Early Warning Systems and Targeted Interventions for Student Success in Online Courses

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Chapter 7
Cultivating Teaching Presence and Social Presence Through Multimedia Intervention

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ABSTRACT

This chapter examines the influence of weekly check-in videos on students' learning and their perceptions of a learning community within an online graduate-level course. The weekly check-in videos provided in the examined course were created using a systematic approach – a series of items that aim to enhance learning and the idea of learning community. Student feedback was collected through a questionnaire that included seven open-ended questions and the Community of Inquiry survey. Video view counts and students' discussion board interactions were also utilized to evaluate the effectiveness of the videos. The positive feedback from the data reiterates that online students need to feel connected with their peers, instructor, and the institution and benefits from more personal learning experiences. The chapter also provides suggestions and strategies for how to use weekly check-in videos to build a learning community in an online course.

INTRODUCTION

Creating a Community of Inquiry (Garrison, Anderson, & Archer, 2001), where students feel supported by the instructor and connected with their peers, is essential to high quality online learning experiences and outcomes. The two major elements of a Community of Inquiry are teaching presence and social presence. Teaching presence refers to an instructor's course design and facilitation. Social presence references the sense of belonging that can be created within an online course. Researchers and practitioners of online learning have advocated for using discussion assignments or small group projects to enhance students' interaction while addressing social presence and teaching presence within an online course. Using this design, student – student interaction develops organically. However, it is not uncommon to see

some students' discussion posts receive significant attention while others are overlooked. This indicates purposeful facilitation is needed.

The author of this study argues there is a need to intentionally and strategically enhance student interaction within an online course to build a learning community where all learners within the course feel connected and engaged. The intervention implemented in this study is a weekly check-in video.

The weekly check-in video clips consist of four major elements: (1) an overview of the learning content and discussion topics; (2) specific students' discussion board posts that the instructor selected and chose to highlight; (3) assignment reminders; and (4) an engaging conclusion (e.g., encouraging words from the instructor, campus photos or fun facts about the institution). The purpose of this study is to examine the extent to which an instructor can cultivate the development of a learning community through weekly check-in videos within an online course. Research questions include:

1. How do an instructor's weekly check-in videos affect students' interactions within the discussion forums?
2. How do an instructor's weekly check-in videos cultivate the development of a learning community?
3. How do an instructor's weekly check-in videos influence students' perceived relationships with the institution?

This chapter includes the following sections: (1) a literature review on the Community of Inquiry, its development and its role in online courses, as well as strategies for promoting high quality interaction in discussions; (2) a case study that examines the effectiveness of weekly check-in videos in developing a Community of Inquiry and enhancing engagement in discussions; and (3) the implications of this study for course design and online student support.

BACKGROUND

Community of Inquiry

Making online courses more engaging, interactive and empowering has long been a goal of online instructors, course designers and administrators. Researchers have repeatedly suggested that building a Community of Inquiry in online courses is absolutely vital to this end (Choi & Kang, 2010; Garrison et al., 2000, 2001; Lietzau & Mann, 2009; Smyth, 2005, 2011; Smyth & Zanetis, 2007). The framework for Community of Inquiry includes: social presence, teaching presence, and cognitive presence (Garrison et al., 2000, 2001). Social presence is "the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities" (Garrison, 2009, p. 352). Teaching presence is defined as "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, 2001). Cognitive presence is regarded as "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse" (Garrison et al., 2001, p. 11).

The focus of this chapter is to explore social presence and teaching presence and their roles in developing a learning community. The intersection of social presence and teaching presence is referred to as "instructor presence" by Richardson et al. (2015). They define instructor presence as "the specific

actions and behaviors taken by the instructor that project him/herself as a real person … socially and pedagogically in an online community, and would fall at the intersection of teaching presence and social presence within the CoI framework" (Richardson et al., 2015, p. 259).

Using Discussion to Promote a Learning Community

A learning community does not develop automatically in any classroom – whether online, face-to-face or blended. Instead, learning communities require a carefully engineered teaching and learning environment (Hron, Cress, Hammer, & Friedrich, 2007; Knipe & Lee, 2002; Shieh, 2010) and must be fostered by all members within the community.

In current learning management systems, such as Blackboard, the most common interactions among students and between students and instructors take place in asynchronous, text-based discussion board forums. Even though genuine and meaningful dialogue can occur in these forums, some researchers contend that online learners tend to use this space to share their own opinions or post serial monologues (Loureiro-Koechlin & Allan, 2010; Murphy, Mahoney, Chen, Mendoza-Diaz, & Yang, 2005). Rarely do learners engage with their peers or instructors in co-constructing knowledge or in critically examining the learning material (Hopkins, Gibson, Solé, Savvides, & Starkey, 2008). In addition, online learners complain of feeling confused and frustrated when communicating in the asynchronous computer-mediated discussion forums (Capdeferro & Romero, 2012; Palloff & Pratt, 2007).

It is apparent that the asynchronous and text-based nature of this type of communication inevitably makes the interactions via this platform less immediate and likely to foster only limited interaction among the students and instructors. Furthermore, plain text is lean, unstimulating, and often fails to express the poster's intended meaning (Taylor, 2011).

