

2017

The Structure of Discussions in an Online Communication Course: What Do Students Find Most Effective?

Laura Jacobi

Minnesota State University Mankato, laura.jacobi@mnsu.edu

Follow this and additional works at: <https://ro.uow.edu.au/jutlp>

Recommended Citation

Jacobi, Laura, The Structure of Discussions in an Online Communication Course: What Do Students Find Most Effective?, *Journal of University Teaching & Learning Practice*, 14(1), 2017. Available at: <https://ro.uow.edu.au/jutlp/vol14/iss1/11>

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

The Structure of Discussions in an Online Communication Course: What Do Students Find Most Effective?

Abstract

The purpose of this study was to explore the perspectives of students regarding what was effective about the way in which the asynchronous discussions were structured in an upper level online organizational communication course. Surveys from 27 student participants were used, with questions focused upon the structure of discussions in the online course as compared to other online courses and to traditional classrooms. Results indicate structured and relevant discussion prompts, small group placement, visible postings, and required weekly postings as significant factors to student success. The majority of students also found online discussions more effective than live discussions in traditional classrooms. Many of the findings offer support for Garrison, Anderson, and Archer's (2000) Community of Inquiry (COI) Model and previous research on effective strategies in structuring online discussions.

Keywords

community of inquiry, asynchronous communication, online discussion, online pedagogy, social presence

Introduction and rationale

When the topic of effective teaching strategies in online tertiary courses comes up, most of us will readily agree that online learning is “comfortable” for university students today, considering their immersion into a world of technology from a very young age. In fact, in a study examining the usefulness of Moodle in enhancing participation and performance, Wood (2010) found that 97% of student participants in her study regarded technology as a very positive learning tool if used appropriately (i.e. in a way that is adapted to student needs). Mirriahi and Alonzo (2015) found a sizeable increase in students’ demand for online technologies to support their ability to collaborate with peers and instructors. Of the 171 student participants, 72.8% reported a preference for discussion of assignments and projects online with other students, while only 30.4% reported that they had the opportunity to do so; similarly, 70.7% reported wanting to share their work with peers through online discussion, but only 21.5% noted having the chance to do so. Shea, Swan, Frederickson and Pickett’s (2002) study on social presence in asynchronous learning networks found that nearly 1,000 online students from dozens of institutions reported being twice as likely to participate in online discussions than in discussions in a traditional classroom. What is it about discussions conducted online that makes them more enticing to students? And how can technology be “used appropriately” in the context of the online classroom? A comfort with technology does not necessarily equate to student success in online discussion engagement, so how can discussions be structured to be most conducive to student learning in virtual classrooms? The literature reflects the significance of the Community of Inquiry Model (Garrison, Anderson & Archer 2000) in examining factors pertinent to effective online discussions. In particular, social presence and the development of authentic topics and discussions (related to teaching presence and cognitive presence) play important roles.

Community of Inquiry model

According to Garrison, Anderson and Archer’s (2000) Community of Inquiry (CoI) model, there are three important factors in developing a “community of inquiry” to foster a worthwhile educational experience: social presence, teaching presence, and cognitive presence. *Social presence* is defined in the context of the model as “the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as ‘real people’”. (p. 89) Maclean and Asher (2009, p. 143) define social presence as “how the student is able to interact in the social setting of the learning community”, and assert that it is important in keeping students from feeling isolated in an online context, as they are likely to do without in-person classmates or an instructor. Social presence is significant in creating a CoI in online courses as it helps students to feel connected to their classmates and instructor.

Garrison, Anderson and Archer (2000, p. 90) write that *teaching presence* involves “the selection, organization, and primary presentation of course content, as well as the design and development of learning activities and assessment”. It may also include shared facilitation of discussions between teacher and students. Furthermore, teaching presence is “a means to an end – to support and enhance social and cognitive presence for the purpose of realizing educational outcomes” (p. 90). Since *cognitive presence* is defined as “the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication”, the ultimate goal is that teaching presence will result in cognitive presence (p.

89). The development of authentic topics and discussions helps to ensure teaching presence, and authentic topics and question prompts allow students the opportunity to “construct meaning through sustained communication”, ensuring cognitive presence as well.

Social presence

Some studies report that students in online courses have negative experiences. Often, such experiences are due to a lack of personal connection (Moskal, Dziuban & Hartman 2010; van Tyron & Bishop 2009; Vonderwell 2003). For example, in Vonderwell’s (2003) qualitative case study examining the asynchronous communication experiences and perspectives of students in an online course, participants discussed the lack of a personal relationship with the instructor and with other students due to the online environment. It is not surprising, then, that a number of studies emphasise the significance of building social presence in the online classroom.

