THE IMPACT OF TEXT-BASED AND VIDEO DISCUSSIONS ON STUDENT ENGAGEMENT AND INTERACTIVITY IN AN ONLINE COURSE

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ABSTRACT

Learning in an online classroom can be optimized when teaching methods focus on student engagement with course content and student-student interactivity. Social learning is a challenge in any online learning environment, but it is realistic with the appropriate selection of discussion modalities. Text-based discussions have been traditionally used, but is this the most effective format to enhance learning outcomes? Video-based discussions have been utilized to supplement the traditional discussion, but the true impact of this newer format has not been explored. Online graduate students enrolled in a nursing ethics course were exposed to both discussion formats during their academic term and were subsequently surveyed on their perceptions of each modality in terms of engagement and interactivity. Students felt that the text-based discussions were more engaging and interactive than the video-based discussions, although the results could have been skewed based simply on a student preference for the familiar format. Keeping in mind the practical applicability of video-based discussions and the potential benefits to the students with this teaching method, it is in the best interest of student learning to continue using this modality moving forward. As online educators strive to optimize learning outcomes for students, it is imperative that social learning through engagement and interactivity is considered when implementing new teaching methods into the virtual learning environment.

Keywords: engagement, interactivity, online courses, video-based discussions, text-based discussions, nursing

INTRODUCTION

Engaging online graduate nursing students requires creative course design and execution for which nurse educators may have to vary the traditional curricula. Students arrive to class with both professional nursing experience and life experience and will benefit when learning includes engaging course content as well as social learning through interactivity with peers. Traditional online learning objectives are often limited to the cognitive domain, but with the appropriate teaching methodology, learning can also be achieved through the affective domain as well. The use of atypical discussion formats, such as video-based discussions, can facilitate social learning to enhance course content and make each course a truly unique experience for the student. Video-based discussions can offer students a practical application of course discussions to enhance ethical decision making in the clinical environment and promoting engagement with course content and interactivity in the online learning environment.

BACKGROUND AND THEORY

The Online Learning Environment

Online educators face the inherent challenge of creating an engaging and interactive virtual

learning environment (Hampton & Pearce, 2016). Engaging students socially in an online course is demanding as today's learners are often very effective multitaskers who may tune out the course content. Utilizing engaging technology that promotes social learning is imperative. As online learners interact with course content and collaborate with their classmates, learning outcomes are optimized. Teaching strategies must continue to evolve in order to encourage student participation and creative problem solving. Social learning will naturally increase when students are excited to use current technologies.

Social Learning Theory

Vygotsky (1978) and Bandura (1977) identified the importance of social influence on the learning process. Social learning theory discusses the importance of natural learning that occurs through conversations with others (Batson, 2009). Brunner (1964) believed that learning cannot occur in isolation. Vygotsky (1978) held the belief that learning cannot be truly understood outside the social context and that interactivity was a key component of learning. In 2003, Bender concurred, stating that working together enhanced learning by allowing students to question each other and share the content in their own terms with other learners. The common theme among these theorists is the belief that student learning is enhanced when working with others; therefore, instructional strategies that promote social engagement should enhance the learning environment (Swartzwelder, 2014). Technology must be aimed at promoting productive social interactions through structured online classroom discussions with the continued goal of identifying the most effective methodologies to enhance learning.

Text-Based versus Video-Based Discussions

The text-based discussion board has been used traditionally in online courses as the primary modality for students to interact with their peers, but is this the most effective teaching strategy? Text-based discussion boards have been shown to include examples of high levels of student thinking, reflection, and engagement (Thomas, 2002); however, they may not actually increase critical thinking (Angeli, Valanides, & Bonk, 2003), and even with a high number of student posts, this may not equate to engagement with the course content (Martono & Salam, 2017). In reality, text-based discussion board content often consists of flat, one-sided, short papers with responses aimed to promote the self-esteem of the writer of the primary posting. Unsubstantiated praise can quickly derail a productive discussion. Discussions must be engaging in order to promote sincere and genuine student-student and teacher-student interactions. In searching for a more dynamic discussion tool, faculty created interactive exercises using a video-based response format. With these emerging instructional technologies, learning is facilitated in a style that is more conducive to student involvement. The research presented here looks at students' perceptions of the level of engagement and interactivity of the video-based discussion versus the text-based discussion with a theoretical framework set in social learning.

METHODOLOGY

Online Discussion Formats

The participants in the study were adult students enrolled in a master's level nursing program who were taking an online graduate ethics course. Four discussions were assigned throughout their academic term; two were in the traditional text-based discussion format, while the other two discussions were in the video-based discussion format. The students were expected to prepare for each discussion by reading the required course materials and outside resources to engage in a substantive and lively discussion on an ethical topic. The traditional text-based discussion board criteria were used—that of a discussion topic with several guided questions. In addition to focusing on the discussion questions, the requirements for the video-based discussion focused more in depth on practical application of the ethics content.