Researchers, however, argue that with good design and facilitation, discussions can be used to promote higher-order thinking, prompt critical thinking, and increase learning satisfaction (Goda & Yamada, 2012; Hew & Cheung, 2012; Richardson, Sadaf, & Ertmer, 2012). Richardson et al. (2012) examined nine different types of questions and their relationships with students' critical thinking levels in 27 discussion forums. They found the most influential question type was "Critical Incident—which required students to respond to a scenario to create a solution" (p. 209). This research provided online instructors with general guidelines for tailoring their discussion prompts to engage students in higher-order thinking.

Goda and Yamada (2012) applied the Community of Inquiry framework to design a blended English as a foreign language (EFL) course. They utilized online asynchronous discussion activities to investigate the relationships between a CoI and the learners' participation levels, satisfaction with online discussion, perceived contributions to discussion groups, English proficiency, and interactions during discussions. They found the number of students' discussion posts increased when students perceived high teaching presence and social presence. In addition, they found discussion activity design was significantly correlated with the number of discussion posts students made, as well as their satisfaction. This was in reference to item 23 of the CoI survey (Swan, Richardson, Garrison, Cleveland-Innes, & Arbaugh, 2008) – "The problems posed increased my interest in course issues." They concluded that "the careful design of a learning community, including appropriate problem setting, seems to be the most important when we apply the CoI framework to CSCL for EFL learners" (Goda & Yamada, p. 311). In other words, discussion activity design that aligns with CoI can enhance learning satisfaction and outcomes.

Facilitators

While the design of discussions is important, the effects of other essential elements require further exploration, especially instructor facilitation. In their analysis of instructors' facilitation in online discussions, Nandi, Hamilton, and Harland (2012) identified two entirely different schools of thought regarding instructors' roles in discussions. While one group argued instructors need to be more involved in discussions and not let the students lead the direction of the discussion, the other group contended instructors should "take a back seat and let students construct their own knowledge" (Nandi et al., p. 8). They concluded that "how instructors should be facilitating a discussion forum . . . is neither fixed in a way, nor uniform" (Nandi et al., pp. 8-9). Although neither approach impacted the quantity of students' postings, Ertmer and Koehler (2015) found the discussions in their study were deeper and richer when facilitated by the instructor than not. It appears that meaningful learning experiences are more likely to happen when the instructor facilitates and participates in discussion more intentionally.

Lewandowski, van Barneveld, and Ertmer (2016) argued that "Through the strategic application of effective discussion prompts, online instructors can facilitate greater student engagement and deeper learning, connecting learners to the course content and to their peers" (p. 15). They categorized five types of prompts that instructors can use to enhance teaching presence and social presence in online courses: logistical prompts, subject matter prompts, application prompts, process prompts, and affective prompts. Furthermore, they emphasized that "It's not just the fact that the instructor responded that was important; it was the focus of his/her response that mattered" (Lewandowski et al., 2016, p. 16). Lu and Jeng (2006) reported when the instructor participated in a discussion as both a facilitator and co-participant, students tended to post more high-level responses (as cited in Lewandowski et al., 2016).

One voice that is missing in this review is that of students. Reflecting on her own online learning experiences, Barnes (2016) drew a strong positive correlation between learning experiences and outcomes. She concluded "Perhaps the single most effective online classroom intervention for nontraditional students is to heighten the sense of the instructor's presence in the course" (para. 44). All of these studies echo Kanuka's assertion that good course design needs to be accompanied by intentional facilitation: "it is the level of the interaction that will determine the quality of a learner's educational experience, whether it is face-to-face or distance and online education" (2011, pp. 154-155).

While the literature has provided strategies for designing and facilitating discussions through mostly text-based communication, there has been little exploration of using video to promote instructor presence. Huang and O'Brien (2017) advocated using weekly videos to engage students in discussions. This study builds on that work with a more structured approach.

METHODOLOGY

Research Context

The research site is a graduate level online course on systematic instructional design. There are 15 students enrolled in the course. All of them are non-traditional students who are in their first semester of an online master's degree program in instructional design. The course has one instructor and one teaching assistant. It is an eight-week course that covers an instructional design model. The intervention implemented in this course is a weekly check-in using video. The instructor followed a specific

formula to create the check-in video clips. Each one included: (1) an overview of the learning content and discussion topics; (2) specific students' discussion board posts that the instructor selected and chose to highlight; (3) assignment reminders; and (4) an engaging conclusion (e.g., encouraging words from the instructor, campus photos or fun facts about the institution).

There are seven discussion board assignments throughout the semester. Six of them are designed to help students give feedback on the assignments that they need to turn in at the end of the week. Overall, there are six major discussion board assignments starting from week one and concluding in week six. The seventh week does not have a discussion board assignment. In the final week, students use the discussion board assignment to share their final reflections on the course.

Students are required to submit their initial posts by midnight on Tuesdays and post at least two peer responses by midnight every Friday. In order to provide sufficient time or students to explore the topic and communicate among themselves, the instructor creates and shares the weekly check-in videos on Thursdays or Fridays. Links are provided in Blackboard announcements along with the runtime of each video. Occasionally, the instructor mentions some of the students' specific discussion posts in the announcement as well. Students receive the Blackboard announcement through their email. Overall, eight check-in video clips are created and shared. The first six videos, which are examined in this chapter, relate specifically to the course assignments. Two videos are not related to weekly assignments. The check-in video in week seven is a special holiday check-in video. The last check-in video is the instructor's reflection on the course.