Social presence promotes a sense of kinship in online environments. For example, Lander (2015) found that certain linguistic strategies important in creating social presence (self-introductions, self-disclosure, empathy and greetings) fostered a sense of community in online discussions. This sense of community is important because it may prompt students to become more actively involved. For example, in their review of research in an attempt to find “optimally designed” teaching strategies that support the CoI framework, deNoyelles, Mannheimer and Chen (2014) found that two strategies were particularly effective in building social presence: social-presence cues (such as encouraging participation and sharing of personal opinions) and required/graded discussions. They maintained that the use of social cues is especially effective because “it helps build a collaborative and trusting learning community, which in turn encourages participation and improves student satisfaction” (p. 156).

Researchers have discussed different ways to create social presence in online classrooms. Rovai (2007) asserts that it is important for instructors to keep up with the conversations in the discussion forums, to be supportive in postings and to include a discussion forum for students to build community (such as a “Water Cooler” or “Break Area”). Salmon (2000) found that online relationships should be developed in the beginning of the course with the use of questions and topics that encourage discussion on social, personal and reflective levels prior to moving into deeper cognitive topics and questions. Messersmith (2015, p. 225) created social presence by requiring that her students complete a semester-long project together; many students “reported feeling closer to their online group members than to face-to-face group members in the classroom. They credited this to communicating daily”. In a study examining postgraduate students’ perspectives on instructional activities that motivated them and enhanced course content, Hall and Villareal (2015, p. 73) found that strong discussion-board activities built social presence because “they capitalized on student experiences, allowed storytelling, and included the application of concepts learned in class”. And MacKnight (2000) claims that summarising discussions and asking thought-provoking questions to stimulate reflective discussions are important in building social presence. Together, these studies reveal the importance of finding ways to build connections among instructors and students. This may happen through supportive communication, discussion prompts requiring personal reflection and/or collaborative opportunities. Regardless of how it is built, social presence is significant to the success of students in online discussions. In fact, Kleinman (2005) refers to fostering community through

online discussion boards as one of the “field-tested recommendations” in encouraging active learning, interaction and academic integrity in online courses.

Authentic topics and discussions

The other aspect of online discussions that is discussed at length in the literature is the significance of using “authentic topics” in driving meaningful discussions. Using authentic topics involves effective course design on the part of the instructor – knowing what topics will help students learn and grow, what questions will stimulate genuine discussion and what material will help students to apply course concepts to real-life, meaningful experiences. Teaching presence relies on instructors’ use of authentic topics. For example, Stover and Pollock (2014, p. 395) claim that designing assignments that require students to interact meaningfully will lead to a “community of inquiry”. In their study, they assessed a history instructor’s attempt to redesign a course as a synchronous online course. The instructor implemented a mandatory attendance policy, required completion of quizzes prior to synchronous class meetings, gave students focus questions well in advance of class sessions and made participation a significant percentage of the final grade (25%). The analysis showed that such decisions helped the instructor build a community of inquiry, in which students perceived the instructor as having a strong teaching presence.

Other researchers have also promoted the use of authentic and relevant topics in driving meaningful discussions. For example, Rovai (2007, p. 81) emphasises the significance of using authentic topics that “address real-life challenges that adults can relate to and that provide a recognizable context for learning”. Clark and Kwinn’s (2007, p. 10) research suggests that planning and facilitating frequent and relevant interactions is the “single most important thing [moderators] can do to create effective virtual classroom sessions”. Similarly, Dennen (2005, p. 139) found that discussion prompts that generate the highest participation levels share two key characteristics: clear guidelines and the “opportunity for everyone to have a unique response”. Finally, when exploring the influence of instructional methods on the quality of online discussion, Kanuka, Rourke and Laflamme (2007, p. 269) found that highly structured and planned discussions with clear expectations for students’ contributions are key to “moving students to higher levels of understanding and critical discourse”. In other words, instructional methods that are well structured and that “provide clearly defined roles and responsibilities for the students” and “provoke the students to explicitly confront others’ opinions” contributed most significantly to student learning (p. 269). All these studies point to the necessity of engaging students with authentic topics and relevant discussion questions that invite students to partake in thought-provoking conversations.

Specifying authentic topics and questions requires little intervention from the instructor. In fact, if the instructor intervenes too much into the discussion, student-student interaction can decline, as students start to rely on the instructor to answer questions and lead as the “expert” (Guldberg & Pilkington 2007; Palloff & Pratt 2001). Dennen (2011) and Bryce (2014, p. 14) found that students do not see their instructors/facilitators as discourse partners in the learning process. As an instructor in her online course for teacher candidates, Bryce (2014) attempted to build teaching presence by becoming involved in the online discussions at just two points in the semester. Because students made no challenges to her comments and only asked questions for clarification or information, she concluded that “perhaps teacher candidates interpreted the instructor’s role as an informed facilitator and evaluator, not discussion participant”. Instead of being an active

