

Course Redesign for Student Success-A Case Study

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Abstract: Online learning modality has become an indispensable part of higher education because it offers flexibility in time and space and allows learners to access and manage their learning anywhere. However, the feeling of isolation causes high student attrition rates in online learning, which significantly impacts quality and economic consequences in higher education. The quality of course content is a critical factor influencing student perception and satisfaction with their online courses. Providing well-structured and well-designed online courses can engage learners, improve their learning experiences, and facilitate achieving their academic goals. This study aims to ascertain the effectiveness of a revised online course in the master's program of health care administration. The community of inquiry serves as the theoretical foundation for this research study. A mixed-method research design is utilized to collect data from multiple sources for triangulation. The findings from this study confirm results generated from various empirical research projects. The limitations and future research are discussed. The implications for online education instructors, instructional designers, and administrators are also presented.

Keywords: content quality, course redesign, online learning, student success, the community of inquiry.

1. Introduction

Online courses and programs offered by higher education institutions have become increasingly popular in the past few decades because of their flexibility, allowing learners to take classes from anywhere and anytime (Mudau & Van den Berg, 2023). Especially in the past few years, the demand for e-learning has increased significantly due to the impacts brought by COVID-19. Distance learning programs worldwide are provided to meet such needs rapidly (Elzainy et al., 2020; Nazneen et al., 2020). Literature has reported that a feeling of isolation among online students impacts their ability to learn, interact, and engage (Mudau & Van den Berg, 2023; Shehzad & Charles, 2023). It is imperative to note that higher education institutions should ensure accessibility, interactivity, and quality content delivered to the learners in the distance learning modality (Akbaba Altun & Johnson, 2022).

In this paper, after the introduction section, the literature review section provides the theoretical background concerning the essential components of the Community of Inquiry and related empirical research. The following section is the research methodology to detail the study setting, participants, research design, data collection, and data analysis. The fourth section will present and discuss the results from two survey instruments. The fifth section will describe the study limitations and the directions for future research. By the end of this paper, the last section will present an in-depth examination of the findings, implications, and a short conclusion.

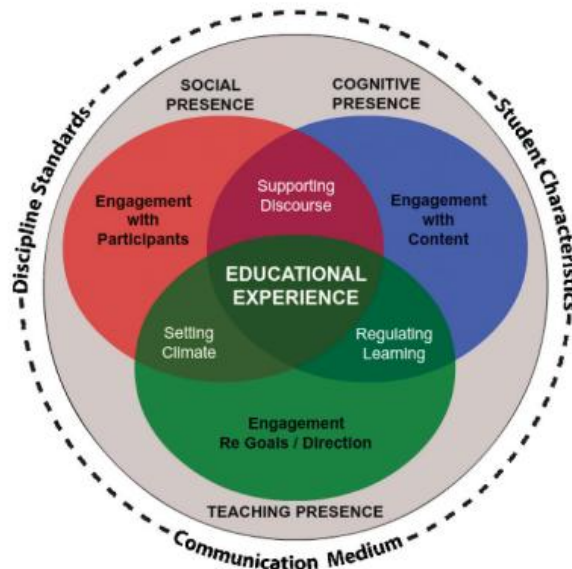
2. Literature Review

2.1 Community of Inquiry

Grounded in the earlier works of Dewey, Garrison et al. (2000) developed the Community of Inquiry (CoI) framework for teaching and learning in the online learning environment. Garrison et al. (2000) emphasized the importance of the intersection of cognitive, social, and teaching presence, as illustrated in Figure 1, to promote a meaningful learning experience. The CoI model illustrated how to accomplish a desired online learning experience through the development of three interdependent components that assist instructors and learners in working together to create a collaborative, constructive, and supportive learning experience (Mudau & Van den Berg, 2023; Sales et al., 2023). According to Garrison et al. (2000), a practical, systematic approach with all three components among instructors and learners can bring about collaborative learning and create new knowledge. These three interdependent components facilitate discourse and content development and create an interactive learning experience (Garrison et al., 2000). This framework is used extensively as a conceptualization guide to stimulate critical thinking, problem-solving, and discourse (Shehzad & Charles, 2023). In addition, this framework has attracted scholars' and researchers' attention to define, explore, and measure the inquiry process in online learning communities (Amka & Dalle, 2022; Mudau & Van den Berg, 2023; Sales et al., 2023).

Figure 1. The community of inquiry framework.