Data Collection

At the end of the semester, a questionnaire was sent to the students. It contained eight open-ended questions and the 34 five-point Likert scale questions from the CoI survey (Swan et al., 2008). In order to investigate students' perceptions of the intervention (i.e., weekly check-in videos), the open-ended questions were specifically related to the weekly check-in videos.

To determine whether students watched the videos or not, the data from Kaltura (the university's video streaming system) were included in the analysis. Students' discussion activities were also part of the data. Specifically, the author analyzed the number of posts students submitted before and after the release of each video.

DATA ANALYSIS

The qualitative data (i.e., students' responses to the open-ended questions) were analyzed with the narrative thematic analysis approach, which is "a method for identifying, and analyzing and reporting patterns (themes) within data" (Braun & Clarke, 2006, p. 79). The analysis was conducted through the five stages "(a) organization and preparation of the data, (b) obtaining a general sense of the information, (c) the coding process, (d) categories or themes, and (e) interpretation of the data" (Butina, 2015, p. 193). The unit of analysis was the smallest meaningful unit which may be anywhere from a word to a paragraph. Data were coded manually to identify the commonalities, differences, key words, and themes for each open-ended question. Once themes were identified, the author counted the number of times each theme occurred across all individuals, and the number of individuals who expressed each

theme. Both representative and meaningful quotes were reported for each theme. Descriptive statistics were reported for the CoI survey, weekly check-in video analytics, and the discussion board post data.

RESULTS

This section includes results from the following: (1) open-ended questions; (2) CoI survey; (3) weekly check-in video view analytics; and (4) discussion board post data.

Students' Responses to the Weekly Check-In Videos

The response rate for the weekly check-in survey was 93% (14 out of 15). All of the respondents completed the Likert-scale items. Most respondents answered all of the open-ended questions (see Table 1). Question eight was not included in the analysis because it was used to solicit general feedback.

Table 1. Open-ended survey questions

Open-ended questions	Response Rate
1. What do you like or dislike about the weekly check-in videos?	14/14
2. How did it make you feel when the instructor mentioned your discussion post/s in the weekly check-in videos?	13/14
3. How did it make you feel when the instructor mentioned your peers' discussion post/s in the weekly check-in videos?	14/14
4. How did it make you feel when the instructor shared photos of the Purdue main campus in the weekly check-in videos?	14/14
5. Describe how the weekly check-in video clips did or did not change the way you participate in the discussions.	13/14
6. Describe how the weekly check-in video clips did or did not change the way you feel about online courses.	13/14
7. Describe how the weekly check-in video clips did or did not change the way you feel about being a Purdue student.	12/14
8. Is there anything else you would like to share about the weekly check-in videos?	9/14

Multiple Positive Effects with Room for Improvement

Students' overall reactions to the weekly check-in videos were very encouraging. Positive sentiment terms such as "helped/helpful," "like/liked," "enjoy/enjoyed," "cared," "personal/personalized," and "connected/connection" were frequently used. The words "like/liked" appeared 11 times in the responses. "Love/loved" appeared four times. One student responded: "I absolutely LOVED the weekly check-in videos. Dr. Huang's use of the videos to highlight what was happening in the course and what was being introduced and discussed within the discussion boards was not only informative but personalized the feel of the course. I also loved that she continued to show different areas of the campus!"

Seven students shared that the videos helped them feel connected to their instructors and/or the campus. Five individuals indicated that they appreciated the personalization in the videos, which is an element that is often overlooked in online classes. Two respondents did not watch all of the videos, but found the ones they did watch helpful or noted that they saw value in them for peers with different learning styles. One student chose not to watch the videos because they were too long for his or her liking

and closed captions were not provided. However, this student indicated: "Opting out of this method was my choice. That being said, I appreciate that you are providing them. This creates space for those who prefer visual to text to access the information in a different way. Thank you for taking the time to create them and make the content more accessible."

Three students specifically appreciated the videos as an alternative way to access the class — with one noting: "I liked that they went over all of the topics we were covering each week, and it made me feel like the instructor cared about me a bit more than if she had just sent an email." Finally, one student's response showcased the need for more face-to-face time with the instructor implicitly: "The weekly check-in helped me feel that the class was still face-to-face and helped me understand the material."

Motivated and Validated!

When asked how they felt about being named in the check-in videos, most of the students shared they liked being mentioned by the instructor. Nine students stated the approach made them feel their work was validated, their efforts were recognized, and they were on the right track. In addition, it also brought out positive emotions. One student noted: "I LOVED when we got shout outs! Thank you, I felt very special!" While most students appreciated the shout outs, two individuals felt some initial discomfort when they found their names and discussion posts were mentioned in the videos. Both of them felt uneasy initially but felt good afterwards. One of them explained: "[I was] nervous at first, but then I realized it was not going to be painful." In addition to feeling appreciated and motivated, most students also commented that the shout outs helped them understand the learning content better. On a personal level, they felt their work had been validated. Overall, the class believed it was helpful to learn from others. One student who did not watch every video and did not see his or her discussion posts mentioned in the videos, felt this approach could be more effective if the instructor mentioned the shout outs in the announcement text. Doing this could give the videos more buy-in from the students.