Video-Based Discussion Guidelines

A video-based discussion also originated with a topic in nursing ethics and guidelines in the learning management system for that particular module. To prepare students for this video discussion, links were made available to written and video tutorials. Additionally, there was a practice area for students to try out the new technology before submitting their graded response. After the students reviewed the tutorials, the students watched an initial "challenge" video on a topic created by the faculty to which the students needed to respond. For this

exercise the two topics were cultural tolerance and genetic engineering. The students then recorded a three-minute video of themselves speaking to the discussion topic prior to viewing any of their peers' video responses. Following their video submission, the students were to view and respond to a minimum of two peer videos by watching their colleagues' videos and providing written professional, positive, and constructive feedback. Following the responses to their peers, the students viewed a professional video response to the topic and were asked to reflect on their own answer to the discussion question.

Surveys

At the end of the term, the students were asked to complete a survey to identify their perceptions of the two types of discussion formats. This was sent to the participants during the last week of the course using the Constructivist On-Line Learning Environment *Survey (*COLLES), a tool that was used to measure engagement and interactivity of the students with the two discussion formats (Taylor & Maor, n.d.). The COLLES instrument was designed to reflect social constructivism (Taylor & Maor, 2000). There are six categories in the tool, and the eight questions pertaining to interactivity were used for this study. Each question was asked twice to gather data specific to students' perception of video discussions versus text-based discussion forums (see Table 1). The Likert-style questions each have five answers that range from almost always (5) to almost never (1).

Out of the seven concurrent sections of the nursing ethics course, 163 students consented to participate in the study that ran ten weeks. Participants were not required to answer every question, so data analysis was based on the number of participants for each question, which averaged around 130.

RESULTS/STUDENT FEEDBACK

Statistical Analysis

The survey data were analyzed via paired sample t-tests that showed a statistically significant difference in the means of the overall scores for the video-based discussions ($M = 3.29$, $SD = 0.66$) versus text-based discussions ($M = 3.84$, $SD = 0.61$) conditions; $t(4) = -9.32$, $p = 0.001$. The mean score for each question can be found in Table 2. Overall, students perceived higher levels of engagement and interactivity with the text-based discussion modality. Specifically, the text-based discussion boards were perceived to be easier for the students to use to complete the assignments and to receive direct feedback. The students felt as though they could express their ideas more clearly to their peers via the text-based discussions rather than the video-based discussions, although in both modalities students felt as though their idea expression was clear. In the text-based discussions, students also felt it was easier to ask their classmates to clarify their comments, and it was easier to give feedback and to start an ongoing dialogue. Students also felt as though they were asked for clarification by their classmates more readily in the text-based discussions than in the video-based discussions. Finally, although in both modalities students were perceived to have responded to ideas, it was more apparent to the students in the text-based discussions.

External Motivation and Positive Feedback

Students reported in the survey an increased external motivation and positive feedback from their peers via the traditional text-based discussion format. Positive feedback will further encourage interaction among students and engagement with course content. The students felt that their participation was encouraged by their peers in the text-based discussions more so than in the video-based discussions. Positive reinforcement for participation in both modalities was perceived to be provided to the students, but it was again more apparent in the text-based discussions. Students also perceived that their contributions were valued more in a text-based discussion, although discussions in both modalities were perceived as being valued. Finally, students' perceptions of their peers' empathy toward their postings was rated higher in the text-based discussions than in the video-based discussions.

IMPLICATIONS FOR NURSING EDUCATION

Text-Based versus Video-Based

In comparing the two modalities, it is apparent in this sample that the graduate nursing students in this online course felt that text-based discussions were more engaging and interactive than were the video-based discussions. Most students are familiar with the text-based discussion format, having used this in previous online or hybrid courses, and the

survey results could be due simply to a student preference for this format. Lack of experience with the video-based discussion technology could lead to unfavorable opinions towards that modality. In general, student preferences of the two modalities can be extrapolated based on the overall lower mean scores received for the questions on the video-based discussion and the higher mean scores for the text-based discussion questions.

Limitations

Besides student preference, other variables could have skewed the results as well, including the small sample size, anxiety about recording a video, and challenges with technology. The study was small, n = 163, and only examined one specific course, making it difficult to generalize the results to other online courses and programs. Also, students have commented on course evaluations that they feel uncomfortable in front of the camera, which led to some anxiety surrounding video-based discussions. Some students also felt anxious due to the need to submit a flawless video and record it multiple times prior to submission, they became frustrated with even the smallest error. The frustration may carry over to the technology as well, as some students commented that they spend more time on the technology than with the actual content. Keeping these confounding variables in mind, future research looking at the impact of video-based discussion versus text-based discussion across multiple courses would be warranted. Despite these limitations, these data provide a good starting point to move forward in reviewing multiple methodologies for online course discussions.