Source (Garrison, 2017): (p. 25)



2.1.1 Cognitive Presence

Cognitive presence is how learners construct new knowledge and confirm meanings through course activities, sustained reflection, and discourse (Garrison et al., 2001). In other words, cognitive presence implies that learners actively participate in cognitive construction, seek the most effective solutions to the learning problem or issue, and apply them at the end (Wang et al., 2021). Garrison et al. (2001) stressed the critical role of cognitive presence in students' learning and considered cognitive presence to be a key indicator of academic success. Mainly, cognitive presence is closely related to students' problem-solving, critical thinking, and cognitive construction (Amka & Dalle, 2022; Garrison et al., 2000; Wang, 2022). It aims to elucidate whether interaction and cognitive building enhance students' critical thinking development (Wang, 2022). Cognitive presence supports students in understanding what is taught through learning tasks, enabling students to develop independent learning skills (Mare & Mutezo, 2021). It is also noted that cognitive presence involves creating knowledge through student-to-content, student-to-student, and student-to-instructor interactions (Amka & Dalle, 2022; Sales et al., 2023).

To explore cognitive presence further, Garrison et al. (2001) measured cognitive presence through a cycle of practical inquiry where students move purposefully from a triggering event to the exploration, integration, and resolution of the event. The triggering event starts with an investigation by proposing a question to motivate students' exploration (Mare & Mutezo, 2021; Wang et al., 2021). Garrison et al. (2001) believed that the instructor should take the lead to initiate the triggering events. In the second phase of exploration, students begin to grasp the nature of the problem and search for relevant information (Wang et al., 2021). Towards the end of this phase, students should be able to select proper details pertinent to the problem. Indeed, exploration enables students to brainstorm, probe, and discuss the problem by collaborating with other students to exchange and integrate relevant information and demonstrate their understanding of the problem (Mudau & Van den Berg, 2023).

The next phase is integration, which entails constructing meanings from the ideas generated in the exploratory phase (Garrison et al., 2001). In this phase, students start applying concepts to showcase how well they could connect and explain the problem of study (Mare & Mutezo, 2021). Garrison et al. (2001) advised that in this phase, instructors must actively monitor students' progress to identify misconceptions and offer exploratory questions, feedback, and additional valuable information to ensure anticipated cognitive development and shape the critical thinking process. Students will be more comfortable moving between reflection and discourse if instructors are enthusiastically involved in helping students' critical thinking and cognitive development (Garrison et al., 2001). Mudau and Van den Berg (2023) affirmed that instructors can facilitate students' development of higher-order skills such as critical thinking and metacognition by creating reflection activities, encouraging students to ask questions and participate in collaborative learning, and allowing them to apply the learned knowledge to real-world situations. As Sales et al. (2023) noted, instructors should monitor students' engagement in meaningful learning interactivity with their peers to ensure that intended learning outcomes will be achieved.

The last phase of this cycle, resolution, refers to solving the problem directly or applying new ideas. In this phase, the instructors should provide clear expectations and opportunities for students to apply newly constructed knowledge so that they will be able to demonstrate their learning, test the hypothesis, or implement the proposed solution (Garrison et al., 2001). Once moving through the four phases, students will be able to construct meanings through sustained reflection and discourse during the learning process (Wang et al., 2021). Overall, all four phases of inquiry are essential to cognitive presence. Nevertheless, resolving the problem could trigger further issues that start over the first phase of the inquiry cycle (Garrison & Archer, 2000). In Amka & Dalle's study (2022), the findings substantiated that cognitive presence positively and significantly impacts students' satisfaction with the e-learning experience. Their study suggested that in light of fostering student's cognitive presence, a course's overall structure and organization must be cohesive to facilitate and engage students in critical thinking and meaningful discussions.

2.1.2 Social Presence

Social presence occurs when the participants in the learning community can project themselves socially and emotionally as real individuals via communication and feel they relate to other students and their instructors (Garrison et al., 2000; Anderson & Dron, 2011). Social presence is vital to facilitate cognitive presence through indirect facilitation of critical thinking carried on by other learners in an interactive and inquiry learning environment (Garrison et al., 2000; Sales et al., 2023). From a constructivist's perspective, collaboration among students and interactions between students and their instructors are catalysts for creating meaningful knowledge (Garrison et al., 2010). Within the learning community, students are free to express their opinions and emotions, develop social bonds with their peers with open communication and mutual awareness, and create new knowledge (Garrison et al., 2000; Wang et al., 2021). Social presence highlights the importance of collaboration among students because it facilitates learning by encouraging and sustaining students' critical reflection and discourse in the collaborative learning community (Garrison et al., 2000; Garrison & Akyol, 2013; Roberts, 2019). Social presence in online learning promotes student-to-student interactions, enhances learner-to-instructor interactions, and improves the e-learning experience (Sales et al., 2023).