Peers in the Spotlight

Students also reacted positively to seeing their peers mentioned in the videos. Many of them indicated they felt more connected to their peers as a result. In addition, ten students mentioned it was informative and helpful to be able to see other students' posts. Some of them noted that they were unable to read through every post in the forums. As one student explained this method gave them "a quick glimpse at what was being discussed." Three students felt this approach helped them see what they might have missed in the forum. One individual indicated it motivated them to "look deeper into what others were doing." For at least one student, this approach was not necessary as he or she "read all of the posts." Nevertheless, this student indicated "it was nice when there was something that needed to be clarified."

There were a couple of unexpected emotional reactions from the students. One individual felt left out or discouraged when not mentioned: "There were a few times I felt like I may have done something wrong if I didn't get mentioned, but I think that may just be my own insecurity popping up (perhaps, that's human nature?)." On the other hand, the student who felt nervous when being mentioned felt emotionally assured when others were mentioned. This student felt: "Relieved that I wasn't the only one being mentioned. But again, then I realized we weren't being called out for doing something wrong and it was all really okay."

Behavioral Changes in Discussion? Yes and No

While students appreciated seeing the overview of the discussion and the highlights of some of their peers' posts, the influence of weekly check-in videos on students' behaviors in the discussions was neutral. In fact, just half of the students indicated the videos motivated them to interact more with their peers in the discussions. One student noted the videos "make me revisit highlighted students' posts." Another student was encouraged by the videos to "go back and read [his or her] peers' posts." Although some of the students noted the videos didn't change their participation in the discussions, one of them shared "I think it probably influenced me in an organic way I didn't consciously notice. It was helpful to feel like we were all coming together and connecting at the end of the discussion term." This indicates that the videos fostered the collaboration and connectivity needed in a learning community.

So Far Yet So Close

The majority of the students did not live close to the university. Only one had visited the institution. Showing the campus through videos and photos was "a very nice touch" as described by one of the students. Twelve students liked seeing the campus through the check-in videos and only two students felt showing the photos of the campus was irrelevant to the course. Eight students used similar expressions such as "feeling part of the campus" and "feeling more connected to the University" in their responses. One student noted: "It was great! I have never been to the campus. It helped me feel like I was a part of campus life." Even the student who had visited the campus appreciated the value of this approach. He/ she indicated "I ... have visited campus before so it was not too impactful for me, but I think for those students who live farther away this was a great idea." Another student echoed this observation by noting: "It made me feel a sense of community, of closeness despite being 874 miles away."

Feelings about Online Courses

Most students felt this approach improved their perceptions of online courses. They found this online course more personal and engaging than they expected. One wrote: "I was worried starting an online program that I would feel isolated. I don't think that's the case at all, and the check-in videos reduce that isolation even more. I don't feel as connected in other classes that don't have them." Another student noted: "They helped me feel like my professors cared about us and were there to help us, which was very nice for a distance learning class." Five students indicated this approach didn't change the way they viewed online courses. Two of them were already in favor of online learning. However, these individuals still recognized the benefits of using weekly check-in videos in online courses. One student explained: "The weekly check-ins didn't necessarily change the way I feel about online courses, but I think online courses are better with weekly check-in videos (for the reasons described [previously], feeling more like a part of the class, the campus and that I knew my instructors and peers better)."

Whether this approach changed students' perceptions of online courses or not, it was apparent that they appreciated the instructor's effort to make the course more personal and engaging. Referring to the videos, one student noted: "They didn't change how I feel about online courses. Sometimes instructors go the extra mile to do things like the weekly check-in, sometimes they don't. What it did show me was how much the instructor was invested in this course and the success of the students. It made the course more intimate. It was kind of like going to a concert at the House of Blues versus an arena. The video

check-ins made this course the House of Blues." Another individual shared how this approach changed the way she felt about being a student in the class: "I felt more of a connection to the instructor . . . I also found myself wanting both instructors to be proud of me, which drove me to do more in discussions and go to the extra mile on assignments."

Not Just an Online Student

The weekly check-in videos helped students feel more connected to the university and made the idea of "being a Purdue student" more real to them. "I believe the check-in videos made me feel like more of a 'real' Purdue student instead of just an online student," one student wrote. Another individual noted: "They helped me feel valued." In addition, a couple of students explicitly shared they felt proud of being a student at the university. One student wrote: "I'd say it made me feel a better sense of community or a sense of 'school spirit,' or perhaps pride of being associated with the institution." For one particular student, this approach didn't change the way he or she felt about the institution. Rather, the videos confirmed the educational quality he or she expected from the institution – "They didn't change how I feel about being Purdue student. I'm here because Purdue is a good school, and I expect top notch instructors." Similarly, this approach was an assurance to another student about the quality of this program: "I had questioned whether I should invest the time and money into this program, and being at the tail end of the first semester I can say with confidence that I made the right choice."

Descriptive Statistics

The descriptive statistics of the 34 Likert-scale questions are displayed in Appendix 1. Question 13 "The instructor provided feedback in a timely fashion" was rated highest by the students. All participants chose "Strongly agree" for this item (M=5). Although it scored lowest, Question 16 "Online or web-based communication is an excellent medium for social interaction" still rated considerbly high (M=4.29).

