

Using Diverse Applications to Promote Student Engagement and Faculty Presence in the Online Classroom

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Abstract

In an online classroom, the course media creates a relationship between the student and the faculty member. In a two and a half year study of student engagement and perception of faculty presence in a nursing program, students were surveyed about the media they used in their courses. Students were also asked about how the media affected how connected they were to other students and to the faculty members in the program. Eighty-seven students participated. Students reported using the course video system most and lecture slides the most. They also reported that online activities increased course discussion. Students commented that the online format was a good learning experience but the lack of immediate feedback from instructors was less satisfactory. Students reported that they felt more engaged in the course when they had contact with their instructors through the discussion board and personal email with their instructors.

Keywords: online teaching, student engagement, instructor presence, community of inquiry

Using Diverse Applications to Promote Student Engagement and Faculty Presence in the Online Classroom

In the past, engagement between students and instructors was quite limited in both the face-to-face and the online classroom settings (Nugent, 2015). Great strides have been made to improve this over the years, and according to Nugent (2015), three principles must be present for quality instruction which include:

1. Faculty must be socially present in the learning environment.
2. Students must form a learning community.
3. Students must be actively engaged in learning activities.

In the fully online Registered Nurse to Bachelor of Science Nursing (RN to BSN) program various media have been used to assist students to meet these principles. The researchers of this Scholarship of Teaching and Learning (SoTL) project set out to determine if the students' perceived needs were being met. This SoTL project was conducted for two and a half years to explore if various types of media increase student perception of faculty engagement. The most frequent types of media the students used were assessed by surveys in two online courses in an RN to BSN Program.

Background

Since 2010 online enrollment in higher education classes has become increasingly more popular. (Allen, Seaman, Poulin & Straut, 2016). Distance education enrollments have increased for the fourteenth straight year. The most recent year reported an addition of 337,016 distance education students, a 5.6 percent increase, exceeding the numbers seen over the past three years

of over one million (Lederman, 2018). At least 31 percent of all students have taken at least one distance education course. Public institutions reported the largest gain in distance learning education students with 67.8 percent of all distance students. (Babyson, 2016).

Influencing this increase in online students, The Carnegie Study of Nursing Education and the IOM Future of Nursing reports have called for the need for nurses to advance their education. Distance learning education courses in nursing have provided a wide range of opportunities for nurses by offering access to quality nursing education in areas where these programs have not existed in the past, such as in rural areas. The online courses have provided nurses the flexibility to participate from their own homes, at convenient times, while continuing to work.

Many online programs have been conducted synchronously and lack engagement due to various time zones and difficulty coordinating office hours, therefore decreasing the perceived engagement. Engagement has been defined as stressing the value of activities and/or discussion as well as “higher-order thinking” (Freeman et al., 2014)

The National Survey of Student Engagement (2015) reported students are more apt to succeed and graduate if they feel satisfied with their education (p. 1). In 2020, the National Survey of Student Engagement (2020) reported two of the top indicators for student perseverance are environment and quality of interaction. However, studies have concluded online courses retention rates are found to be much lower with higher reports of dissatisfaction than their counterparts of face-to-face classes (Sun and Chen, 2016). The rationale for this was a lack of face-to-face engagement which has contributed to feeling isolated and disconnected from others (Waugh & Su-Searle, 2014). Online forums and other acts of engagement have been found to combat such isolation and disconnectedness (Dubosson & Emad, 2015; Warren et al.,

2014). Retention in online courses has also been linked to faculty and student engagement.

Therefore, it is important to note that students who are engaged tend to persevere and succeed in courses (Bigatel& Williams, 2015; Croxton, 2014).

Faculty expect their learners to be engaged in online classes; however, if the faculty are not engaged how can we expect the students to be engaged? Lack of faculty interaction in online courses has also been cited as the main reason for dissatisfaction (Cole, Shelley and Swartz 2014). Eom et. al (2006) concluded instructor feedback, self-motivation, course design, interaction and instructor facilitation significantly improved students' perceived learning outcomes. Many faculty members have also identified the challenge of feeling connected, or having a presence, and engaging with their students. Yu et al (2013) concludes that online instructors must provide a sense of caring by soliciting feedback from students about the course and using it to improve the course. Higher levels of interpersonal interaction were also correlated to better student performance in online courses (Yu, 2013, p. 1), which highlights the importance of strong faculty engagement in online courses. Because online technology is continuously changing and there are so many advancements in technology, continual evaluation is needed to discover instructional strategies and media which lead to increased student engagement, satisfaction, and success.