In an online e-learning environment, the sense of isolation among students impacts their ability to learn, interact, and engage (Shehzad & Charles, 2023). Social presence is significant because it emphasizes social interaction, the significance of meaningful relationships, and connecting with students despite their geographical distance (Mare & Mutezo, 2021). The evidence of critical inquiry and the quality of the discourse is optimized when students feel a sense of group commitment and belonging (Garrison et al., 2000). Amka and Dalle's study (2022) revealed that the students' social presence positively and significantly increased their satisfaction with the e-learning experience. When students develop strong bonds among group members and actively participate in the learning community, social presence reduces anxiety and stress caused by deadlines and quizzes. Moreover, constructive discussions within the collaborative learning community lead to cognitive discourse (Kumar et al., 2021). Hence, courses with an innovative design that encourages active participation and interaction among students will motivate them to participate in group activities; ultimately, students are more satisfied with their overall learning experience (Amka & Dalle, 2022).

2.1.3 Teaching Presence

Anderson et al. (2001) delineated teaching presence as the instructional design and organization, discourse facilitation, and direct instruction in teaching and learning. Teaching presence can enhance students' cognitive and social processes to attain meaningful and educational learning outcomes (Garrison et al., 2000). Instructional design involves creating curricular content, preparing curricular resources, sequencing lessons, and outlining assignment instructions, rules, and evaluation criteria (Anderson et al., 2001; Garrison et al., 2000). It is essential for an instructor to design courses and write instructions that can improve students' understanding, ensure students' engagement, and make students more satisfied with the course (Richardson et al., 2017). Discourse facilitation refers to the instructor's continuously monitoring and commenting on students' postings and written assignments (Anderson & Dron, 2011; Garrison et al., 2000). On the other hand, direct instruction refers to the efforts and teaching methods of prompting discussion and encouraging students to contribute to collaborative learning (Anderson et al., 2001; Wang et al., 2021). Garrison et al. (2010) found that teaching presence is central to establishing and maintaining students' social and cognitive presence. In any online learning system, teaching presence is critical for the student's overall satisfaction (Garrison & Cleveland-Innes, 2005; Law et al., 2019; Lim & Richardson, 2021) as it depends on how the instructor designs coursework, delivery, and instruction (Law et al., 2019). Amka and Dalle (2022) contended that a well-designed course with explicit instruction could bolster the creation of a teaching presence since physical availability is absent in the online learning environment.

As a key component of CoI, teaching presence also brings in the instructor's voice and presence because

instructors can shape the growth of cognitive and social presence (Garrison et al., 2000; Wang, 2022). Instructor's presence refers to the instructor's competence to establish interpersonal relationships and create a sense of community without physical presence in online classrooms (Richardson & Swan, 2019). It is the instructor's primary responsibility to keep students' interest, motivation, and participation in the online course (Garrison et al., 2000; Mare & Mutezo, 2021; Sales et al., 2023). Through a systematic literature review, Roberts (2019) identified several vital roles instructors play in online education, including instructional designers, subject specialists, researchers, mentors, student supporters, technology experts, facilitators, managers, administrators, and team players. Shehzad and Charles (2023) also underpinned the instructor's roles to include facilitator, motivator, role model, and learning community builder to foster students' problem-solving abilities. Furthermore, the instructors should provide intellectual and scholarly leadership and model the type of contributions that they want students to make (Anderson et al., 2001). The instructor should be a leader or role model, encouraging student participation and discourse and guiding the learning journey (Garrison et al., 2010). In addition, Sales et al. (2023) averred that instructors can optimize learners' well-being with the proper emotional support and substantial academic engagement.

Although teaching presence can be seen in online discussion forums, instructors should also establish their presence in other aspects of a course, for example, announcements, feedback to students, emails, and so on (Anderson & Dron, 2011). In online education, technology could empower students to be collaborators, critical thinkers, and problem-solvers (Lu, 2016; Roberts, 2019). The findings from Amka and Dalle's study (2022) suggested that instructors should be equipped with proper knowledge regarding the systems and software involved in creating a meaningful experience. Accordingly, instructors should utilize technology to personalize learning based on the student's needs (Lu, 2016; Roberts, 2019; Sales et al., 2023). It is suggested that to establish an appropriate teaching presence, instructors could employ synchronic platforms such as Big Blue Button, GoTo Meeting, Google Meet, Microsoft Teams, Skype, Webex, and Zoom to give weekly live lectures and host office hours to clarify students' questions as well as offer explicit guidance and helpful tips for completing the assignments (Amka & Dalle, 2022; Lu, 2016).

Garrison and Arbaugh (2007) asserted that teaching presence is a predominant predictor of student satisfaction, perceived learning, and the sense of community. Garrison and Cleveland-Innes's (2005) research showed that teaching presence positively correlates with student satisfaction with online experiences. Similarly, Lim et al.'s (2021) study also validated that teaching presence correlates strongly and positively with student satisfaction. The meta-analysis conducted by Caskurlu et al. (2020) revealed moderately strong positive correlations between teaching presence with perceived learning and student satisfaction. Turk et al. (2022) explored the relationship between teaching presence or social presence and student satisfaction. Their study concluded that both teaching and social presence are sound predictors of student satisfaction with three basic psychological needs.

