the least mean value. Respondents also agreed with the statement that social presence is felt through affective expression, open communication, and group cohesion. However, lowest mean value captured in social presence through design and organization is regarding to how well instructor communicate important course goals. In contrast, cognitive presence is felt from online activities triggering events, exploitation, integration, and resolution. In the context of triggering event, they occasionally believed that the issues raised sparked their curiosity about the subjects addressed in class and that class activities aroused it. The results of this study have implications for administrators, instructional designers, and online instructors who aim to improve student learning experiences and engagement in their courses.

Keywords: Cognitive Presence, Social Presence, Teaching Presence, Online Learning, Malaysia

Introduction

Background of Study

The effects of COVID-19's rapid spread in Malaysia push companies of all stripes to switch to an online way of functioning. Universities and other institutions of higher education are not exempt from this exceptional circumstance. Instead of face-to-face classroom instruction, several governments now entirely require online learning. There are some difficulties with online learning because there is no face-to-face interaction between group members for group discussions and there is no physical interaction between professors and students. Students are expected to engage in independent study and acquire information that is complemented by internet literacy.

Experiences in teaching, social interactions, and cognitive presence are the three interdependent components that make up the three key ingredients necessary to generate meaningful online learning outcomes and improve online learning experiences. Any action that incorporates teaching is referred to as the teaching presence, and examples include curriculum design, discourse simplification, and one-on-one student coaching. Social presence is the act of interacting with and fostering relationships with others who are part of a group, such as classmates. Knowledge-building intellectual tasks require cognitive presence. (Lau et al., 2021). According to Whiteside (2015), interaction is a critical component of the online experience and that it entails a methodical, staged process. Social presence is the fundamental idea behind these engaging, interpersonal interactions (Whiteside, 2015). In another study, the social aspect of online courses led to better group cohesion and more emotional expression at a higher level. Through course facilities that are viewed as practical instruction in the learning process, teaching presence supports students. This presence is crucial for stimulating social interaction, reciprocal communication, and academic accomplishment. Cognitive presence, on the other hand, dominated social and teaching presence (Purwandari et al., 2022).

This study is important for students in Malaysia because students there said they had bad experiences with online learning because they couldn't stay in touch with their teachers and other students. Online communication was similarly challenging since it was challenging to determine the ideal time to communicate with instructors and classmates because many of them had various conditions. They also felt unhappy, lonely, and demotivated to learn during online learning (Nassr et al., 2020).

Statement of Problem

Online education encompasses a technology such as audio and video conferencing, worldwide web, email, chat, and group text which are delivered and accessible via computer, mobile phone, or tablet, assisted by facilities of the internet. Based on the previous studies (Paudel, 2021), when online learning is done well, students can learn at their own pace and develop self-discipline without being constrained by a timetable, a process known as self-pacing. Besides, education become more accessible to everyone no matter what the time and location as well as wide and variety of learning resources. Students can also set their schedule and study quickly in the online teaching and learning environment, enabling them to go above and beyond the intended learning outcome by asking more questions, asking more in-depth inquiries, and tackling more challenging problems (Radin & Shlat, 2021). Students that are confident in their own abilities explore and resolve problems when learning online.

Additionally, students can overcome challenges, which strengthens their learning attitudes and improves their online learning experience (Xu et al., 2021).

However, because of the quick and extensive shift to online learning during the COVID-19 pandemic, students are now on diverse learning paths. Students are increasingly alone in their quest of information, and the majority of their responses show that they are unclear about the nature of learning (Alger & Eyckmans, 2022). Social isolation has negative impacts on students' mental health that also have an impact on their motivation and focus, as is well known (Kunaviktikul et al., 2022). Because emotions and subtlety are more challenging to convey and understand online, the students believed that digital contacts were less valuable and less fruitful than physical ones. Additionally, the slight delays brought by the slower internet connections make it harder (Kalmar et al., 2022).

As a result, this study intends to explore how students' experiences with online education are impacted by teaching, social, and cognitive presence. This investigation was done to answer the following research objectives:

- RQ1-To study the influence of online education on teaching presence.
- RQ2- To study the influence of online education on social presence.
- RQ3-To study the influence of online education on cognitive presence.

Literature Review

Characteristics of Online Education

An increasing number of institutions are including online courses in their curriculum in response to rising student enrollment, dwindling public funding, and opportunities provided by highly developed information technology. In the long run, it is anticipated that the cost of providing instruction would decline due to this educational delivery method, which helps universities manage their growing student populations. The study discusses the evolving traits and academic requirements of the online learner. It could be of great assistance to educators, administrators, and instructional designers to comprehend (a) who is likely to engage in online learning, (b) what elements or drivers contribute to a positive online learning environment, and (c) potential obstacles that might prevent some students from enrolling in or completing an online course (Dabbagh, 2012)

Additionally, studies indicate that today's youth, who are more accustomed to the Internet and Web-based technologies like search engines, instant messaging, massively multiplayer online role-playing games, podcasting, vodcasting, social bookmarking, and folksonomies, are well-equipped to participate in online learning activities that foster interaction and collaboration anywhere, anytime (Dabbagh & Horvitz, 2007)

Students in online learning environments may face learning obstacles due to a lack of knowledge and expertise in using online learning tools, particularly communication and collaboration. Thus, with socially mediated online learning activities that place more emphasis on social interaction and collaboration than on independent learning, the idea of the independent, adult, disciplined, place-bound, self-starter, self-motivated, and goal-oriented learner—characteristics that largely characterised the classic distance education learner—is now being challenged.

In order to succeed in online learning settings, students must exhibit "self" behaviors, including self-discipline, self-control, self-awareness, and self-management, which are traits of self-regulated or self-directed learning. The capacity of students to monitor and control their learning is crucial given the virtual absence of a teacher in online learning (Cheurprakobkit et al., 2002). For online learners to actively and productively participate in their learning, online students must comprehend and value the learning opportunities provided by collaborative and communication technologies. Online students must therefore be prepared to collaborate on projects, share their work, and engage in small and large-group virtual interactions, or they run the risk of being isolated in a community that is becoming increasingly reliant on connectivity and contact. With this new setting, it is possible to summarise the recognised traits of the developing online learner as follows:

- Demonstrating a positive academic self-concept.
- Demonstrating proficiency with online learning technology.
- Being able to communicate and get along with people.
- Displaying aptitude for independent study.
- Appreciating the importance of collaboration and engagement in group learning.
- Being internally center of control.
- Demonstrating a desire for association.