Teaching presence was scored significantly high with an overall mean from the three sub-categories of 4.59. The sub-category "Direct Instruction" was scored highest (M=4.79) indicating students felt the instructor was able to help them focus on the discussion topics and provide them feedback in a timely manner. "Facilitation" was rated high as well (M=4.62). "Deisgn & Organization" was scored lowest with a mean of 4.39.

Items related to the development of a learning community, dialogue, and instructor feedback also rated high. Question 13 was scored highest with a mean of 5. Questions 7 and 10 each returned the second highest mean of 4.79. The majority of students agreed that the instructor was able to provide timely feedback, engage students in productive dialogue, and develop a sense of community.

Social presence was marked highest among the three presences with a mean of 4.60. The sub-category "Open Communication" was rated highest at 4.69 within this section, which indicates that students were comfortable communicating in a text-based online medium, contributing to the conversation, and interacting with their peers. Question 14 scored highest (M=4.79) confirming that a learning community was established.

Cognitive presence was also rated extremely positively (M=4.52), although it was the lowest among the three presences. The sub-category "Resolution" was marked highest within this section with a mean of 4.60. Question 34 had a mean of 4.86 which implies students were confident applying the knowledge

and skills they gained. Question 28, which related specifically to the value of discussions and the appreciation of multiple perspectives, had a mean of 4.71.

Weekly Check-In Video View Analytics

The weekly check-in videos were made available on Kaltura, the university's video streaming platform. The instructor emailed the video links to students each week. Although students could watch the video clips directly through the links, the videos were not set to auto-play. Students had to click the "play" button on Kaltura to watch the videos. They could also make comments on the videos. However, the instructor did not expect students to make any comments nor did she encourage it.

Table 2 provides a summary of the video analytics. The findings can be summarized as follows:

1. Similar to the findings reported in the previous section, the analytics show that not all students viewed the videos.
    a. The most viewed videos were in week one (orientation to the class) and week four (the first major assignment was due this week). Each of them was played 14 times.
    b. The least viewed video was the week five video, which was played eight times. This could be due to the fact that the video was posted later than usual.
2. The data suggested that students tended to spend five to six minutes watching each video.
3. While students were not expected to make comments on the videos, two students shared their feedback on the videos in the comment areas. There were three comments directly related to the video content.
    a. Week one: "Thank you for the update. The race sounds like a blast! Is this a yearly event? I'd love to participate next year!" The instructor had mentioned participating a marathon on campus in the video.
    b. Week four: "Thank you for the added perspective on these chapters, it certainly helps as we move forward with our design documents!"
    c. Week eight: "I really enjoyed the class! Thank you for all of your help, Professor!!"

Interactivity in Discussion Forums

To evaluate whether the weekly check-in videos changed students' interactions within the discussion forums, students' discussion posts were gathered through the learning management system. The data (see Figure 1) only included the last three days of each week, which is the period when the students were required to post their peer responses. The data did not provide a definite pattern. In some weeks (e.g., week two and week five), on the day the video was released, the number of posts submitted was much higher than the number of posts made the previous day. Conversely, in week one and week three, on the day the video was released, the number of posted submitted was lower than the number of posts the previous day.

While there is no clear pattern in students' participation or interaction in the discussion forums, there is an intriguing phenomenon related to the specific threads that the instructor mentioned and shared in the weekly check-in videos (See Table 3). In week three and week five, the highlighted threads received more responses than average. For example, on average each student's thread had nine responses in week three. All but one of the highlighted threads received either an average or above average number of re-

Table 2. Weekly check-in video analytics

Week	Length of the Video	Video Analytics
Week 1	7:09	• 14 Plays • 6:22 Avg. View Duration* • One Student Comment
Week 2	10:23	• 12 Plays • 6:42 Avg. View Duration
Week 3	8:00	• 11 Plays • 5:19 Avg. View Duration
Week 4	9:34	• 14 Plays • 6:43 Avg. View Duration • One Student Comment
Week 5	6:59	• 8 Plays • 6:19 Avg. View Duration
Week 6	6:24	• 11 Plays • 5:40 Avg. View Duration
Week 7**	2:21	• 12 Plays • 2:03 Avg. View Duration
Week 8**	6:57	• 9 Plays • 6:33 Avg View Duration • One Student Comment

* Avg. View Duration: The sum total of all recorded minutes watched divided by the total number of plays

** The check-in video in week seven was a special holiday check-in video. The week eight check-in video was a reflection on the course. These two videos were not related to the course content.