2.2 Content Quality

Quality content conveys knowledge and cultivates curiosity and critical thinking (Akbaba Altun & Johnson, 2022). It is a fundamental and critical factor impacting student perception and satisfaction with their online courses (Amka & Dalle, 2022). Thus, higher education institutions and instructors ought to ensure that the content is well-structured and well-presented to guarantee the quality of the curriculum (Richardson et al., 2017). Literature shows that course content could influence the perceived quality and perceived interaction between students and teachers (Akbaba Altun & Johnson, 2022; Elzainy et al., 2020). Amka and Dalle's study (2022) also found a positive and significant relationship between content quality and students' satisfaction with the e-learning experience. Nazneen et al. (2020) investigated the factors involved in student satisfaction, and their findings showed that user-friendly interfaces and quality instructors determine a high level of student satisfaction.

2.3 Research Questions

Course content quality is a crucial factor influencing students' experience and perception of their course. After a course is revised, course evaluation is needed to identify what works or needs improvement. By examining the effectiveness of the redesigned course, the following questions were raised:

- (1) What are the students' perceptions and experiences regarding various learning assessments in the revised course?
- (2) What factors do impact student's learning experience in the revised course?

3. Research Methodology

3.1 Setting and Participants

This study focused on the graduate program in healthcare administration offered by an American public university's global campus. In particular, the University has implemented countless initiatives to keep the course contents updated and relevant, improve student engagement and satisfaction, and advance the course or program completion rates. A mixed-method research design was used for this study to investigate the students' perceptions of a redesigned course to understand if the course content met its purpose of revision and students' needs. One hundred eighty-four students enrolled in this redesigned course from October 2022 to August 2023.

The Institutional Review Board at the University approved this research. Students were informed about the purpose of the study via email communication. The email notified students that participation in this project was voluntary and no coercion or penalty would apply for early withdrawal.

3.2 Data Collection

For data collection, two survey instruments were utilized in this study. Both surveys had open-ended questions to allow students to express their thoughts and experiences regarding this redesigned course. One was an in-house survey created by the researchers. The in-house survey purposely asked students about their experiences with various learning assessments in this studied course. The ratings were on a five-point Likert-type scale from strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, to strongly agree = 5. Another instrument was the University's standardized end-of-course survey to ascertain students' level of satisfaction with the course. The ratings were on a five-point Likert-type scale from strongly disagree = 0, disagree = 1, neutral = 2, agree = 3, to strongly agree = 4.

Besides verbal comments captured by two surveys, the journal assignment asked students to write reflections on their learning during this 6-week course. Content analysis was used to examine narratives from the students analytically. The collected qualitative data from multiple sources were used for triangulation purposes to help confirm the research findings and provide more insights that allow us to explain the phenomenon better, which increases the credibility of this research.

3.3 Data Analysis

Once quantitative data were collected and verified confidently, the SPSS Statistical software suite was used to manipulate the data and conduct statistical analysis. Before analyzing survey data, descriptive statistical procedures were used to profile the characteristics of the sample as a whole or selected subgroups within it. The measures of central tendency and variability were obtained. Pearson correlation analysis was also performed to understand the intercorrelations between two variables.

4. Results and Discussions

4.1 The Findings from The In-House Survey

Thirty-four students responded to the in-house survey, which resulted in an 18.5% response rate. The first research question was formulated to understand the students' perceptions of various learning assessments in this redesigned course. Table 1 presents the in-house survey results expressed by the percentage of students who either agreed or strongly agreed with the survey item.

Table1: Student Survey Results Expressed in Percentage

Survey Item	N	% of Agree + Strongly Agree
Case-Scenario based Discussion Boards prepared me to deal with various aspects of managed care and contractual services.	34	88.23
The Provider Contracts Presentation helped me polish my PP Presentation and oral presentation skills.	34	85.30
The Final Paper Prep helped me get started on my research and development of the final paper.	34	91.18
e-Portfolio helped me think critically about how my learning in the MHA program has prepared me as a future health care administrator.	34	76.47
The World of Medicare certificate helped me expand my knowledge in Medicare.	33	90.91
This course increased my knowledge of the health care industry.	34	97.05

The survey item, 'This course increased my knowledge in healthcare,' received the highest score. About 97% of surveyed students either agreed or strongly agreed with this statement. Although most of our students

are middle-aged frontline healthcare professionals, they learned a lot from this course because the course strengthened their knowledge of the study subject. One student commented, *“I have worked in healthcare for over 15 years and I still learned a lot from this course.”* Similarly, another student stated, *“This was an extremely important class for my current role and has expanded my knowledge immensely.”*