Online students should also have or independently learn how to use collaborative learning skills apart from the listed characteristics (Dabbagh, 2012).

Challenges of Online Education

Despite the advantages of online education, the challenges of online learning had been studied and discussed since pandemic COVID-19 outbreak. Teachers, students, parents, and curricula were facing the difficulties in adapting themselves to the new norm in higher level of education which will be the focused in this study. Challenges of online learning is categorised into five (5) issues which are (1) Social impact, (2) Physical impact, (3) Lecture Issue, (4) Psychological impact and (5) Technical problems (Alalmai et. al., 2022). Online learning that impacted to the social issue such as poor communication, lack of group discussion and feeling isolated. There is no opportunity to have a face-to-face interaction among friends and teacher in online learning platform which can create a misunderstanding. This might impact the students' outcomes due to misinterpretation of tasks given by the educators. Moreover, routine activity at home without having a physical touch with people outside has a tendency leads to a feeling of isolation, procrastination, and lack of motivation to study. The second issue is physical impact which is related to health conditions like high blood pressure, diabetes, back discomfort, and joints pain in young people because of excessive screen time and lack of movement.

Meanwhile, the professor encountered unclear learning expectations and insufficient training to offer lessons online. It is worsened for courses that involve students with disabilities, such as those who are deaf or have hearing impairment, which the course was not designed to be taught remotely, struggle with remote learning just as much as teachers and students do (Aljedaani et. al., 2022). Apart from that, practical and clinical work were unable to be taught, learnt, and assessed online except knowledge component (Mukhtar et. al., 2020). Also, studies reported that student tends to misbehave to themselves by trying to access online resources during assessments or exam.

Most common problem in online learning education is technical problem. Limited access to the internet, expensive mobile data and unavailability of essential technology were the most common issue raised in the rural area of Third World country. Moreover, device compatibility and bandwidth of the software usage also contributed to challenges of online learning. Psychological impacts were discussed in Dull et. al (2019) where excessive usage of internet associated with depression, behaviours and impulse issues like over-involvement in compulsive web surfing that leads to information overload. Moreover, internet related deaths have been reported, such as cardiac arrests which due to sleep deprivation and suicide due to net related stress. Above mention challenges conclude that online education cannot replace offline or traditional learning which ensures the holistic development of young minds for a better future, regardless of solution to the scenario had been provided.

Past Studies

Past Studies for Benefits of Online Education

The phrase "new normal" is one of the most often used words after the pandemic. The rising usage of online education resources is the new norm in learning methods. The COVID-19 pandemic has encouraged innovative methods of education. Educational institutions around the globe are utilizing online education platforms to continue educating students. The new norm is a reimagined vision of education, with online education at its foundation.

The advancement of online education, particularly in higher education, does not occur overnight. A study done by The National Centre for Education Statistics (NCES) found that the primary factors influencing higher education institutions to offer online courses were meeting students' demands for flexible schedules (68 %), providing college access to pupils who would not have it otherwise have access (67 %), making more programs offered (46 %), and aiming to raise the number of students enrolled (45 %) (Parsad et al., 2008). Many studies have been done to investigate the advantages of online education, especially in terms of teaching, social and cognitive elements.

Effective and successful online education occurs when educators and students engage in meaningful engagement. In this context, Paudel (2021) has done a survey questionnaire to determine the opinions of 280 lecturers and students from five Nepalese colleges about the benefit of online education. The results indicated that the participants viewed online education as beneficial primarily for promoting online research, connecting practitioners to the global community, and gaining access to a vast and authentic knowledge resource. According to the research findings, online education can be an alternative to traditional education (Paudel, 2021).

On the other hand, developing cognitive presence involves students creating interactions with others. The cognitive presence is an important indication of the quality of an online education experience since it relies upon relevant approaches based on the collaborative development of knowledge in an online setting (Sadaf et al., 2021). According to Garrison et al (1999) states that the practical inquiry (PI) model, cognitive presence is operationalized as four phases: triggering event, investigation, integration, and resolution (Garrison et al., 1999). According to a study on cognitive presence done by Yildirim et al. (2019) on 91 students of the Department of Medical Documentary and Secretary, they found that most student posts (72 %) expressed exploration, whereas the minority (35 %) reflected assimilation. The posts

demonstrated average levels of triggering events (55 %) and resolution (49 %). The data suggest that as students gain experience with online education, they assume greater responsibility for their education. The findings have significance for instructors' facilitation of online courses and designers' organization of online courses (Yildirim & Kilis, 2019).

Past Studies for challenges of online education

Many studies have investigated the online learning system's challenge due to the COVID-19 disease. The outbreak has impacted the nation's social and economic activities, especially those in the education sector. According to literature studies, Rasheed et al (2020) students discovered issues that were not easily resolved, such as the lack of preparation or a plan in online learning systems. In another study from Mahyoob (2020), students had trouble using the Blackboard platform. In online learning, almost 30% of students switched to different applications instead of attending classes and completing other activities using Blackboard. Therefore, the biggest struggles with online learning were technological difficulties.

There have been many past studies on the challenges of online education. According to Rasheed et al. (2020) respondents were not physically, environmentally, or psychologically prepared for this circumstance, with some variances based on gender, age, and residence state. Respondents also expressed concern about the effects of the lockdown on their performance. This study received 284 responses through a questionnaire survey among students from various courses. According to Mahyoob (2020), by reviewing the survey-based questionnaire replies from 184 students from English language learners (EFL) in Science and Arts College, Alula, Taibah University, Saudi Arabia . A descriptive statistical approach was used to analyse the data gathered. It is discovered that the primary issues affecting online EFL learning during COVID-19 are connected to academic, technical, and communication difficulties. The study's findings demonstrate that most EFL students are unsatisfied with continuing their online education since they did not make the expected improvements in language proficiency.