participant in discussions, the instructor should only intervene in discussions to motivate and/or keep the discussion on track (Dysthe 2002; Palloff & Pratt 1999). As Dennen (2005, p. 142) found in her cross-case analysis of nine online classes, “the most favorable [instructor] presence seemed to be one that let students know that their messages were being read without taking over the discussion”. Of the nine instructors in this study, those with subtle facilitation styles who did not dominate discussions and who gave individual qualitative feedback to students were most successful. According to Andresen (2009), rather than involving themselves in the course discussions, instructors should spend their time developing carefully thought-out discussion questions and topics that relate to learning objectives. Andresen (2009, p. 252) states that “without such planning and subsequent guidance, only lower levels of cognitive engagement will occur”. For example, instructors could ask students to present real or hypothetical examples that are pertinent to the course topics (Dysthe, 2002), or they could pose specific, relevant, reflective questions to encourage deeper reflection (Fung 2004; Hulkari & Mahlamaki-Kultanen 2007). As Andersen (2009, p. 254) writes, “instructors need to spend time preparing the asynchronous discussions rather than being active within them”.

While social presence and authentic discussion topics are significant in successful online discussions, what other factors may play a role? Are there specific aspects of structuring online discussions are structured that are most conducive to student learning? Listening to student voices is crucial in the process of understanding how to best use technology to enhance student learning in the context of online discussions. Therefore, the purpose of this case study is to discover student perspectives on what makes for effective discussions in the online classroom, and its research question is: What type of structure and which strategies do students find most and least effective in helping them to learn in online discussions?

Methods

Because discussions remain one of the most significant tools used to enhance student learning in both traditional and online classrooms, they were chosen as the focus of study. Surveys were used to assess student perceptions of the usefulness and structure of the discussions in an upper-level online organisational-communication class from a large midwestern American university. Students were informed that the purpose of the case study was “to understand what is most effective from students’ perspectives”. They were offered extra credit in exchange for completing the survey, which asked specific questions about their experience with the online discussions in the class. The survey was distributed in the 13th week of a 15-week semester as an attachment to an email. Students were instructed to type their responses, print out the survey and submit to my school mailbox without a name or any identifying information, to ensure anonymity. Students who participated were asked to email me to let me know that they had participated so that I could grant the extra credit.

Because I felt it important to maintain confidentiality, in addition to keeping survey responses separate from the record of student participants, I did not ask participants for demographic data. However, grade level and gender can be determined based on the list of student participants who reported completing the survey for extra credit. Of the 47 students in the class, 27 students participated. Twenty-one (77%) were seniors (fourth year), five (19%) were juniors (third year) and one was a graduate student (4%). Eighteen (67%) of the students were female.

Class structure

Communication in Human Organizations was a 15-week course taught completely online; it included links to weekly online lectures from the instructor and a discussion board for weekly asynchronous discussions with the use of Moodle, a web-based learning-management system. Students were placed randomly into discussion groups made up of seven or eight students. Discussions were structured such that quizzes acted as a gateway to the discussion board. After passing one of two five-point quizzes based on the lectures and text readings, students in the course posted to an online discussion board each week. The syllabus clarified the purposes of the asynchronous threaded discussions: “to create an ongoing dialogue” and “to provide an opportunity for you to hone your observational skills, apply what you have been studying, and see what other students have to say on the week’s topic”. Discussion questions required critical reflection and application of course material. For example, in exploring and applying systems theory, students were asked to visit a fast-food restaurant, observe how the organisation did or did not function as a system and apply the principles of systems theory to their analysis. In exploring the role of power in organisations, students were asked to analyse power metaphorically as a coin versus a candle flame, and argue for which power was evident in the organisation they were observing. Each week, students were asked to meet a specific word count in responding to the questions (300 to 400 words), and were given guidelines in answering the questions: to demonstrate a firm understanding of course concepts through incorporation of text, lecture and personal experiences where pertinent. Students were also expected to respond (with a word count of 150 to 200 words) to at least one other student posting within their small group each week. Standard guidelines were specified for each week (for example, offering additional ideas or observations for the student to consider and/or clarifying ways they interpreted particular concepts or theories differently from the original poster). Discussion postings were scored as 1 (postings with substance that followed the guidelines), 0.5 (postings that partially fulfilled the guidelines) or 0 (for postings that did not fulfill the guidelines or where the student did not post). All scores were averaged at the end of the semester and the student’s online participation was assigned a total score based on the resulting percentage. Discussions accounted for 33% of the final grade.

Data collection

Surveys were used to gather the perspectives of undergraduate and graduate students on the structure and usefulness of the online discussions in the course. Because it was important to understand the experiences of students from their perspectives, I felt it was important to ask them about their experiences with open-ended questions, which allowed students the freedom and flexibility to record what they found particularly helpful (or not) about the discussions. According to Van Manen (1990, p. 63), “the most straightforward way to go about our research is to ask selected individuals to write their experiences down”.