The ‘final paper prep’ survey item received the second-highest score at 91.18%. Students appreciated the opportunity to work ahead for their final paper. Here are two examples of students’ feedback concerning the final paper prep: *“A look ahead and a jump start is always beneficial.”* *“I was able to create the outline with the research already in hand, this helped me identify gaps in my research.”*

The World of Medicare certificate also earned a high ranking. Approximately 90.8% of students voiced positive opinions about the value of getting the certificate. This certification not only helped students learn better in this course but also prepared them for dealing with real-world issues. Here are some examples of students’ comments. *“This was one of my favorite assignments for the class, and something that I feel it’s more than necessary for professionals working in healthcare to know.”* *“Prior to the course, my knowledge of Medicare was minimal at best. I have such a better solid understanding from this certificate.”* *“Fantastic learning activity! A useful resource that we can use in the future.”*

Nearly 76.5% of surveyed students felt that the ePortfolio helped them think critically about how their learning in the MHA program has prepared them as future healthcare administrators, which obtained the lowest score in the in-house survey. There was no adverse comment towards the ePortfolio learning activity. Instead, positive comments include, *“I didn’t realize how much I brought to the table until I started adding everything to my ePortfolio.”* *“It made me think critically about the work I wanted to share even if that work was not my best.”* *“e-Portfolio was a great way to get me to start collecting all the information I learned thus far and put together a professional profile for myself.”* *“ePortfolio is beneficial and provides a real-life application of why students are attending classes.”*

4.2 The Findings from The End-Of-Course Survey

The second research question explored the levels of student satisfaction in the revised course. There were 184 surveys sent to students, and 55 surveys were returned, resulting in a 29.89% response rate. Table 2 displays students’ perceptions of the course. Among 16 survey items, ‘hard work required to earn a good grade’ earned the highest mean score at 3.80, followed by ‘clear instruction for grading’ (3.72) and ‘assignments requiring critical thinking’ (3.71). On the other hand, the survey item regarding ‘engaging course content’ earned the lowest score at 3.46. However, when we reviewed the comments collected in the survey, we found no statements from students’ written comments to support this rating. The second lowest score (3.49) went to the survey item, ‘the instructor promoting active participation.’ The survey item regarding ‘the instructor’s timely feedback’ was ranked third lowest at 3.56. We only saw positive feedback provided to instructors in the collected written comments.

Instructor’s timely feedback helps students succeed. A study by Vesley et al. (2007) unveiled that students value their instructor’s timely feedback and guidance to improve the quality of their work, which keeps the students on track. Donlan et al. (2022) emphasized that instructors must provide timely and constructive feedback to help students learn more effectively. Another remark by Moore (1989) indicated that substantial instructor feedback is critical to student’s learning and satisfaction, and students reported higher satisfaction when their instructors gave timely feedback.

Table 2: Students’ satisfaction

Survey Item	Mean
Q1. Clear instruction was given on how assignments would be graded.	3.72
Q2. Course assignments require me to think critically.	3.71
Q3. Hard work is required to earn a good grade in this course.	3.80
Q4. I would recommend this course to another student.	3.63
Q5. I would recommend this instructor to another student.	3.58
Q6. Instructions for completing assignments are clear.	3.58
Q7. The course content (assignments/readings/study materials) is engaging.	3.46
Q8. The instructor adds her/his perspective, such as knowledge and experience, to the course content.	3.67
Q9. The instructor communicates and promotes high expectations.	3.58
Q10. The instructor fosters critical thinking throughout the course.	3.67

Q11. The instructor promotes active classroom participation of students.	3.49
Q12. The instructor provides consistent grading across assignments.	3.59
Q13. The instructor provides feedback in a timely manner.	3.56
Q14. The instructor provides useful feedback for improving students' quality of work.	3.58
Q15. The instructor's feedback aligns with her/his communicated expectations.	3.58
Q16. The quality of my educational experience has met my expectations.	3.67

3.62

Table 3 is a correlation matrix showing intercorrelations among the variables in the University's standardized end-of-course survey. The majority of variables had strong, positive correlations ($r > .5$). The survey item, 'quality of educational experience meeting my expectations', was significantly correlated with 'recommending this instructor' ($r = .980$), 'recommending this course' ($r = .949$), 'assignments requiring me to think critically' ($r = .928$), 'clear assignment instructions given on grading' ($r = .879$), and 'the instructor fostering critical thinking' ($r = .836$). The findings in this study are in line with prior studies (Caskurlu et al., 2020; Garrison & Cleveland-Innes, 2015; Lim et al., 2021; Turk et al., 2022) that instructors play a decisive role in promoting a high-quality online learning experience.