Conceptual Framework

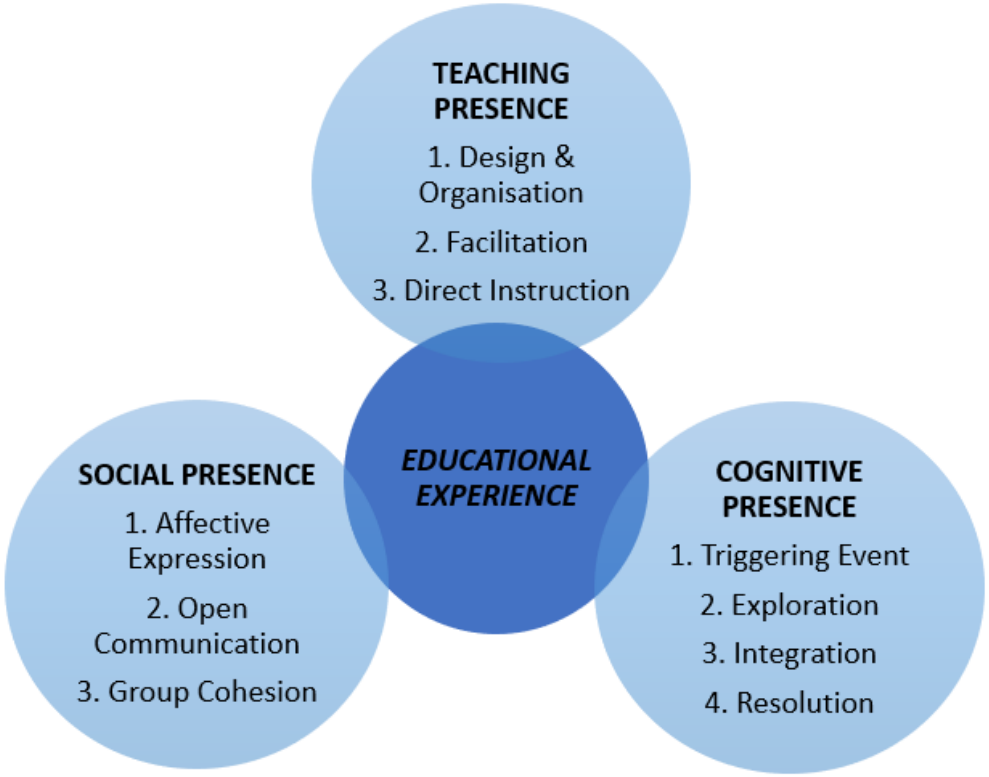

Figure 1: Conceptual Framework of the Study - Exploring Education Experience through the Teaching, Social, and Cognitive Presences.

Figure 1 shows the conceptual framework of the study. This framework is rooted from the Community of Inquiry (CoI) framework developed by Garrison et al (1999) and also (Arbaugh et al., 2008).

Teaching Presence

Three essential elements; course organisation and design, facilitation, and instructor-led instruction; are employed in this study to evaluate the teaching presence in online learning. In the context of online course design and organisation, the study evaluated how the teacher communicates the course subjects, objectives, and learning activities to the students. How well a teacher supports and motivates students will affect how well the class conversation and student learning are facilitated. On the other hand, the element of direct instruction assessed how well the instructor helped the students learn by providing feedback and engaging in relevant conversations.

Social Presence

In this study, social presence was measured through three important elements: affective expression, open communication, and group cohesion. The affective expression assesses the student's web-based communication and impressions towards some course participants, giving participants a sense of belonging in the course. On the other hand, open communication measures students' conversation, discussion, and interaction with the course

participants. Group cohesion evaluates how students express their point of view to other students while maintaining a sense of trust and developing a sense of collaboration throughout online discussion.

Cognitive Presence

The cognitive presence for conceptual framework of the study demonstrates four (4) important roots which can be summarised into triggering event, exploration, integration, and resolution.

Methodology

This quantitative study is done to investigate how teaching, social, and cognitive presences affect students' learning experiences. All the 69 participants were purposely chosen from a public university in Malaysia. The instrument (refer to table 1) used is a survey adapted from (Arbaugh et al., 2008). Apart from the demographic profile in Section A., there are 3 other sections. Section B has 13 items on Teaching Presence, section C has 9 items on social presence and section D has 12 items on cognitive presence.

Table 1
Distribution of Items in Survey

Section	Factors	Number of items
B	Teaching Presence	13
C	Social Presence	9
D	Cognitive Presence	12
	TOTAL NO OF ITEMS	34

Table 2
Reliability Statistics

Section	Factors	Number of items	Reliability statistics
B	Teaching Presence	13	0.977
C	Social Presence	9	0.926
D	Cognitive Presence	12	0.959

The 34 items of the survey used a five-point Likert scale from never to always. Data is gathered using a Google form, and SPSS version 26 is used for analysis. The reliability statistics between the presence factors and the total number of research items were assessed using Cronbach's alpha. The results are higher than 0.9, demonstrating the instrument's good internal reliability (see Table 2). Data is presented in percentages for the demographic profile and mean scores to answer the research questions. This study's scale has a 5-point range; thus, the mean interpretation is divided into three categories; low (1.00–2.33), moderate (2.34–3.67), and high (3.68–5.00).

Findings

Findings for Demographic Profile

Section A-Demographic Profile

Q1. Gender

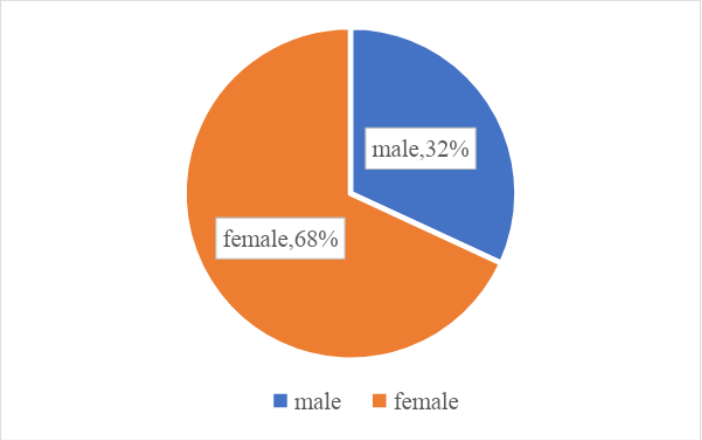

Figure 2- Percentage for Gender

The percentages of male and female students who took part in this survey are shown in pie chart above. From the pie chart, 68 % of the respondents were female and 32 % were male (see Figure 2).