Students were given evaluations with specific questions aimed at recording feedback on the usefulness of the structure of the discussions in the course as compared to both other online courses and discussions in traditional face-to-face classrooms. Students were asked four questions:

1. What do you like *most* about the way in which discussions are set up in this course?
2. What do you like *least* about the way in which discussions are set up in this course?

3. Are discussions in this online course *more* effective, *less* effective, OR *the same level* of effectiveness as discussions in your live classes? Why? What would make discussions the most effective they could be?
4. In what ways have discussions been set up differently in other online courses you have taken? What did you like or not like about that structure?

Data analysis

In this study's analysis, the responses were compared continuously to discover emerging themes and patterns. Computer scans of the data were also used in generating themes, determining frequency counts of themes and verifying the researcher's semantic analysis.

Strauss and Corbin's (1990, 1998) three phases of coding were used to code the data. First, data was coded using open coding, to name and define preliminary categories. Next, axial coding was used to find the categories that were most salient to participants and to find meaningful connections among them. Finally, selective coding was used to integrate and organise categories at a higher level of abstraction. Coding on this level aided in discovering important insights into the most and least effective factors associated with the structure of successful online discussions, as consistent with theory and previous research.

Results

What students found most effective

All 27 participants answered this question, and a number of students provided more than one answer. Four themes emerged from the data in terms of what students found most effective about the structure of the asynchronous online discussions in the course: structured and relevant discussion prompts (n = 17), small-group placement (n = 8), visible postings (n = 7) and the time frame given in which to post (n = 7).

Structured and relevant discussion prompts

Consistent with previous research and theory on the significance of authentic topics and discussions (e.g., Clark & Kwinn 2007; Dennen 2005; Rovai 2007), 17 students (63%) found clear expectations for discussions and relevant discussion prompts that required application of course concepts particularly effective. For example, one student appreciated the clear and consistent expectations:

I like that there is a specific structure for each response along with specific instructions. It makes it much easier to respond to the question and comment on other people's posts because it is precise and everyone is on the same page.

Another found the discussion prompts helpful in initiating discussions: "I like the in-depth prompts, which both give you something to talk about and something to respond to other people in your class with." Another student concurred:

Discussions are very open ended and you can go many different routes when approaching a subject. This allows for each person to take their own path, and it really broadens the learning horizon for other classmates. It allows you to see how they look at subjects and not just how you do.

For this student, the open-ended discussion prompts allowed room for flexibility in responses and fresh perspective from others in the discussion. Another student referred to this as “substance”: “I like how there is substance in every discussion. I also enjoy reading about other people’s real life experiences and how they are incorporated into the class.” This also reveals the students’ appreciation for questions that asked for application of real-life experiences. For example, another student said, “Being able to apply the theories each week gives you the opportunity to understand each concept/theory better by applying them to real world situations.”

Small-group placement

In addition to structured and relevant discussion prompts, eight of the students (30%) said they appreciated being placed in smaller groups of seven or eight students. They found it more manageable to keep up with the posts of a smaller group, and they appreciated the opportunity it gave them to get to know others better; this reinforces Garrison, Anderson and Archer’s (2000) notion of social presence. For example, one student said, “It has a more intimate feeling and is easier to respond to people and ask questions.” Another said, “I really like how we have specific, smaller groups; it allows me to become more familiar with other students’ work and not have an overwhelming number of possible students to respond to” The usefulness of small groups in successful online discussions is consistent with previous research. Studies by Palloff and Pratt (1999) and Han and Hill (2007) confirm the significance of the use of small groups for discussions: both studies found that small groups helped to build a sense of community and helped students engage in more in-depth discussions. Previous studies (e.g., Clark & Mayer 2003; Jonassen, Less, Yang & Laffey 2005; Messersmith 2015) have also confirmed that students can learn at deeper, more meaningful levels when working collaboratively in small groups.

In addition to finding the small groups useful in terms of management and community-building, students also appreciated exposure to the postings of all students in the class. One student noted:

It [small group] gives us a little more opportunity to get to know people in the class better and be able to piece together who they are. It allows us to have back and forth conversations with a handful of people. I like that we are not restricted to our group though and we are able to read all of the discussion posts to learn even more.

Thus, in addition to the usefulness of small groups for management and community building, students appreciated the ability to view and learn from the posts of *all* of their classmates.

Visible postings

Seven of the students (26%) said they appreciated being able to see the postings of their classmates prior to posting their own responses to the questions. Some instructors may fear that allowing students to see the postings of others could encourage students to use unethical methods in responding to questions (such as summarising from the postings of others rather than responding with their own thoughts). While one cannot deny this as a potential problem, students in this course discussed some significant advantages of being able to see other postings. One student said:

Many times when I read the discussion question, I don't understand that well at first, but when I am able to see an example of how other students answered the question, it allows me to fully understand what I am being asked.