The Community of Inquiry Model

The Community of Inquiry Model is a framework which connects online learning to the amount of interaction. The Community of Inquiry Model, developed by Garrison and colleagues in 2000, involves three concepts or presences: cognitive presence, social presence and teaching presence. The underlying framework defines learning as occurring in a community with collaborative interaction (Garrison, 2016). Cognitive presence is the way learners experience

meaning and critical thinking (Akyol & Garrison, 2008). Social presence is defined as students being able to "project themselves socially and emotionally" (Garrison & Arbaugh, 2007, p. 159). Finally, teaching presence as defined by Garrison and Arbaugh, (2007) state that the teaching presence starts before the online course and continues after course completion. However, the majority of teaching presence is in facilitation and direct instruction. Some researchers have stated a need for a fourth presence which considers the individual students' skills, motivation, self-regulation, self-efficacy in learning in a larger community of inquiry and is a result of the social cognitive theory of Bandura (1986) and Zimmerman (2000). Many researchers have studied the importance of the community of inquiry framework in online pedagogy (Bigatel et al., 2012). Few researchers however have researched which online activities have generated the most interaction.

Purpose

The aim of this Scholarship of Teaching and Learning (SoTL) research project was twofold: to assess (a) student learning using various media options for presentations and class submissions and (b) engagement in the on-line RN to BSN program in a large public Midwestern urban university. These specific aims were chosen since research has demonstrated student learning is linked with engagement.

Method

Study Design

A survey was used to collect data for convenience and efficiency. The researchers maintained participant anonymity with the use of an outside link in RedCap. A prospective descriptive design was used to survey participants. Before initiating the project, institutional

review board (IRB) approval was secured from the university. The IRB application included confidentiality of collected data, consent to participate in the study and protection of human rights. Participants accessing and completing the survey indicated consent to participate.

Instrument

An online survey was used to collect the data using RedCap. The survey consisted of 11 Likert scale questions- and three open ended questions. The questions were developed based on the perceptions of the learner regarding engagement and usefulness in two online RN to BSN courses.

The students were asked about the assignments that they were given and the media that they used to complete the assignments (Kaltura, voice-over-power point, iMovie, other) (See Appendix A). Other questions asked if the assignment met their learning objectives, helped engage with other students and the faculty, was beneficial in increasing course discussion, and increased their confidence with online submissions. For the participants that completed the survey in 2019, we added an additional question about whether this format helped them demonstrate an understanding of the material better than if it was presented in the face to face classroom.

Participants

A convenience sample consisted of 87 RN to BSN students in either an introductory nursing class or an informatics class. The students were recruited through an announcement in the learning management system after they completed the course. Inclusion criteria were that the students had to have recently completed the Transitions to Baccalaureate Education or Informatics courses in the RN to BSN program in this university. Students were over the age of

18 and enrolled in one, or both, of these two classes from the fall of 2016 to spring of 2019. Exclusion criteria comprised students under the age of 18 and only in other RN to BSN classes. None of the students in this program had taken an online course which consisted of using any of these various types of media. All students enrolling in these two courses were first year RN to BSN students and had not taken an online class before enrolling in this program. To enroll in this RN-BSN program, students are required to have a minimum of 2.8 GPA in their associate degree program.

Data Collection

When participants accessed the survey link, they were immediately presented with a copy of the informed consent to participate which also stated the purpose of the study before they could access the survey. The survey was hosted online through Redcap (Patridge & Bardyn, 2018), a survey instrument which is part of the Center for Clinical and Translational Science and Training at the university.

Data Analysis

Descriptive statistics were used to describe each variable. Spearman correlations were used to evaluate the relationships between the ordinal variables. For the open-ended question, themes were individually identified by the two authors and consensus was reached.

Results

Eight-seven students participated in the survey. Over half of the students reported using the video recording system Kaltura to complete the assignments. The assignments that used Kaltura were discussion and introduction videos in which the students stated their goals for returning to school for a BSN.