Figure 1. Number of discussion posts before and after the check-in video was released each week
Note. Week seven and week eight were not included in this table because week seven did not have a discussion board assignment and the discussion assignment in week eight was not related to the major course assignments.
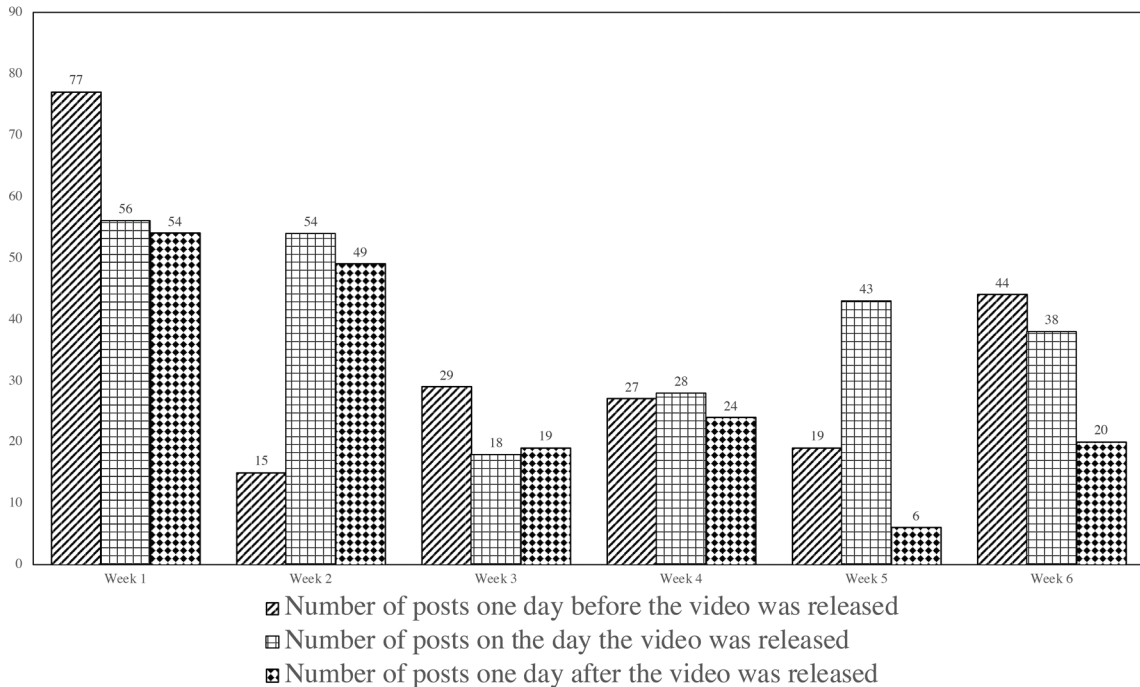
● Number of posts one day before the video was released
⊞ Number of posts on the day the video was released
⊞ Number of posts one day after the video was released

Table 3. Number of responses generated by the highlighted threads

	Average number of responses each thread received	**Number of responses the highlighted thread received**
Week 3	9	Student 1 – 13 Student 2 – 10 Student 3 – 7 Student 4 – 9
Week 5	14	Student 1 – 27 Student 2 – 21 Student 3 – 16 Student 4 – 18 Student 5 – 18 Student 6 – 16

sponses. In week five, this phenomenon was even more apparent. All of the highlighted threads received a higher than average number of responses (m=14). One of the highlighted threads received the most responses in that week. This implies that the threads that were highlighted in the videos received more attention from the students than those that were not.

DISCUSSION

The discussion is organized according to the research questions and the themes emerging from the data.

Question 1: How do an instructor's weekly check-in videos affect students' interactions within the discussion forums?

In reviewing students' discussion posts and their interactions within the forums, the data suggested the degree to which students' behaviors changed within the discussions varied. Some students were encouraged by the videos to become more active in the discussions by reviewing and responding to the discussion posts highlighted in the videos. Some students did not change their way of participating in the forum even though they appreciated the videos and found them helpful in providing information they may have missed. Therefore, it was difficult to fully understand the extent to which the weekly check-in videos affected students' interactions within the discussion forums. In this case, some students were heavily and visibly engaged in discussions without any interventions and some were silently engaged in discussions. One student shared: "I learned just from reading through the conversations, even when I didn't comment." While this study did not provide a definite answer to the question, it is encouraging to observe the positive influence of the weekly check-in videos on some students' participation and learning.

Question 2: How do an instructor's weekly check-in videos cultivate the development of a learning community?

The data overwhelmingly suggested the weekly check-in videos positively enhanced social presence and teaching presence. This intervention definitely helped students feel more connected with their peers and instructor, as well as the university. Students' responses to the survey suggested, as one individual

noted: "the weekly check-ins really helped to develop a stronger online learning community and sense of connection." It appeared many students felt that the weekly check-in videos positively affected the development of a learning community.

Question 3: How do an instructor's weekly check-in videos influence students' perceived relationship with the institution?

Before the semester started, the instructor identified several landmarks and fun facts about the institution to share with the students. For example, she included photos of campus landmarks in the check-in videos. This design method received positive feedback from the students. Many students indicated they liked being able to see the campus and felt more connected to the institution. One student mentioned "I really enjoyed the Purdue campus videos – helped me feel part of the campus, even though I'm a distance-learning student." Another student shared "It made me feel a sense of community, of closeness despite being 874 miles away." This approach truly helped the students feel connected to the university, even though they were geographically distant.

Clearly, there are some aspects that the instructor can improve in the design and delivery of the weekly check-in videos. Several students indicated they would like to see the instructor focus more on the learning content than the social elements (e.g., introducing the campus) in the videos. A couple of students recommended the instructor provide shorter videos. The video analytics also indicated students tended to stop watching the video after approximately five – six minutes. Although it might be challenging, the instructor should explore ways to communicate with students more effectively and efficiently. Surprisingly, a couple of students felt nervous when seeing their names and posts mentioned in the videos. The instructor recognizes there is a need to prepare students for the shout outs, possibly adjusting the video format. Finally, students asked for closed captions or transcripts. To ensure the videos are accessible to all learners, the instructor will make this a priority when creating videos in the future.