Another student talked of liking the ability to see others' postings because "it is helpful in getting a deeper understanding of the lesson". Such comments reveal that the visibility of the postings helps to ensure proper understanding of assignments and course material, and therefore potentially greater depth in the discussions; this contributes to cognitive presence, an important component of the CoI model. Furthermore, although the visibility of postings was not the direct focus of this study, Laurillard (2002) found that students appreciate the opportunity to seek clarification from other students in online discussions. This helps to confirm visible postings as an important consideration for further research.

Time frame

Finally, seven students (26%) mentioned that they appreciated the amount of time allotted to processing and posting responses. Students were introduced to new discussion questions each week; they were expected to post their responses to the questions posed by the instructor every Thursday and to respond to other students' postings by the following Sunday. This time frame was conducive to learning for students. One student responded, "What I like most is that there are clear and consistent due dates for things to be done. It is like a routine." Another student said, "I like how you are always on your own time and can participate in the discussion as early as you want and up until Thursday each week." This was reinforced by another, who said, "The entire class has almost a full week to participate in the online discussions, which enables thoughtful responses, and less pressure for time sensitive, abrupt answers." The time frame allowed students to process the questions and reflect critically upon them, and the few days between due dates of original postings and responses to other students' postings allowed them to respond with more insight. As one student noted, "the separate due dates gives us a window where we know we can definitely have time to respond with a thought provoking answer". Student commentary in this case study conveys time frame as an important consideration in need of further study.

What students found least effective

Twenty-one students answered this question. Two themes emerged pertinent to what students found least effective in structuring the online discussions: quizzes acting as a gateway to the discussion board (n = 9) and different student approaches to discussion engagement (n = 5). Other aspects mentioned by small numbers of students are discussed as well.

Quiz as gateway to discussion board

Students were required to pass one of two quizzes to be allowed onto the discussion board, where they could then post their responses. Quizzes consisted of five multiple-choice questions from a question bank. Students were tested on their understanding of the main ideas presented in texts and lectures. Quizzes were not intended to trick students, but rather to ensure that they were reading the material and watching the lectures prior to posting to the discussion board, to allow for more fruitful, productive discussions. Correct answers to each quiz question along with page references to find the corresponding information were provided immediately after students

submitted their quiz answers. This allowed the student the opportunity to study prior to taking the quiz a second time. On most quizzes, 90-99% of students passed.

Nine students (33%) said that quizzes were the feature they liked least about the way in which discussions were structured; of those nine students, four gave no explanation as to why. One student claimed that the quizzes gave them anxiety. Two claimed that the quizzes were too easy. Two other students made valid points about missing out on more information when failing a quiz. For example, one student stated, "If you cannot see the discussion after struggling with the quiz questions, you are further blocked from learning what you were already struggling to understand." This qualitative analysis is inconclusive as to whether passing a quiz to post to a discussion board is an effective technique for online discussions, as the students shared very little information about *why* they found quizzes an ineffective tool. However, the points made are valid, and should be considered by instructors when structuring online courses. For example, to ensure exposure to material that will help all students learn, instructors may wish to consider allowing students to see the discussion board regardless of whether they pass a gateway quiz or are allowed points for posting.

Different student approaches to discussion engagement

As in face-to-face classrooms, at times students encounter others who approach discussions in different ways from their own. Five participants (19%) expressed frustration with the discussion-engagement practices of other students. For example, one participant said, "Sometimes I feel like most people don't thoroughly read through others' posts before responding. Or else they read only the post they respond to." Another student commented:

I dislike that members in my group wait until the last minute to post their initial post. When I am doing mine I am in the zone to keep talking about a certain topic. It is hard to go back days after I have done my initial post and respond to another student.

Clearly, it was frustrating for students who read all postings and post early to encounter others without that same approach. Students did have suggestions for this in an online context. One participant suggested holding students accountable for reading all postings in some way; another suggested requiring that students respond to the comments they receive on their posts since "it would give students more incentive to really read the responses that other students give on [their] forum".

Other

Three participants claimed to have no complaints or suggestions, although some did have complaints about certain aspects of the structure of the discussions: difficult to adhere to the required word count of 300 to 400 words per post ($n = 2$), preference for more instructor involvement in discussions ($n = 1$) and discomfort with the requirement to respond to other students' postings ($n = 1$).

Online or face-to-face discussions: Which is more effective?

Overwhelmingly, students found online discussions more effective than those in traditional classrooms. Eighteen out of 27 students (67%) saw online discussions as *more* effective than live; five (18.5%) saw them as the *same* level of effectiveness; and only four (14.5%) found them *less* effective.