Table 3: Correlation matrix showing intercorrelations among the variables

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Q1	1.000									
Q2	.581**	1.000								
Q3	.661**	.677**	1.000							
Q4	.383*	.543**	.693**	1.000						
Q5	.538**	.727**	.413*	.382*	1.000					
Q6	.741**	.808**	.838**	.607**	.680**	1.000				
Q7	.675**	.591**	.753**	.591**	.509**	.845**	1.000			
Q8	.725**	.581**	.721**	.445**	.547**	.818**	.781**	1.000		
Q9	.506**	.386*	.542**	.232	.497**	.535**	.481**	.633**	1.000	
Q10	.473**	.458**	.570**	.274	.521**	.559**	.548**	.562**	.912**	1.000

[Footnotes] * $p < 0.05$; ** $p < 0.01$.

5. Limitations and Future Research

There are three limitations identified in this study. First, this research focused on an online course in the master's program in healthcare administration. Thus, the findings drawn from this research are not generalizable to any graduate courses at other programs at the same university or other universities nationwide. Second, this research relied on two survey instruments to collect data. Substantial errors or bias often occur since the respondents' behaviors might not always be warranted, which could harm the accuracy of survey estimates. Third, most of our students are middle-aged frontline healthcare professionals. The COVID-19 pandemic has affected them more than other professionals. The students' job status and family issues caused by the pandemic may interfere with students' learning and objective evaluation for the 6-week course. Therefore, another research study with the same research design should be conducted after the pandemic to confirm the findings derived from this study.

6. Conclusions

This study aimed to explore the online learning experiences that students had in a redesigned course of the master's program in healthcare administration. Understanding students' experience and satisfaction is fundamental to improving the course curriculum and enriching the student's learning experience. The in-house survey revealed that 97% of students agreed or strongly agreed with this statement, 'This course increased my knowledge in healthcare,' which gives us confidence about the significance of this studied course.

The University's end-of-course survey is an ongoing effort to gather feedback from students across the University in a systematic way. The findings in this research align with the literature (Caskurlu et al., 2020; Garrison & Cleveland-Innes, 2005; Law et al., 2019; Lim & Richardson, 2021; Turk et al., 2022) discussed previously, which states that instructors play a crucial role in students' online learning experience and satisfaction. The instructors are essential in providing appropriate resources and facilitating the teaching process

that encourages learning (Amka & Dalle, 2022). The findings also support the underlined notion of the Community of Inquiry that teaching presence can boost students' cognitive and social processes to attain meaningful and educational learning outcomes (Garrison et al., 2000).

This study has important implications for online education instructors, instructional designers, and administrators. According to Garrison et al. (2000), teaching presence involves the instructional design of the course, facilitating discourse, and direct instruction of key course concepts. First, courses must be revised and updated regularly to keep content relevant to adult learners. Incorporating innovative learning activities and design such as case-based learning, debates, peer-teaching, role-playing, simulation, and team-based learning could promote active participation, generate meaningful discussions, and nurture critical thinking and problem-solving skills. To ensure all instructors provide quality online education to learners, higher educational institutions must provide professional development opportunities, install a fair performance evaluation system for instructors, and establish a coaching program. It is the institution's responsibility to ensure that instructors understand and apply the notions of the CoI framework to the classroom by taking a leadership role in building a collaborative learning community in their virtual classrooms.