Like Goda and Yamada (2012), the author used asynchronous discussion activities to develop an online learning community. In addition, weekly check-in videos were incorporated to increase instructor's social presence and teaching presence. Consistent with Goda and Yamada (2012) and Ertmer and Koehler (2015), this course delivery approach resulted in an effective learning community based on the CoI framework. Students indicated they felt valued and validated when the instructor quoted their discussion posts and encouraged them to review each other's posts. This in turn might have positively impacted students' social presence as recommended by Huang and O'Brien (2017).

LIMITATIONS AND FUTURE RESEARCH

Although the findings of this study suggested that weekly check-in videos were successful in this class, there are several limitations that may affect the generalizability of the study. First, the sample size was relatively small. Second, two elements implemented in this course were not included in the data: (1) the instructor's participation in discussions and (2) optional weekly virtual meetings that were offered throughout the semester. These two elements may have affected students' learning experiences in this class. Third, data related to students' participation in discussion focused exclusively on the quantity of the posts. An alternative approach would be to include qualitative analysis of students' discussion activities. Finally, this research was conducted in a graduate course where students are generally more

mature, motivated, and self-directed. Therefore, the findings of the study should not be extrapolated to undergraduate classes. While this is a limitation, it is also an opportunity for future research.

The systematic way of developing the weekly check-in videos used in this study resulted in more benefits beyond building a Community of Inquiry within the course. More specifically, the parts in the videos where the instructor showed campus photos and shared fun facts about the university also increased the connection between the students and the institution. In addition, it assured students of the quality of the program and even validated their decision to pursue this master's degree. Future study can also explore the effectiveness of using a similar check-in strategy in different formats (e.g., text announcements, text announcement with PowerPoint slides, etc.). If there are no differences among the modalities, then the instructor can choose the modality that is more convenient or comfortable for him or her to create the check-in.

While the results suggested that the weekly check-in videos did not necessarily affect students' participation in discussions, this is a topic for future study. How can we effectively promote students' participation in discussions? Richardson and Ice (2010) emphasized "it is important to remember that asking the right question is key for a good discussion" (p. 58). Goda and Yamada (2012) shared a similar suggestion: "Setting proper problems appears to be essential when designing a productive learning environment for EFL learners if the researcher wants to increase student comments" (p. 310). It is apparent having good discussion design is the foundation of successful discussion. Nevertheless, facilitating discussions seems unnatural to online instructors (Lewandowski et al., 2016). It is important to identify strategies and examples that online instructors can use to enhance the interaction among students in discussions.

CONCLUSION

This study examines the effectiveness of using weekly check-in videos to cultivate social presence and teaching presence in a graduate-level online course. Findings of this study align with research demonstrating that instructor presence, through weekly check-in videos, increases social presence. This helps online students feel more connected with their peers and the instructor.

Providing weekly check-in video clips is not an uncommon instructional strategy for online instructors. The intervention incorporated in this study is innovative because it requires the instructor to strategically organize his or her feedback for the class and intentionally select discussion board posts from specific students each week to: (1) promote interaction among students; (2) enhance the depth of discussion; and (3) create a culture of inclusivity. Moreover, adding the institutional presence (e.g., campus photos) helps the learner to develop an identity beyond the course itself and bridges the distance between the student and the institution. The author hopes the positive findings of this study will encourage others to adopt these strategies and share their own insights on how to create a learning community in online courses.

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KEY TERMS AND DEFINITIONS

Asynchronous Online Discussion: A form of discussion that happens asynchronously (not in real time) in an online environment where discussion prompts are provided to facilitate communication and collaboration among participants.

Community of Inquiry (CoI): A collaborative-constructivist framework that advocates creating meaningful online learning experiences through three dimensions including teaching presence, social presence, and cognitive presence.

Community of Inquiry Survey: A questionnaire developed based on the CoI framework to measure the effectiveness of online learning environments.

Instructor Presence: The intersection of social presence and teaching presence in which an instructor presents in a sociable manner while providing pedagogical guidance.

Online Learning: Instruction delivered through the Internet either synchronously or asynchronously.

Social Presence: A sense of belonging and connection, cultivated and maintained by the instructor and students within a course.

Teaching Presence: The instructional activities that convey an instructor's teaching and guidance to help students to achieve the desired learning outcomes.

Video Feedback: Information regarding learners' performance or understanding delivered through video clips.

APPENDIX

The CoI survey was administered in this study. Table 4 shows the survey questions and the results.