Q2. Age Group

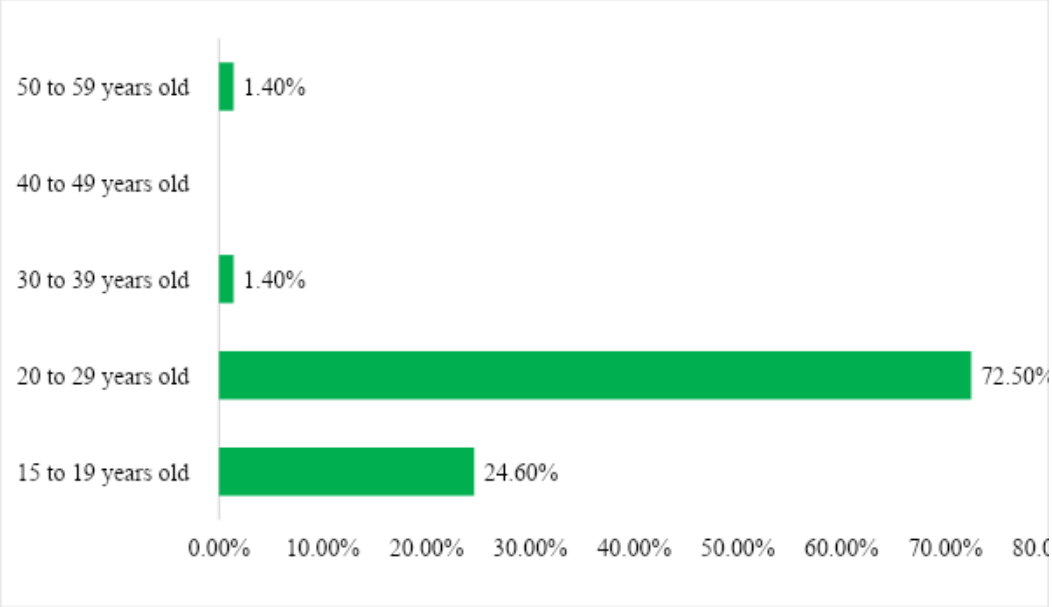

Figure 3- Percentage for Age Group

As indicates in Figure 3, the respondents are divided into five age groups. The highest group of respondents, with 72.50 % is in the 20–29 age range, followed by 24.60 % from 15 to 19 age range .1.4 % of the total respondents were between the ages of 30-39 and 50-59 age group This survey questionnaire does not include people aged 40 to 49.

Q3. Education Level

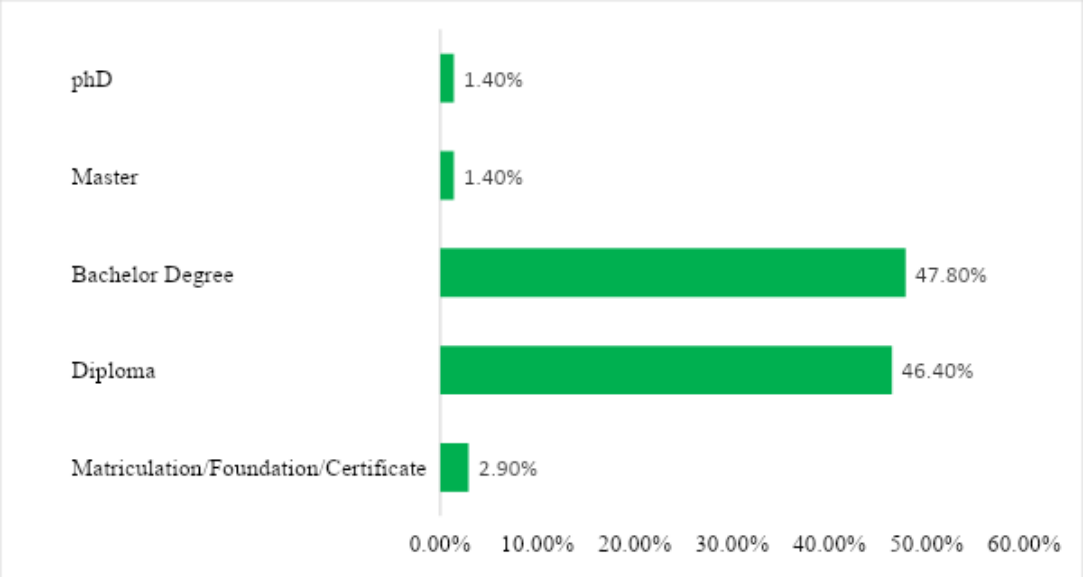

Figure 4- Percentage for Education Level

Regarding the educational level of the respondents, Figure 4 indicates that 47.80% had bachelor's degree, 46.40% had diploma and 2.90% had matriculation or foundation or certificate. Only 3.46 % of respondents had a master's or a doctorate.

Q4. Discipline

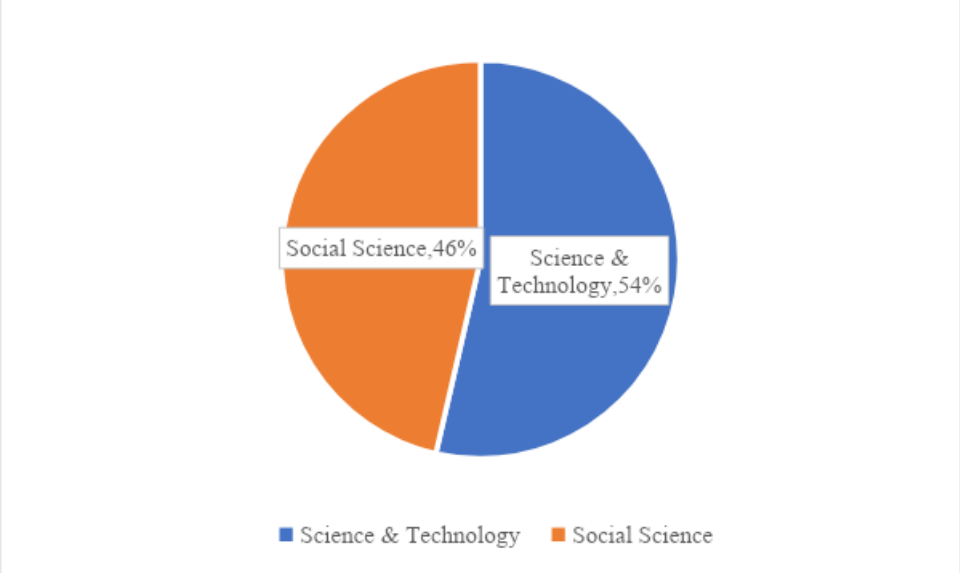

Figure 5- Percentage for Discipline

As shown in pie chart, 54 % respondents were from social science student and 46% respondents from social science (see Figure 5).