More effective

Those who saw the online discussions as more effective said that it was largely due to the fact that *everyone* participated. Because discussion postings accounted for a significant portion of the grade (33%), all students felt motivated to participate. For example, one student said, “Many times in live discussions it is not required to speak, so I usually will tune out everybody and not participate.” Another student said, “We have to participate in order to get the points, so it basically forces you to be active in the class.” This fits with Dennen’s (2005, p. 140) finding that required discussion postings in online courses provided evidence of students being motivated by grades. Dennen noted that “the flurry of messages that were posted right before the deadline in Dr. A’s class were likely written in the interest of receiving the attributed grade”, whereas in the class for which discussion postings were not part of the grade, “many students did not post any messages during the semester”. This was confirmed by Swan, Schenker, Arnold and Kuo (2007, pp. 47-48), who claimed that ‘to encourage online discussion, one must grade it, and discussion grades must count for a significant portion of final course grades’. Of course, the hope is that the motivation moves beyond the grade: that the points motivate students to *get* involved in the discussion, and that the ensuing discussion motivates students to *stay* involved.

Students also claimed that the necessity of participating led to more fruitful discussions, since a variety of perspectives were offered, and they prepared more thoughtful, research-based responses. For example, one student said, “It allows the entire class to get everyone’s perspective or personal experience on a topic. In a classroom only a few people get to speak, and it is usually the same people, and there is usually limited time.” Another student said, “Because it is required for points to engage in discussion, more people take part in it, and therefore there are more inputs and a variety of things being discussed.” One other student said, “In online discussions, individuals are better able to prepare their responses, do research, and think critically before posting and responding to others, making for more informed discussions... online discussions are more educational.” Clearly the fact that participation in the discussions was required was beneficial. It encouraged active engagement by all students and led to a variety of thoughtful responses.

In addition to the variety of perspectives offered when everyone is required to participate, students also found online discussions more effective because the students who tend to dominate discussions in traditional classrooms were inhibited from doing so in the virtual classroom; this has been confirmed in research by Dixson, Kuhlhorst and Reiff (2006). Moreover, shy people feel more comfortable voicing their opinions online due to the sense of anonymity they feel behind a computer screen. One student noted, “Being behind a screen, I think helps some students including myself who might be anxious sometimes to speak up about a subject or in a discussion.” Another student said that “in an in-person discussion, it’s much more intimidating to speak up”.

Students also characterised online discussions as more effective for other reasons: likelihood of more-focused discussions and ability to revisit the discussions. They said that live discussions can easily go off topic, and this is less likely to happen in an online discussion. Students also said that the ability to reread the discussions helped them to grasp the topics better, making online

discussions more effective. For example, one student said that it was “nice to be able to go back and reread the discussions to better grasp the lesson. In a discussion that’s happening live, you have to take detailed notes quickly in order to remember what was all discussed”. Another student said, “It is powerful to read a response and have it saved to your hard drive instead of listening in a classroom and rushing to write down notes.”

Less effective

Students who found the online discussions to be less effective than discussions in traditional classrooms cited one major reason: it feels less natural. Again, only four out of 27 students found them less effective, but three mentioned this theme. For example, one student said, “You get immediate feedback in replies in real life. Online, you’re waiting for the other person to check your comment and get back to you, and that’s only *if* they choose to reply.” Another student commented, “There isn’t as much back and forth talk about a topic. There isn’t that stream of conversation to learn from; it’s just one person’s thoughts and no one to counteract or support them.” The remaining student said that they found online discussions less effective because they gained fewer perspectives than in a live discussion; however, in the explanation, it was clear that this was due to a lack of involvement in the discussion: “Once I have posted my response, I usually don’t look back to see others’ replies.” The student continued: “I also sometimes don’t have time to read everybody’s responses and so I might not get to hear as many different perspectives as I could in a classroom setting.”

Same level of effectiveness

Those students who found online and live discussions to be similar in levels of effectiveness mentioned a mixture of the advantages and disadvantages of each. For example, one student claimed, “You naturally lose the level of collaboration you would get live reacting to each group conversation in the moment. However, the online forum forces everyone to contribute and allows for more overall perspective.”

Comparison to other online courses

Six of the 27 participants had no previous experience with discussions in online courses and therefore offered no comments. When the remaining 21 participants compared the online discussion in this course to those in other online courses, three themes: the significance of small groups and visibility of postings, the importance of required responses and weekly postings and the educational benefit of quizzes as a gateway to the discussion board.

Significance of small groups and visibility of postings

In response to the question about what students liked or did not like about the structure of other online courses they had taken, many explored the same issues discussed previously: the significance of small groups and the visibility of postings. Their responses reinforced the importance of both. For example, students talked of other online courses in which they had not been broken into small groups, and they did not like this due to the fact that it felt overwhelming. One student claimed that due to the small group placement, “you don’t feel overwhelmed with having to read tons of discussion postings. Instead, you can take your time and understand what people are trying to say”. The students’ appreciation of the visible postings was also mentioned when compared to other courses without them. For example, in talking about the invisibility of

other student postings in another class, one student said, “I am not a fan.” The student proceeded with the notion that

[the] point of having a discussion is to be able to see what other people are discussing and focusing on, in contrast to the points you want to discuss and talk about. The whole idea of having a discussion is to be able to get feedback and see what others are discussing.