Table 1

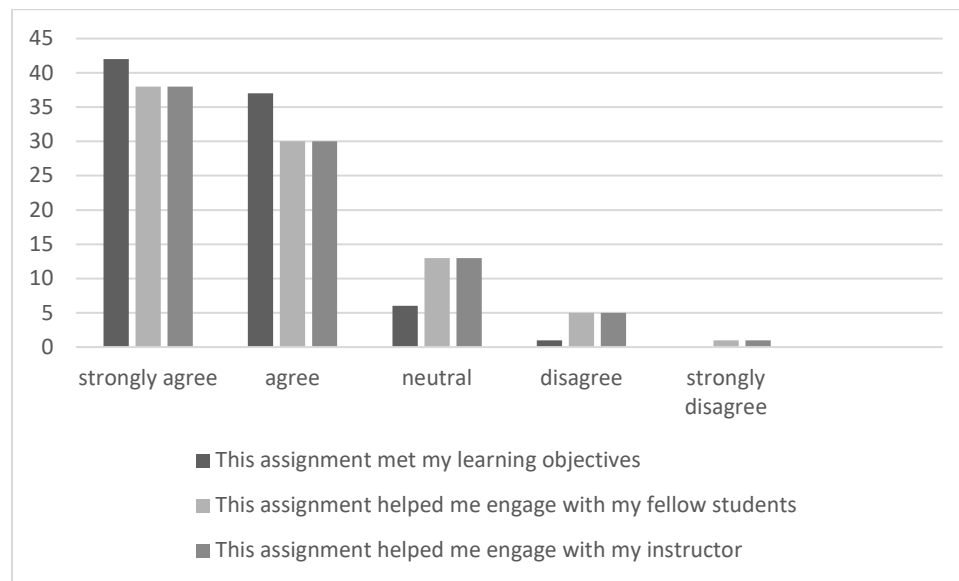
Type of Media Used by Students

Media type	N (%)
Kaltura	50 (57.5%)
Voice over PowerPoint	32 (36.8%)
Prezi	2 (2.3)
iMovie	1 (1.1)
Other	2 (2.3)

Eighty Two percent of students used either Kaltura or Voice over PowerPoint to complete their projects. Only 3% of the respondents reported using this medium before completing the assignment.

Figure 1

Student Evaluation of Assignment's Outcomes



Forty- two participants (48%) strongly agreed the assignment met their learning objectives.

Additionally, students reported that these assignments increased engagement with their instructor as well as among their student peers.

Table 2

Student Evaluation of Confidence Building and Support from Faculty

	This Activity Increased My Confidence With Online Submissions	Through This Activity I Received Adequate Direct Instruction From My Instructor
	N (%)	N (%)
strongly agree	44 (50.6)	36 (41.4)
agree	30 (34.5)	33 (37.9)
neutral	8 (9.2)	8 (9.2)
disagree	3 (3.4)	10 (11.5)
strongly disagree	2 (2.3)	0 (0)
Total	87	87

Overall, students felt they received adequate direction from their instructor and felt strongly that this activity increased their confidence with online submissions.

Table 3

Student Evaluation Related to Increasing Discussion and Comparison to Traditional Setting

	This Activity Was Beneficial In Increasing Course Discussion	Better Demonstrate An Understanding Of The Material Better Than A Traditional Classroom
	N (%)	N (%)
strongly agree	34 (39.1)	25 (28.7)
agree	40 (46.0)	28 (32.2)
neutral	5 (5.7)	23 (26.4)
disagree	7 (8.0)	7 (8.0)
strongly disagree	1 (1.1)	3 (3.4)
Total	87	86 (1 missing)

Students agreed that this activity increased discussion within the course. although over half of the students stated that they felt the material was understood better in this format than in a traditional classroom setting, this question had more neutral and negative responses than the other questions we asked.

Table 4

Spearman’s Correlation Showing Strong to Very Strong Relationships between Variables

	Engage with fellow students	Engage with instructor	Increased confidence	Increasing course discussion	Adequate instruction from instructor	Better understanding than a traditional classroom
Met learning objectives	.747**	.722**	.796**	.742**	.699**	.531**
Engage with students		.712**	.780**	.801**	.600**	.562**
Engage with instructor			.738**	.753**	.763**	.707**
Increased confidence				.776**	.629**	.538**
Increasing discussion					.642**	.611**
Adequate instruction						.637**

** p<.01

Students reported increased engagement and understanding in each category. All variables in the analysis had a statistically significant positive relationship to each other.

Qualitative analysis

Format was helpful. Several themes were identified from the open-ended survey questions. When asked, “How did this format help you compared to if you presented in a traditional classroom?” participants reported feeling that the online format was less stressful, more convenient, and helped them feel more engaged in the course. They also reported that the format allowed them to organize material in a different way.

Table 5

Themes identified from Qualitative Analysis

Theme	Student Commentary
Less stress	This format helped me because I was able to work at my own pace throughout the week, rather than having to feel pressured by having it completed by a specific date and time because I had to be in class. We still had deadlines, but they were reasonable and allowed us to work at our own pace without feeling rushed. (participant 15)
Convenience	By staying in the comfort of my home and being able to complete my homework using this medium. (participant 18) It helped because I was able to do it on my time and didn't have to travel to complete it. (participant 7)
More engaged	Helped feel more engaged rather than just reading material and PowerPoint on our own (participant 5)
Organize info in a new way	Changed my outlook on methods to learn (participant 23)

Format hindered? Participants did report that some aspects of the online courses hindered them compared to a traditional classroom. Several students disliked the lack of direct contact. Participant 52 stated, “I miss the classroom, but on-line is most practical for my schedule. Beggars can’t be choosers.” Other students did not like the lack of immediate feedback that they would get in a traditional classroom setting. Participant 82 stated, “It took forever to hear back from the TA (teaching assistant)”. Participant 10 recommended “easier and faster contact with the instructors”. The students’ consensus was that overall, the format was helpful but lack of immediate feedback from the instructors was frustrating.