DISCUSSION

Utilizing multiple discussion modalities benefits the student in several ways. Students may be more familiar with and therefore prefer the text-based discussion format, but it leaves out several key elements present in a video-based discussion. Video-based discussions mimic how a nurse will handle situations with ethical implications in the workplace—using body language, passion, and tone, in addition to words, to make a clear and substantive point on the issue. There is a human element to the video-based discussion; caring can be clearly conveyed via nonverbal communication, which inherently will engage the viewers more readily. Students are then presented with a realistic, practical way with which to provide feedback to their colleagues, both written and verbal. This will not only promote interactivity within the course but in clinical practice as well. Responses to patients presenting ethical challenges, such as those battling addiction, may be more empathetic due to the nonverbal communication depicting caring that may be present in classmates' video postings. The students will learn how to structure and when to discuss ethical topics, and they will have practical experience doing so, possibly increasing accountability for social media postings. Throughout a video-based discussion, student-student interactions will be on a more personal level, that taps into multiple senses. This modality is still new and introducing students to it now will only benefit them in the course as well as in clinical practice.

New technology will always bring about some resistance, at both the faculty and student levels. Backing up words with your face and voice adds extra weight to the words selected to discuss sensitive topics. Those who cannot rapidly pick up new technologies may struggle with some components of the video design and posting, and the easy way out is to fall back on what is familiar. Text-based discussions will continue to be used but video-based discussions can supplement the learning achieved through traditional methods. Providing resources and added time to students to overcome challenges may be warranted to garner a positive response to the new technology. But always, the practical applicability of new teaching methods must be kept in mind during implementation in the classroom, and it is clear that video-based discussions can provide potential benefits to students.

To maximize the benefits for the students, a suggestion for educators implementing video discussions would be to provide a thorough orientation to the new technology. For example, students could use the video discussion technology to introduce themselves during the first week of class. This would allow students to submit a video assignment without the stress of being assigned a grade. If students in this study were more comfortable with the technology, the results may have different. Therefore, additional studies will need to be done to determine if interactivity

increases with comfort level.

CONCLUSION

With the exponential growth of online learning, it is imperative that faculty identify the most effective methods to increase engagement with course content as well as interactivity among students. Social learning needs to be considered when teachers integrate new technologies into an online classroom. Integration of new technologies can be viewed as a vehicle to improve learner outcomes (Lawrence & Lentle-Keenan, 2013). Teaching methodologies should continuously evolve to meet the needs of future learners. It is contingent upon faculty to work to methodically design and implement courses that allow for meaningful collaboration (Robinson, Kilgore, & Warren, 2017). Having faculty step away from being the guide to student learning and instead focus on collaborating with students will move online education in a positive direction (Candela, 2016), which will optimize student-centered learning. Multimodal teaching methodologies will continue to engage students with different learning preferences. While faculty believe the video-based discussion assignment provides a more engaging learning experience than may be perceived, there has been little research on the impact of this methodology. Educators can continue to trial different discussion modalities to determine which works best to engage students and to promote social learning. Work is needed by educators to help bridge the gap between the potential, actual, and perceived levels of course engagement and student interactivity when utilizing alternative course discussion methods.

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Appendix A

Table 1. COLLES Survey Questions

Survey Questions
In the video discussions, I explained my ideas to other students.
In the video discussions, I asked other students to explain their ideas.
In the video discussions, other students asked me to explain my ideas.
In the video discussions, other students responded to my ideas.
In the video discussions, other students encouraged my participation.
In the video discussions, other students praised my contributions.
In the video discussions, other students valued my contributions.
In the video discussions, other students empathized with my struggle to learn.
In the discussion forums, I explained my ideas to other students.
In the discussion forums, I asked other students to explain their ideas.
In the discussion forums, other students asked me to explain my ideas.
In the discussion forums, other students responded to my ideas.
In the discussion forums, other students encouraged my participation.
In the discussion forums, other students praised my contributions.
In the discussion forums, other students valued my contributions.
In the discussion forums, other students empathized with my struggle to learn.

Note. Survey questions, adapted from the COLLES survey. Answer choices for each question were: Almost Always (5), Often (4), Sometimes (3), Seldom (2), Almost Never (1).

Table 2. Mean Score for all Interactivity Questions on the COLLES Survey

Survey Questions	Video Discussions		Discussion Boards	
	N	Mean	N	Mean
I explained my ideas to other students.	132	4.22	129	4.53
I asked other students to explain their ideas.	132	2.72	128	3.68
Other students asked me to explain my ideas.	132	2.52	130	3.48
Other students responded to my ideas.	132	3.89	130	4.32
Other students encouraged my participation.	132	2.98	126	3.75
Other students praised my contributions.	131	3.82	130	4.06
Other students valued my contributions.	132	3.81	130	4.02
Other students empathized with my struggle to learn.	132	2.38	130	2.73

Note. The number of students that responded to each question, and mean scores for each question, are presented in the table.