Required responses and weekly discussions

Another response to this question pertained to required discussion postings. Some participants mentioned that discussion postings had not been mandatory in other online courses they had taken. Although it involved more work, such students seemed to find required responses a necessity for effective online discussions. One student said, “I think responses are crucial because they make students read multiple posts.” In other words, requiring responses to other student postings helped to motivate students to be more involved in the discussions. Another student also talked about the importance of consistent weekly discussions:

I took a course where we had to do a certain number of postings, so we could miss a couple if we wanted to. Students took this leniency too far and the discussions started to just be the same limited amount of students posting each week.

According to this student, mandatory weekly postings kept students on track and posting weekly, such that everyone remained involved in the discussions.

Include quizzes!

Ironically, what some students found to be ineffective, others found to be quite effective. Some students talked about how quizzes were not required in other online courses, and they found this to be detrimental to the quality of discussion in those courses. For example, one student said:

Previous online discussions did not require a quiz to open up the discussion, and the discussion became a mess because it was open to every member of the class. I rarely engaged others in these previous discussions. I felt like I was meeting a page requirement for these classes while the discussions in this course make me feel like I am actually engaging in discussion.

This student appreciated the quizzes and felt they led to a deeper exploration of concepts and richer discussions. This is consistent with previous research, which has found that students appreciated online quizzes that offered several attempts since it “provided extra practice and encouraged students to explore concepts” (Hall & Villareal 2015, p. 72). However, as only two students discussed the quizzes as effective in this class, further research is needed to assess the usefulness of quizzes as a gateway to discussions.

Discussion and conclusions

This study confirms the comfort level students experience engaging in online discussions, as shown by the fact that the vast majority of participants in this study found online discussions to be at least as effective as, if not more effective than, those in the traditional classroom. The online discussion offers a space for those who feel less comfortable asserting their voice. Required discussion postings also allowed students to gain a variety of perspectives rather than an isolated few, as is often the case in many traditional classrooms.

To create successful online discussions takes some planning, however. As shown by previous theory and research, students desire structured and relevant discussion prompts to frame their discussions, such that they can reflect critically upon material and apply it to real-life experiences. They also appreciate when the class is broken into smaller groups, as this helps them build community (social presence) and makes discussions more manageable. In addition to what has been confirmed in previous research, this study found that students reported learning and engaging more actively when postings were visible and not hidden from them until after posting their own responses to questions. It was also found that timing may play a role in the success of online discussions. Students valued the time to process before answering questions and constructing responses to other students. The consistent weekly discussion with a three-day lapse between original postings and responses to others worked well for student engagement. The usefulness of quizzes as a gateway to the discussion board is unclear at this point and requires further research.

In summary, the voices of these students offer further confirmation of the usefulness of the CoI model in the context of online discussions. For example, students in this course confirmed the significance of social presence in their validation of small groups due to their use in building community. They also confirmed the significance of teaching presence and cognitive presence in their desire for structured and relevant discussion prompts, their request to see the postings of all students and their wish that instructors include weekly, required postings and quizzes. Their voices also reinforce previous research, clarifying the significance of authentic topics and discussion questions and the use of small groups. Further research should continue to explore the significance of visible postings, postings as a requirement, time frame allotted for discussion postings and quizzes as a gateway to discussion boards.

References

- Andersen, M 2009. Asynchronous discussion forums: Success factors, outcomes, assessments, and limitations. *Educational Technology & Society*, 12(1), pp. 249-257.
- Bryce, N 2014. Teacher candidates' collaboration and identity in online discussions. *Journal of University Teaching and Learning Practice*, 11(1), pp. 1-18.
- Clark, R C & Kwinn, A 2007. *The new virtual classroom: Evidence-based guidelines for synchronous e-learning*. John Wiley & Sons, San Francisco.
- Clark, R C & Mayer, RE 2003. *E-Learning and the science of instruction*. Pfeiffer, San Francisco.
- Dennen, V P 2005. From message posting to learning dialogues: Factors affecting learner participation in asynchronous discussion. *Distance Education*, 26(1), pp. 127-148.