Q5. Year of study

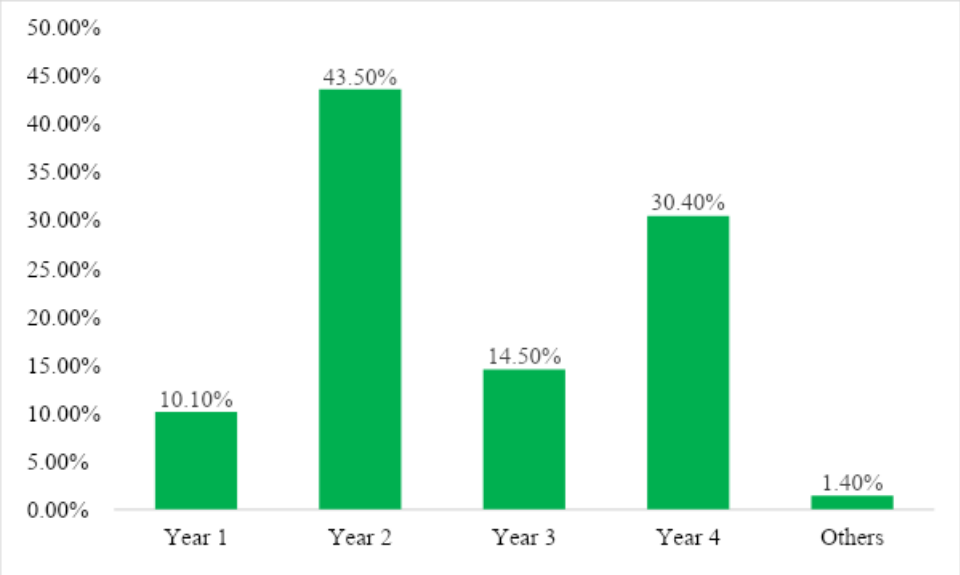

Figure 6- Percentage for Year of Study

Considering the respondents' year of study, year 2 has the largest percentage of respondents (43.5%), followed by year 4 (30.40%). Year 3's percentage was 14.50, while year 1's was 10.10 percent. The lowest percentage of responses came from others and is 1.40 percent. (see Figure 6).

Findings for Teaching Presence

This section presents data to answer the research question on how teaching presence impacts online education. This study measures teaching presence through design and organisation, facilitation, and direct instruction (see Table 3). Based on Figure 7, TPQ8 scored the highest mean value of 4.38, followed by TPQ4, TPQ9, and TPQ7, with mean values of 4.33, 4.29, and 4.28, respectively. TPQ1, TPQ2, TPQ3, and TPQ6 had a mean value ranging from 4.23 to 4.20, while TPQ10 to TPQ13 scored the lowest mean value ranging from 4.17 to 4.16.

Table 3
Items survey in teaching presence

	DESIGN & ORGANISATION	MEAN
TPQ 1	The instructor clearly communicated important course topics.	4.23
TPQ 2	The instructor clearly communicated important course goals.	4.22
TPQ 3	The instructor provided clear instructions on how to participate in course learning activities.	4.25
TPQ 4	The instructor clearly communicated important due dates/time frames for learning activities.	4.33
	FACILITATION	
TPQ 5	The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.	4.19
TPQ 6	The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.	4.20
TPQ 7	The instructor helped to keep course participants engaged and participating in productive dialogue.	4.28
TPQ 8	The instructor helped keep the course participants on task in a way that helped me to learn.	4.38
TPQ 9	The instructor encouraged course participants to explore new concepts in this course.	4.29
TPQ 10	Instructor actions reinforced the development of a sense of community among course participants.	4.17
	DIRECT INSTRUCTION	
TPQ 11	The instructor helped to focus discussion on relevant issues in a way that helped me to learn.	4.16
TPQ 12	The instructor provided feedback that helped me understand my strengths and weaknesses relative to the course's goals and objectives.	4.16
TPQ 13	The instructor provided feedback in a timely fashion.	4.17

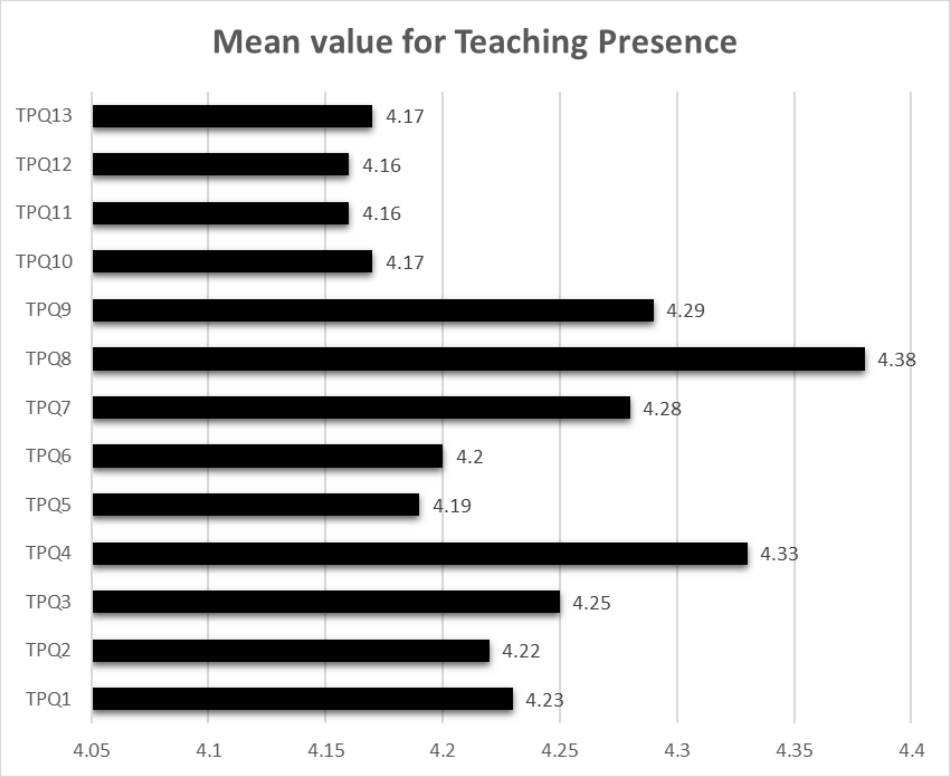

Figure 7- Mean for Teaching Presence

Findings for Social Presence

In order to address the study topic of how social presence affects online education, this section provides data. Affective expression, honest communication, and group cohesion serve as indicators of the teaching presence in this study. Based on the survey of 69 respondents, the mean value of 4.04 shows most of the respondents felt a sense of belonging in the course as a result of getting to know the other course members in affective expression section. The mean value of 4.01 presents the respondents were able to develop different opinions about several of the course attendees while the lowest mean value of 3.87 indicates the respondents agreed the great tool for social engagement is online or web-based communication.