Room for improvement? When asked “what could have made this experience better?”, 50% of participants were satisfied with the course and said “nothing” was needed to improve. Participant 23 said, “It is hard to make recommendations on an experience that was excellent from start to finish. I would like to just say that this experience was amazing, and I am looking forward to continuing clear through doctor of nurse practice education with the University of Cincinnati educational system.” The students that offered recommendations for improvement focused around decreasing technical issues (Kaltura, Mac, Blackboard). One student reported issues with their webcam and stated, “For this particular assignment, I had to work off of my mother-in-law's computer” (participant 15). Student consensus was that technical issues are where improvements should be focused.

Feeling connected. When asked “what makes you feel most connected to your peers/instructor?” students identified several ways of connecting with faculty and fellow students. Thirty-five students said that using the discussion board connected them. Participant 81 commented, “I feel more connected with my peers and instructor when we participated in the discussion board, giving each other feedback on an assignment” . Email between faculty and students was mentioned by 17 participants. Using audio/visual technology to “help us to visualize the instructor and the classmates” (Participant 79) and “watching each other’s videos and attaching a face with a name while they explain what they are about” (Participant 73) was identified by 13 participants as increasing connectedness. Participants highlighted the importance of receiving feedback (n=12) and personal interactions (n=21) directly from the faculty as being critical to engaging with faculty in online course. Participant 84 noted that “having the instructor make comments or email me directly about my submitted assignments” increased engagement in the course.

Discussion

The purpose of this study was to assess (a) student learning using various media options for presentations and class submissions and (b) engagement in the on-line, asynchronous RN to BSN program in a large public Midwestern urban university. The results concluded significant findings in all three of the presences in the Community of Inquiry Theory. Cognitive presence is how students experience meaning and critical thinking (Garrison, 2006). The results indicated students met their learning objectives and had a better understanding of the material significantly more than in a traditional classroom. Social presence is the student being able to project themselves “emotionally and socially” (Akyol and Garrisons, 2008). Findings indicated that students were able to actively engage with peers and instructors, increased discussion, and enjoyed seeing videos of the faculty and fellow students to be able to associate faces and voices with other course participants. Teaching presence is communicated by course facilitation and student reported having adequate instruction from the instructor. Increased engagement of the instructor in the online environment helped them engage with their instructors and peers and increase confidence.

Limitations

One limitation is this was a small study without random assignment to groups and therefore cannot be generalizable. More comparative studies in the future with a larger number of participants are needed. The number of participants could have decreased based on waiting until after the term to administer the survey.

In addition, students experienced “down time” with the technology incorporated in the learning management system and thus could not use of the software items such as Kaltura. Another limitation was the lack of assessment for the concept of satisfaction, especially regarding the quality of feedback and teaching presence, which was not explored and should be in future studies.

Implications for Educators

Due to the current COVID 19 pandemic, remote instruction is being implemented by faculty unfamiliar with teaching on an online platform in many higher learning institutions. Students have responded to having a positive learning experience when combined with engagement with fellow peers and instructor. Foundational practices of instructors creating an online course in which students are given ample technological resources enabling them to engage yields greater understanding of course objectives. Engagement is viewed as learner interaction with peers and faculty through projects such as creating videos, voice over power points, and animated presentations in which instructors give feedback both orally through recording comments or in writing.

This project presents statistically significant positive engagement with faculty and peers and their perception of how satisfied they felt about meeting of their course objectives. Students reported that online courses are convenient, but it is imperative that faculty continue to personally interact with students via discussion boards, emails, personal videos, and providing feedback quickly to students in order for them to feel that the faculty have a presence in the course. Based on our we work we recommend using these various approaches and offer options about how they should be realized.

- Discussion Boards: Create assignments that require students to meaningfully respond to each other in a supportive way. Instructors should also have a clear presence in each discussion board by responding to students' posts or posting their ideas on the topics as well.
- Emails: Instructors answer and/or respond to emails in a timely manner (within 48 hours) and inform students of this timeframe in the beginning of the course.
- Personal Videos: Instructors create first introduction video in the beginning of the course to start the interaction between students and instructors. Instructors should respond to students in a video, which allows the student to connect to a "real person".
- Timely Feedback: Similar to the email recommendations above, instructors should respond and grade students' assignments within 48 hours. Students should be aware of the time to give instructors to grade in the beginning of the course, so student's expectation of a timely response is not immediate.

As more faculty are developing online courses to meet the increasing demand of educating during the pandemic and after, considerations need to be made to ensure that the faculty presence is felt within these courses so students can continue to engage with faculty and students during distance learning.

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