References

- [1] J. Bowers, P. Kumar, "Students' Perceptions of Teaching and Social Presence: A Comparative Analysis of Face-To-Face and Online Learning Environments," *Web-Based Learning and Teaching Technologies*, vol. 10, pp. 27-44, 2015. <https://doi.org/10.4018/ijwltt.2015010103>
- [2] M. Britto, S. Rush, "Developing and Implementing Comprehensive Student Support Services for Online Students," *Journal of Asynchronous Learning Networks*, vol. 17, no. 1, pp. 29-42, 2013.
- [3] S. Akbaba Altun, T. E. Johnson, "How to Improve the Quality of Online Education from Online Education Directors' Perspectives," *Turkish Online Journal of Distance Education (TOJDE)*, vol. 23, no. 2, pp. 15-30, 2022. <https://doi-org.su.idm.oclc.org/10.17718/tojde.1095732>
- [4] A. Amka, J. Dalle, "The Satisfaction of The Special Need's Students with E-Learning Experience During COVID-19 Pandemic: A Case of Educational Institutions in Indonesia," *Contemporary Educational Technology*, vol. 14, no. 1, Article ep334, 2022.
- [5] T. Anderson, J. Dron, "Three Generations of Distance Education Pedagogy," *International Review of Research in Online and Distance Learning*, vol. 12, no. 3, pp. 80-97, 2011. <http://www.irrodl.org/index.php/irrodl/article/view/890/1663>
- [6] T. Anderson, L. Rouke, D. R. Garrison, W. Archer, "Assessing Teaching Presence in A Computer Conferencing Context," *Journal of Asynchronous Learning Networks*, vol. 5, no. 2, pp. 1- 17, 2001. <https://olj.onlinelearningconsortium.org/index.php/olj/article/view/1875>
- [7] A. Atim, I. Mahadi, I., N. E. D. Abdul Malik, E. Kiziltas, "Critical Success Factors in E-Learning—A Case Study," *E-BANGI Journal*, vol. 18, no. 4, pp. 42-58, 2021.
- [8] S. Caskurlu, Y. Maeda, J. C. Richardson, J. Lv, "A Meta-Analysis Addressing The Relationship Between Teaching Presence and Students' Satisfaction and Learning," *Computers & Education*, vol. 157, 103966, 2020. <https://doi.org/10.1016/j.compedu.2020.103966>
- [9] J. Dolan, K. Kain, J. Reilly, G. Bansal, "How Do You Build Community and Foster Engagement in Online Courses?," *New Directions for Teaching & Learning*, vol. 170, pp. 89-100, 2022. <https://doi.org/10.1002/tl.20510>
- [10] A. Elzainy, A. El Sadik, W. Al Abdulmonem, "Experience of E-Learning and Online Assessment During The COVID-19 Pandemic at The College of Medicine, Qassim University," *Journal of Taibah University Medical Sciences*, vol. 15, no. 6, pp. 456-462, 2020. <https://doi.org/10.1016/j.jtumed.2020.09.005>
- [11] T. Favale, F. Soro, M. Trevisan, I. Drago, M. Mellia, "Campus Traffic and E-Learning during COVID19 Pandemic," *Computer Networks*, vol. 176, 107290, 2020. <https://doi.org/10.1016/j.comnet.2020.107290>
- [12] D. R. Garrison, T. Anderson, W. Archer, "Critical Inquiry in A Text-Based Environment: Computer Conferencing in Higher Education," *The Internet and Higher Education*, vol. 2, no. 2-3, pp. 87-105, 2000. [https://doi.org/10.1016/S1096-7516\(00\)00016-6](https://doi.org/10.1016/S1096-7516(00)00016-6)
- [13] D. R. Garrison, W. Archer, *A Transactional Perspective on Teaching and Learning: A Framework for Adult and Higher Education*, Pergamon, 2000.
- [14] D. R. Garrison, T. Anderson, W. Archer, "Critical Thinking, Cognitive Presence and Computer Conferencing in Distance Education," *American Journal of Distance Education*, vol. 15, no. 1, pp. 7-23, 2001. <https://doi.org/10.1080/08923640109527071>
- [15] D. R. Garrison, M. Cleveland-Innes, "Facilitating Cognitive Presence in Online Learning: Interaction Is Not Enough," *The American Journal of Distance Education*, vol. 19, no. 3, pp. 133-148, 2005. https://doi.org/10.1207/s15389286ajde1903_2
- [16] D. R. Garrison, J. B. Arbaugh, "Researching the Community of Inquiry Framework: Review, Issues, and