In the viewpoint of the open communication, most of the online learners felt comfortable conversing through the online medium with mean value of 4.06. While the mean value of 4.04 and 4.01 shows the online learners felt at ease taking part in the class discussions and interacted with other course participants without discomfort respectively.

From the perspective of group cohesion part, the table below clearly shows less than value mean of 4, the respondents agreed to these three (3) questions with the highest value mean of 3.99 where the online learners can foster a sense of cooperation by participating in online discussions. The medium mean value of 3.94 indicates that the online learners believed the other students in the course respected their point of view and for the lowest mean value of 3.84 demonstrates the online learners were confident enough to argue with other course participants while still feeling a sense of mutual trust.

Figure 7 shows the respondents clearly comfortable speaking and communicating with people online with 4.06 mean value under open communication section and they felt at ease dissenting from other course participants while preserving a sense of trust with mean value of 3.84 which indicates the lowest mean value from the perspective of social presence.

Table 4
Items survey in social presence

	AFFECTIVE EXPRESSION	MEAN
SPQ 1	Getting to know other course participants gave me a sense of belonging in the course.	4.04
SPQ 2	I was able to form distinct impressions of some course participants.	4.01
SPQ 3	Online or web-based communication is an excellent medium for social interaction.	3.87
	OPEN COMMUNICATION	
SPQ 4	I felt comfortable conversing through the online medium.	4.06
SPQ 5	I felt comfortable participating in the course discussions.	4.04
SPQ 6	I felt comfortable interacting with other course participants.	4.01
	GROUP COHESION	
SPQ 7	I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.	3.84
SPQ 8	I felt that my point of view was acknowledged by other course participants.	3.94
SPQ 9	Online discussions help me to develop a sense of collaboration.	3.99

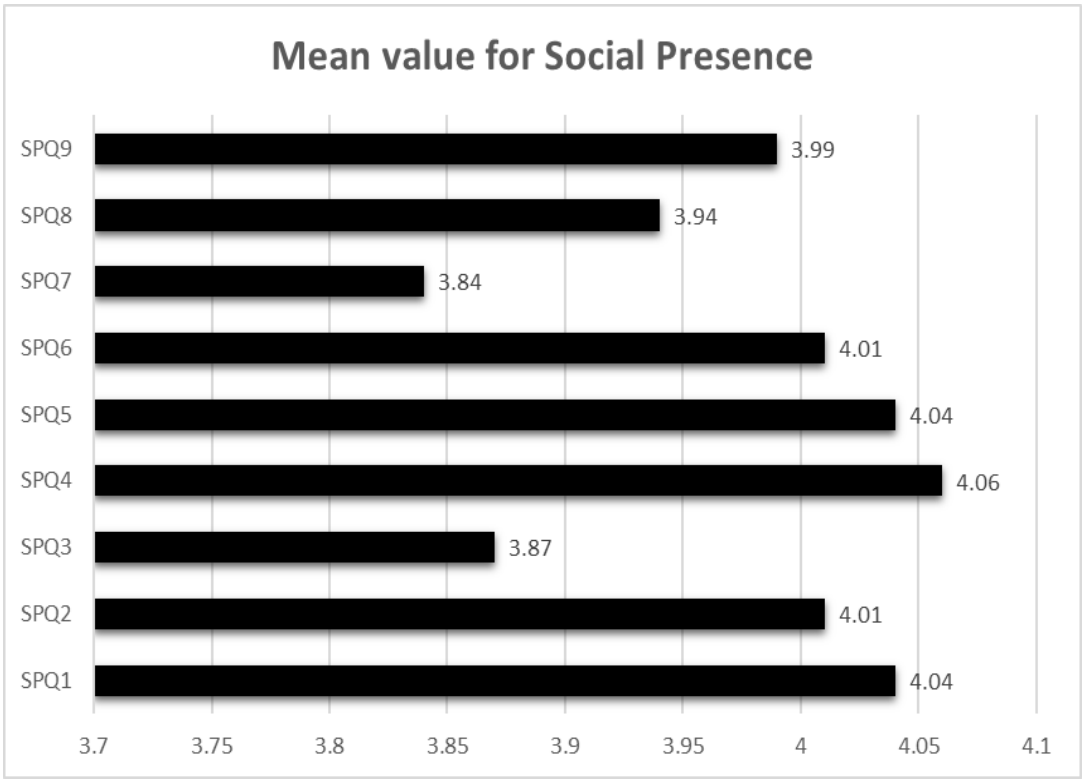

Figure 8- Mean for Social Presence

Findings for Cognitive Presence

This section provides information to address research question 3 (RQ3) regarding how online education affects cognitive presence. Cognitive presence is felt from online activities that has triggering events, exploitation, integration, and resolution.

Table 5
Items survey in cognitive presence

	TRIGGERING EVENT	MEAN
CPQ1	Problems posed increased my interest in course issues.	3.93
CPQ 2	Course activities piqued my curiosity	3.93
CPQ 3	I felt motivated to explore content related questions.	4.10
	EXPLORATION	
CPQ 4	I utilized a variety of information sources to explore problems posed in this course.	4.13
CPQ 5	Brainstorming and finding relevant information helped me resolve content related questions.	4.16
CPQ 6	Online discussions were valuable in helping me appreciate different perspectives.	4.10
	INTEGRATION	
CPQ 7	Combining new information helped me answer questions raised in course activities.	4.22
CPQ 8	Learning activities helped me construct explanations/solutions.	4.16
CPQ 9	Reflection on course content and discussions helped me understand fundamental concepts in this class.	4.19
	RESOLUTION	
CPQ 10	I can describe ways to test and apply the knowledge created in this course.	3.97
CPQ 11	I have developed solutions to course problems that can be applied in practice.	3.94
CPQ 12	I can apply the knowledge created in this course to my work or other non-class related activities.	4.13