Table 4. CoI survey results

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	N	Mean	Median
Teaching Presence – Design & Organization (M = 4.39)								
1. The instructor clearly communicated important course topics.	1 (7.14%)	0	0	5 (35.7%)	8 (57.14%)	14	4.36	5
2. The instructor clearly communicated important course goals.	1 (7.14%)	0	0	4 (28.57%)	9 (64.29%)	14	4.43	5
3. The instructor provided clear instructions on how to participate in course learning activities.	1 (7.14%)	0	0	5 (35.71%)	8 (57.14%)	14	4.36	5
4. The instructor clearly communicated important due dates/time frames for learning activities.	1(7.14%)	0	0	4 (28.57%)	9 (64.29%)	14	4.43	5
Teaching Presence – Facilitation (M = 4.62)								
5. The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.	0	0	3 (21.43%)	2 (14.29%)	9 (64.29%)	14	4.43	5
6. The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.	0	0	1 (7.14%)	4 (28.57%)	9 (64.29%)	14	4.57	5
7. The instructor helped to keep course participants engaged and participating in productive dialogue.	0	0	0	3 (21.43%)	11 (78.57%)	14	4.79	5
8. The instructor helped keep the course participants on task in a way that helped me to learn.	0	0	1 (7.14%)	4 (28.57%)	9 (64.29%)	14	4.57	5
9. The instructor encouraged course participants to explore new concepts in this course.	0	0	1 (7.14%)	4 (28.57%)	9 (64.29%)	14	4.57	5
10. Instructor actions reinforced the development of a sense of community among course participants.	0	0	0	3 (21.43%)	11 (78.57%)	14	4.79	5
Teaching Presence – Direct Instruction (M = 4.79)								
11. The instructor helped to focus discussion on relevant issues in a way that helped me to learn.	0	0	0	4 (28.57%)	10 (71.43%)	14	4.71	5
12. The instructor provided feedback that helped me understand my strengths and weaknesses relative to the course's goals and objectives.	0	0	1 (7.14%)	3 (21.43%)	10 (71.43%)	14	4.64	5
13. The instructor provided feedback in a timely fashion.	0	0	0	0	14 (100%)	14	5.00	5

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Table 4. Continued

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	N	Mean	Median
Social Presence – Affective Expression (M = 4.55)								
14. Getting to know other course participants gave me a sense of belonging in the course.	0	0	0	3 (21.43%)	11 (78.57%)	14	4.79	5
15. I was able to form distinct impressions of some course participants.	0	0	1 (7.14%)	4 (28.57%)	9 (64.29%)	14	4.57	5
16. Online or web-based communication is an excellent medium for social interaction.	0	0	1 (7.14%)	8 (57.14%)	5 (35.71%)	14	4.29	4
Social Presence – Open Communication (M = 4.69)								
17. I felt comfortable conversing through the online medium.	0	0	0	4 (28.57%)	10 (71.43%)	14	4.71	5
18. I felt comfortable participating in the course discussions.	0	0	1 (7.14%)	3 (21.43%)	10 (71.43%)	14	4.64	5
19. I felt comfortable interacting with other course participants.	0	0	0	4 (28.57%)	10 (71.43%)	14	4.71	5
Social Presence – Group Cohesion (M = 4.55)								
20. I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.	0	0	3 (21.43%)	2 (14.29%)	9 (64.29%)	14	4.43	5
21. I felt that my point of view was acknowledged by other course participants.	0	0	0	4 (28.57%)	10 (71.43%)	14	4.71	5
22. Online discussions help me to develop a sense of collaboration.	0	0	0	7 (50%)	7 (50%)	14	4.50	4.5
Cognitive Presence – Triggering Event (M = 4.43)								
23. Problems posed increased my interest in course issues.	0	0	2 (14.29%)	5 (35.71%)	7 (50%)	14	4.36	4.5
24. Course activities piqued my curiosity.	0	1 (7.14%)	1 (7.14%)	3 (21.43%)	9 (64.29%)	14	4.43	5
25. I felt motivated to explore content related questions.	0	0	2 (14.29%)	3 (21.43%)	9 (64.29%)	14	4.50	5
Cognitive Presence – Exploration (M = 4.52)								
26. I utilized a variety of information sources to explore problems posed in this course.	0	1 (7.14%)	0	4 (28.57%)	9 (64.29%)	14	4.50	5
27. Brainstorming and finding relevant information helped me resolve content related questions.	0	1 (7.14%)	1 (7.14%)	4 (28.57%)	8 (57.14%)	14	4.36	5
28. Online discussions were valuable in helping me appreciate different perspectives.	0	0	0	4 (28.57%)	10 (71.43%)	14	4.71	5

Table 4. Continued

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	N	Mean	Median
Cognitive Presence – Integration (M = 4.55)								
29. Combining new information helped me answer questions raised in course activities.	0	0	2 (14.29%)	3 (21.43%)	9 (64.29%)	14	4.50	5
30. Learning activities helped me construct explanations/solutions.	0	0	1 (7.14%)	5 (35.71%)	8 (57.14%)	14	4.50	5
31. Reflection on course content and discussions helped me understand fundamental concepts in this class.	0	0	1 (7.14%)	3 (21.43%)	10 (71.43%)	14	4.64	5
Cognitive Presence – Resolution (M = 4.60)								
32. I can describe ways to test and apply the knowledge created in this course.	0	0	2 (14.29%)	4 (28.57%)	8 (57.14%)	14	4.43	5
33. I have developed solutions to course problems that can be applied in practice.	0	0	1 (7.14%)	5 (35.71%)	8 (57.14%)	14	4.50	5
34. I can apply the knowledge created in this course to my work or other non-class related activities.	0	0	0	2 (14.29%)	12 (85.71%)	14	4.86	5