- Dennen, V P 2011. Facilitator presence and identity in online discourse: Use of positioning theory as an analytic framework. *Instructional Science*, 39(4), pp. 527-541.
- deNoyelles, A, Mannheimer Zydney, J & Chen, B 2014. Strategies for creating a Community of Inquiry through online asynchronous discussions. *Journal of Online Learning and Teaching*, 10(1), pp. 153-165.
- Dixson, M, Kuhlhorst, M & Reiff, A 2006. Creating effective online discussions: Optimal instructor and student roles. *Journal of Asynchronous Learning Networks*, 10(4), pp. 15-28.
- Dysthe, O 2002. The learning potential of a web-mediated discussion in a university course. *Studies in Higher Education*, 27(3), pp. 339-352.
- Fung, Y Y H 2004. Collaborative online learning: Interaction patterns and limiting factors. *Open Learning*, 19(2), pp. 135-149.
- Garrison, D R, Anderson, T & Archer, W 2000. Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(303), pp. 87-105.
- Guldborg, K & Pilkington, R M 2007. Tutor roles in facilitating reflection on practice through online discussion. *Educational Technology & Society*, 10(1), pp. 61-72.
- Hall, S & Villareal, D 2015. The hybrid advantage: Graduate student perspectives of hybrid education courses. *International Journal of Teaching and Learning in Higher Education*, 27(1), pp. 69-80.
- Han, S Y & Hill, J R 2007. Collaborate to learn, learn to collaborate: Examining the roles of context, community, and cognition in asynchronous discussion. *Journal of Educational Computing Research*, 36(1), pp. 89-123.
- Hulkari, K & Mahlamaa-Kultanen, S 2008. Reflection through web discussions: Assessing nursing students' work-based learning. *Journal of Workplace Learning*, 20, pp. 157-164.
- Jonassen, D H, Lee, C B, Yang, C C & Laffey, J 2005. The collaboration principle in multimedia learning. In Mayer, E E (ed.), *The Cambridge handbook of multimedia learning*. Cambridge University Press, New York, pp. 247-270.
- Kanuka, H, Rourke, L & Laflamme, E 2007. The influence of instructional methods on the quality of online discussion. *British Journal of Educational Technology*, 28(2), pp. 260-271.
- Kleinman, S 2005. Strategies for encouraging active learning, interaction, and academic integrity in online courses. *Communication Teacher*, 19(1), pp. 13-18.
- Lander, J 2015. Building community in online discussion: A case study of moderator strategies. *Linguistics and Education*, 29, pp. 107-120.
- Lauillard, D 2002. *Rethinking university teaching: A conversational framework for the effective use of learning technologies*. Routledge, London.

- MacKnight, C B 2000. Teaching critical thinking through online discussion. *Educase Quarterly*, 4, pp. 38-41.
- Maclean, R & Asher, A 2009. Increasing interactivity: Applying inquiry-based learning to ALN. *International Journal of Instructional Media*, 36(2), pp. 141-151.
- Messersmith, A S 2015. Preparing students for 21st century teamwork: Effective collaboration in the online group communication course. *Communication Teacher*, 29(4), pp. 219-226.
- Mirriahi, N & Alonzo, D 2015. Shedding light on students' technology preferences: Implications for academic development. *Journal of University Teaching and Learning Practice*, 12(1), pp. 1-14.
- Moskal, P D, Dziuban C & Hartman, J 2010. A transforming environment for adults in higher education. In Kidd, T (ed.), *Online education and adult learning: New frontiers for teaching practices*. Information Science Reference, Hershey, PA, pp. 54-68. doi:10.4018/978-1-60566-830-7.ch005.
- Palloff, R M & Pratt, K 1999. *Building learning communities in cyberspace: Effective strategies for the online classroom*. Jossey-Bass, San Francisco.
- Palloff, R M & Pratt, K 2001. *Lessons from the cyberspace classroom: The realities of online teaching*. Jossey-Bass, San Francisco.
- Rovai, A P 2007. Facilitating online discussions effectively. *The Internet and Higher Education*, 10, pp. 77-88.
- Shea, P J K, Swan, K, Fredericksen E E & Pickett, A M 2002. Student satisfaction and reported learning in the SUNY Learning Network. In Bourne, J & Moore, J C (eds.), *Elements of quality online education*. Sloan Consortium, Needham, MA pp. 145-155.
- Stover, S & Pollock, S 2014. Building a community of inquiry and analytical skills in an online history course. *International Journal of Teaching and Learning in Higher Education*, 26(3), pp. 393-403.
- Strauss, A & Corbin, J 1990. *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage, Newbury Park, CA.
- Strauss, A & Corbin, J 1998. *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.), Sage, Thousand Oaks, CA.
- Swan, K, Schenker, J, Arnold, S & Kuo, C L 2007. Shaping online discussion: Assessment matters. *World Conference on Educational Multimedia, Hypermedia and Telecommunications*, Vancouver, BC. Viewed at http://www.editlib.org/?fuseaction=Reader.ViewFullText&paper_id=25745.
- Van Manen, M 1990. *Researching lived experience: Human science for an action sensitive pedagogy*, University of Western Ontario, London, ONT.
- Van Tyron, P J S & Bishop, M J 2009. Theoretical foundations for enhancing social connectedness in online learning environments. *Distance Education*, 30(3), pp. 291-315.

Vonderwell, S 2003. An examination of asynchronous communication experiences and perspectives of students in an online course: A case study. *Internet and Higher Education*, 6, pp. 77-90.

Wood, S L 2010. Technology for teaching and learning: Moodle as a tool for higher education. *International Journal of Teaching and Learning in Higher Education*, 22(3), pp. 299-307.