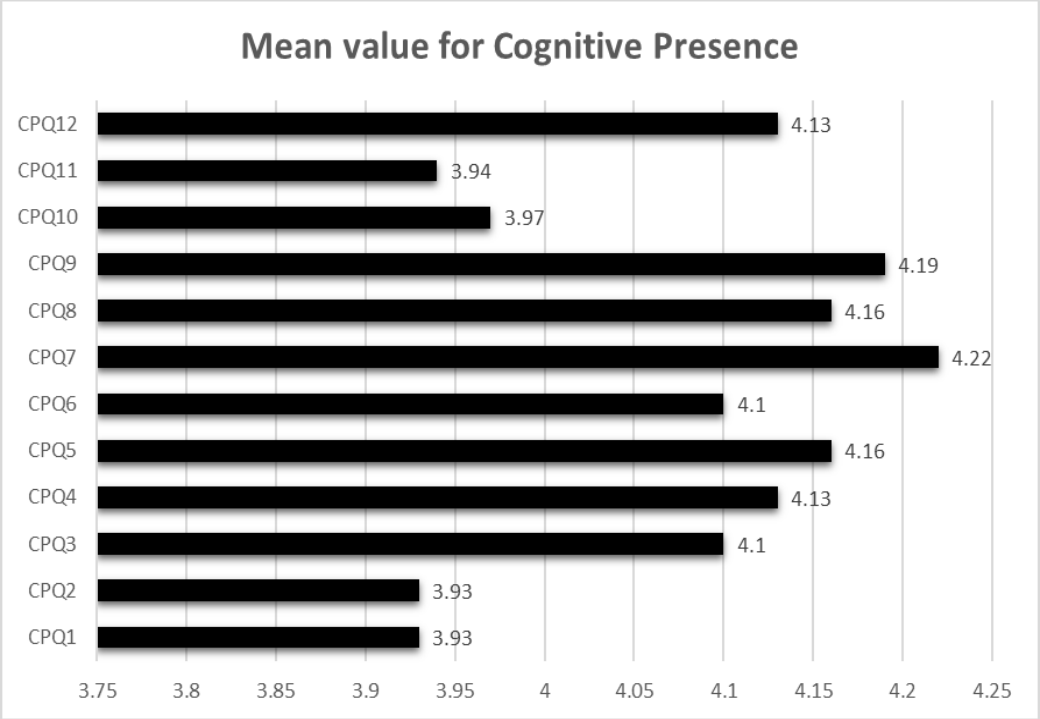

Figure 9-Mean for Cognitive Presence

Figure 8 shows the mean value for the total of 12 statements in measuring cognitive presence. The correspondent's mean ratings ranged from 3.93 to 4.22. The CPQ7 had the highest mean score of 4.22 on the cognitive present subscale. CPQ9 achieved the second-highest mean at 4.19, while CPQ8 and CPQ5 obtained the third-highest mean at 4.16. Both CPQ4 and CPQ12 have scores of 4.13. CPQ6 and CPQ3 received a score of 4.1, whereas CPQ2 and CPQ1 received a mark of 3.93. The CPQ10 had an average score of 3.97. The average score for CPQ11 is 3.94. The fact that all the items were relatively highly rated indicates that the students responded well to cognitive presence.

Conclusion

Summary of Findings and Discussion

This quantitative survey-based research study examines the impact of teaching, social, and cognitive presences on students' learning experiences. All the items assessed in teaching presence (course organisation and design, facilitation, and instructor-led instruction) received good feedback from the respondents, with a mean value of more than 4.0. Respondents believed that the course design and organisation as well as the facilitation provided by the instructors frequently helped keep the students on task in a way that helped the students learn in the setting of teaching presence. However, lowest mean value captured in social presence through design and organization is regarding to how well instructor communicate important course goals. This probably because of insufficient training given to the educators for online learning, thus there is a difficulty in delivery the course goal especially in the early stage of pandemic. Among the three items measured in teaching presence, direct instruction scored the least mean value. Direct Instruction is a teaching strategy which carefully developing lesson around well-explained teaching task and manageable learning units. The idea behind direct instruction is that precise instructions prevent misunderstandings, which may substantially improve and speed up process. However, based on this survey, student rated teaching presence for direct instruction is the lowest compared to another two

components of teaching presence. Students are expected a constructive informed approaches for learning activity or task through clear discussion of the topics rather than by being allowed to explore their own lines of inquiry without the necessary guidance. Delivering interactive lessons is good, but students must have complete understanding on how to proceed with the lesson's material.

Respondents believed that open communication in the context of social presence helped to improve social presence in online learning. They were at ease conversing with other participants online and taking part in class discussions. Students do sometimes experience a sense of social presence through group cohesion in which they feel comfortable disagreeing with other course participants, occasionally experience the recognition of their point of view by other course participants, and occasionally experience how online discussions support the growth of a sense of collaboration. Apart from that, students also occasionally felt online, or web-based communication is an excellent medium for social interaction. It demonstrates how social presence elements have developed through useful interactions among students in online classes. As learners, they develop a sense of mutual trust since they share the same expectations. Additionally, how students behave in social presence patterns affects their academic achievement. They feel more at ease speaking their minds when discussions are informal and allow for the expression of viewpoints without making them feel uncomfortable.

Cognitive presence is necessary for intellectual tasks that advance knowledge (Lau et al., 2021). The four components of cognitive presence are: (1) triggering event to define and understand the problem; (2) exploration of the problems and issues covered in the course; (3) integration to create solutions from the ideas generated during exploration; and (4) resolution, which involves applying the knowledge learned in the course to a real-world setting. The course problems' exploration and integration into the construction of solutions from those concepts had the greatest mean value of these four components. Respondents believed that using new information improved their ability to respond to inquiries from course activities. They were able to answer queries about the material by brainstorming and gathering pertinent data. They also occasionally believed that the issues raised sparked their curiosity about the subjects addressed in class and that class activities aroused it. The survey reveals positive perceptions regarding the influence of cognitive presence on online learning. On the other hand, creating interactions with people is part of the cognitive presence development process. Since it relies on pertinent strategies based on the collaborative acquisition of knowledge in an online setting, cognitive presence is a significant sign of the quality of an online education experience (Sadaf et al., 2021).

Pedagogical Implications and Suggestions for Future Research

The results of this study demonstrate the importance of the three main components; teaching presence, social presence, and cognitive presence; for enhancing the educational experience of online learning. The organisation and design of the course, facilitation, and instructor-led instruction; all indicators of teaching presence; received positive response from the students. Active feedback from teachers is believed to has good impact on the student behaviour in determining their strengths and weaknesses relative to the course’s goals and objectives. Hence, online learning can be improved by certainly involve some degree of direct instructions by educators even though in this 21st Century the pattern of online leaning is moving towards like project-based learning or self-directed learning. Apart from that. the

instructor needs to make certain improvements to the students' social and cognitive presence. The instructor must be innovative when using online or web-based communication, which is a medium for social interaction and may be a great tool for connecting with students and boosting engagement while keeping their sense of trust. In the context of cognitive presence, the instructor must be meticulous when designing activities and questions that will get students interested in the topics and help them come up with real-world solutions to course problems. To ensure dependable digital infrastructure, open access to resources, and cloud learning, the university must also strengthen its institutional capacity and policy. For online and mixed learning, universities and their management need to develop specific policies and procedures. The institution needs to create a peer review team for more research. In order to raise the standard of online education, they need to assess whether the teaching and learning process adheres to pedagogical principles. Knowledge of pedagogical topic can aid the instructor in delivering the course information successfully and quickly. A high-quality assessment must be used by the institution and instructors to support the learning process.