- Future Directions,” *Internet and Higher Education*, vol. 10, pp. 157–172, 2007.
- [17] D. R. Garrison, M. Cleveland-Innes, T. S. J. Fung, “Exploring Causal Relationships Among Teaching, Cognitive and Social Presence: Student Perceptions of The Community of Inquiry Framework,” *The Internet Higher Education*, vol. 13, no. 1-2, pp. 31-36, 2010. <https://doi.org/10.1016/j.iheduc.2009.10.002>
- [18] D. R. Garrison, Z. Akyol, “Toward the Development of a Metacognition Construct for Communities of Inquiry,” *The Internet Higher Education*, vol. 17, pp. 84-89, 2013. <http://dx.doi.org/10.1016/j.iheduc.2012.11.005>
- [19] P. Kumar, C. Saxena, H. Baber, “Learner-Content Interaction in E-Learning- the Moderating Role of Perceived Harm of COVID-19 in Assessing The Satisfaction of Students,” *Smart Learning Environments*, vol. 8, pp. 1–15, 2021. <https://doi.org/10.1186/s40561-021-00149-8>
- [20] K. M. Law, S. Geng, T. Li, “Student Enrollment, Motivation and Learning Performance in ABled Learning Environment: The Mediating Effects of Social, Teaching, and Cognitive Presence,” *Computers Education for Primary Care*, vol. 136, pp. 1-12, 2019. <https://doi.org/10.1016/j.compedu.2019.02.021>
- [21] J. Lim, J. C. Richardson, “Predictive Effects of Undergraduate Students’ Perceptions of Social, Cognitive, and Teaching Presence on Affective Learning Outcomes According to Disciplines,” *Computers & Education*, vol. 161, 104063, 2021. <https://doi.org/10.1016/j.compedu.2020.104063>
- [22] J. R. N. Lim, S. Rosenthal, Y. J. M. Sim, Z. Y. Lim, K. R. Oh, “Making Online Learning More Satisfying: The Effects of Online-Learning Self-Efficacy, Social Presence and Content Structure,” *Technology, Pedagogy and Education*, vol. 30, no. 4, pp. 543-556, 2021. <https://doi.org/10.1080/1475939X.2021.1934102>
- [23] H. Lu, “Cultural Inclusiveness in Online Learning: Can Educational Technology Be A Solution?,” *International Journal of Culture and History*, vol.2, no. 4, pp. 178-183, 2016. <https://doi.org/10.18178/ijch.2016.2.4.060>
- [24] S. Mare, A. T Mutezo, “The Effectiveness of E-Tutoring in An Open and Distance E-Learning Environment: Evidence from The University of South Africa,” *Open Learning*, vol. 36, no. 2, pp. 164-180, 2021. <https://doi.org/10.1080/02680513.2020.1717941>
- [25] M. G. Moore, “Three Types of Interaction,” *American Journal of Distance Education* , vol. 3, pp. 1–7, 1989.
- [26] P. K. Mudau, G. Van den Berg, “Guidelines for Supporting a Community of Inquiry through Graded Online Discussion Forums in Higher Education,” *Education Sciences*, vol. 13, 963, 2023. <https://doi.org/10.3390/educsci13090963>
- [27] A. Nazneen, T. Alsulimani, R. Sharma, “Marketing and Management in Higher Education: The Relationship between The Quality of Online Programmes and Student’s Satisfaction,” *Marketing and Management of Innovations*, vol. 2, pp. 235-246, 2020. <https://doi.org/10.21272/mmi.2020.2-17>
- [28] J. Richardson, J. Maeda, J. Lv, S. Caskurlu, “Social Presence in Relation to Students’ Satisfaction and Learning in The Online Eenvironment,” *Computers in Human Behavior*, vol, 71, pp. 402-417, 2017. <https://doi.org/10.1016/j.chb.2017.02.001>
- [29] J. C. Richardson, K. Swan, “Examining Social Presence in Online Courses in Relation to Students’ Perceived Learning and Satisfaction,” *Online Learning*, vol. 7, no. 1, pp. 68-88, 2019. <https://doi.org/10.24059/olj.v7i1.1864>
- [30] J. J. Roberts, “Online Learning as A Form of Distance Education: Linking Formation Learning in Theology to The Theories of Distance Education,” *HTS Theologiese Studies / Theological Studies*, vol. 75, no. 1, pp. 1-9, 2019. <https://doi.org/10.4102/hts.v75i1.5345>
- [31] J. N. R. Sales, J. R. E., Javier, S. Lu, R. E. Mijares, D. L. Quimpo, C. B. Salazar, M. S. Aguja, “Teachers’ Experiences and Perspectives in Conducting Synchronous Classes: Affordances and Challenges,” *Journal of Educational Technology and Online Learning*, vol. 6, no. 3, pp. 495-513, 2023. <https://doi.org/10.31681/jetol.1099870>
- [32] N. Shehzad, T. Charles, “Exploring The Impact of Instructor Social Presence on Student Engagement in Online Higher Education,” *Contemporary Educational Technology*, vol. 15, no. 4, ep484, 2023. <https://doi.org/10.30935/cedtech/13823>
- [33] Turk, M., Heddy, B. C., & Danielson, R. W. (2022). Teaching and social presences supporting basic needs satisfaction in online learning environments: How can presences and basic needs happily meet online? *Computers & Education*, 180, Article 104432. <https://doi.org/10.1016/j.compedu.2022.104432>
- [34] P. Vesely, L. Bloom, J. Sherlock, “Key Elements of Building Online Community: Comparing Faculty and Student Perceptions,” *MERLOT Journal of Online Learning and Teaching*, vol. 3, no. 3, pp. 234–246, 2007.
- [35] Y. Wang, “Exploring The Relationships Among The Dimensions of A Community of Inquiry in An Online Learning Environment,” *Distance Education*, vol. 43, no. 3, pp. 353-368, 2022.

<https://doi.org/10.1080/01587919.2022.2088471>

- [36] J. Wang, Y. Yang, H. Li, J. Aalst, "Continuing to Teach in A Time of Crisis: The Chinese Rural Educational System's Response and Student Satisfaction and Social and Cognitive Presence," *British Journal of Educational Technology*, vol. 52, no. 4, pp.1494-1512, 2021.
<https://doi.org/10.1111/bjet.13129>