This study intends to spread knowledge and experiences that will benefit students' online learning from the students' point of view. The teaching, social, and cognitive presence from the perspective of the instructor should also be studied, as part of the further suggested study. It might serve as a starting point for further investigation into the advantages of having a presence in an online classroom. Especially if the instructor is working alone, they need to figure out what will give them the best return on their time and effort spent making and teaching the course.

References

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

Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, D. R., Ice, P., Richardson, J. C., & Swan, K. P. (2008). Developing a community of inquiry instrument: Testing a measure of the Community of Inquiry framework using a multi-institutional sample. *Internet and Higher Education*, *11*(3–4), 133–136. https://doi.org/10.1016/j.iheduc.2008.06.003

Dabbagh, N. (2012). Learner Characteristics and Online Learning. *SpringerReference*, *7*, 217–226. https://doi.org/10.1007/springerreference_302098

Dabbagh, N., & Horvitz, B. S. (2007). *N. Dabbagh and B. Bannan-Ritland, Online Learning: Concepts, Strategies, and Application*. 667–669. https://doi.org/10.1007/s11423-007-9071-4

Garrison, D. R., Anderson, T., & Archer, W. (1999). Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education. *Internet and Higher Education*, *2*(2–3), 87–105. https://doi.org/10.1016/S1096-7516(00)00016-6

Kalmar, E., Aarts, T., Bosman, E., Ford, C., de Kluijver, L., Beets, J., Veldkamp, L., Timmers, P., Besseling, D., Koopman, J., Fan, C., Berrevoets, E., Trotsenburg, M., Maton, L., van Remundt, J., Sari, E., Omar, L. W., Beinema, E., Winkel, R., & van der Sanden, M. (2022). The COVID-19 paradox of online collaborative education: when you cannot physically meet, you need more social interactions. *Heliyon*, *8*(1), e08823. https://doi.org/10.1016/j.heliyon.2022.e08823

Kunaviktikul, W., Ang, E., Baridwan, N. S., Bernal, A. B., Dones, L. B. P., Flores, J. L., Freedman-Doan, R., Klunklin, A., Lee, W. L., Lin, C. C., Luk, T. T., Nguyen, A. T. H., Nurumal, M. S., Setiawan, A., Sumaiyah Jamaluddin, T. S., Huy, T. Q., Tungpunkom, P., Wati, N. D. N. K., Xu, X., & Shorey, S. (2022). Nursing students' and faculty members' experiences of online education during COVID-19 across Southeast Asia: A Photovoice study. *Nurse Education Today*, *111*. https://doi.org/10.1016/j.nedt.2022.105307

Lau, Y. Y., Tang, Y. M., Chau, K. Y., Vyas, L., Sandoval-Hernandez, A., & Wong, S. (2021). COVID-19 Crisis: Exploring Community of Inquiry in Online Learning for Sub-Degree Students. *Frontiers in Psychology*, *12*(July), 1–14. https://doi.org/10.3389/fpsyg.2021.679197

Mahyoob, M. (2020).Challenges of e-Learning during the COVID-19 Pandemic Experienced by EFL Learners. *Arab World English Journal*, *11* (4) 351-362. https://dx.doi.org/10.24093/awej/vol11no4.23

Nassr, R. M., Aborujilah, A., Aldossary, D. A., & Aldossary, A. A. A. (2020). Understanding education difficulty during covid-19 lockdown: Reports on Malaysian university students' experience. *IEEE Access*, *8*, 186939–186950. https://doi.org/10.1109/ACCESS.2020.3029967

Nassr, R. M., Aborujilah, A., Aldossary, D. A., & Aldossary, A. A. A. (2020). Understanding Education Difficulty During COVID-19 Lockdown: Reports on MalaysianUniversity Students' Experience. The Institute of Electrical and Electronics Engineers.(IEEE).Volume8,186939-186950. https://doi.org/10.1109/access.2020.3029967

Parsad, B., Lewis, L., & Tice, P. (2008). Distance education at degree-granting post-secondary institutions: 2006-2007. *Washington, DC: National Center for Education Statistics, Institute of Education Sciences, US Department of Education*, 90–95. Retrieved from https://www.voced.edu.au/content/ngv:47545

Paudel, P. (2021). Online education: Benefits, challenges and strategies during and after COVID-19 in higher education. International Journal on Studies in Education (IJonSE), 3(2), 70-85. Retrieved from https://doi.org/10.46328/ijonse.32.

Purwandari, E. P., Junus, K., & Santoso, H. B. (2022). Exploring e-learning community of inquiry framework for engineering education. *International Journal of Instruction*, *15*(1), 619–632. https://doi.org/10.29333/iji.2022.15135a

Radin, M. A., & Shlat, N. (2021). Online Education: Learning Outcome, Success & Challenges. *SOCIETY. INTEGRATION. EDUCATION. Proceedings of the International Scientific Conference*, *1*, 524–536. https://doi.org/10.17770/sie2021vol1.6156

Sadaf, A., Wu, T., & Martin, F. (2021). Cognitive Presence in Online Learning: A Systematic Review of Empirical Research from 2000 to 2019. *Computers and Education Open*, *2*, 100050. https://doi.org/10.1016/J.CAEO.2021.100050

Whiteside, A. L. (2015). Introducing the social presence model to explore online and blended learning experiences. *Journal of Asynchronous Learning Network*, *19*(2), 4–5. https://doi.org/10.24059/olj.v19i2.453

Xu, S., Li, G., & Luo, H. (2021). Factors Influencing College Students' Teaching, Social, and Cognitive Presence in Online Learning: Based on a National Survey. *Proceedings - 2021 International Symposium on Educational Technology, ISET 2021*, 101–105. https://doi.org/10.1109/ISET52350.2021.00030

Yildirim, Z., & Kilis, S. (2019). Posting patterns of students' social presence, cognitive presence, and teaching presence in online learning. *Online Learning Journal*, *23*(2), 179–195. https://doi.org/10.24059/olj.v23i2.1460