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PROMOTING SOCIALIZATION IN DISTANCE EDUCATION

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ABSTRACT

Learners enjoy the convenience of being able to take online courses, yet many reports missing the face-to-face contact with their peers. This researcher has sought to tap into the vision of Ferratt & Hall (2009) whereby educators and technology designers are encouraged to extend the vision of online learning to "virtually being there and beyond." Thus, the purpose of this study was to examine innovative synchronous technology and pedagogy as a means of promoting social presence in online learning. The inquiry was quantitative in nature. Through adapting Garrison and colleagues' community of inquiry framework (Garrison, Anderson, & Archer 2000) it was noted that students perceived the use of synchronous Centra technology to be beneficial in promoting a sense of social presence in online learning.

Through one-on-one conversations within Centra, it was discovered that the use of this technology also had a positive effect on student retention. There was a correlation between learners' perception that the instructor promoted an atmosphere of online community and there being a sense of social presence. There was evidence of satisfaction with instructor as evidenced by high student evaluation ratings. Instructor ratings were above the department mean and the university mean.

Keywords: **Social presence, Centra, online learning, emerging technology, The Concept of Social Presence in Distance Education**

INTRODUCTION

With the advent of new interactive media, new research questions about communities of online learning, collaborative inquiry, and the effort to foster innovative methods of pedagogy have taken place. There is a challenge to systematically explore the integration of pedagogical ideas with new technology in an attempt to further the evolution of education as opposed to merely reinforcing existing practices (Garrison, Cleveland-Innes, & Fung, 2010). One such pedagogical idea is the use of emerging technology to promote social presence in online learning. Typically, online courses are designed around asynchronous learning environments. Learners receive assignments, complete them, and submit them back to the instructor for feedback. With this method, classmates rarely have an opportunity to discuss the assignments together as they would if they were in a face-to-face setting. Discussion boards are used to post a discussion. This method yields a delayed response time by group members. And, when responses are given, they tend to be very brief, and not of higher-order skill quality. No real substance is added to the topic of discussion. Chat sessions are conducted by typing conversations synchronously; however, a drawback to this method of communication is that some learners' type too slow and by the time their message is entered, the conversation has progressed to another topic.

They tend to feel left out of the conversation, become frustrated, and go into the silent mode. It then becomes the task for the instructor to encourage and nudge these learners to participate in the session. There is no sense of real community; no sense of

actually belonging (Stodel, E., Thompson, T., Macdonald, C., 2006). Thus the question, How can new and emerging technologies be incorporated into the learning environment so as to promote social presence in online learning?

Ferratt and Hall (2009) have extended a challenge to educators and technology designers to extend "the vision of distance education to learning via virtually being there and beyond" (p. 425). Their vision for online learning goes beyond the boundaries of learning in structured isolation, using asynchronous technology, focusing only on academics, consisting only of written words; their vision encompasses also the idea of learning through use of the best technology-enhanced classrooms, using also synchronous technology, also focusing on the person, and incorporating voice along with written words. They contend that the person should be able to "virtually" be in the classroom, but acknowledge that constraints of lack of appropriate technologies must be overcome in order to see their vision realized. Like Ferratt and Hall, many researchers are grappling with the idea of virtual online learning or creating a social presence in online learning. And, if promoting social presence is the vision, then exactly what is 'social' presence?

Socialization is the ability of learners to "identify with community, communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities" (Garrison 2009 in Garrison, D.R., Cleveland-Innes, M., & Fung, T., 2010, p. 32).

It is the degree to which they "feel affectively connected one to another, and is seen as realized through affective expression, open communication, and group cohesion" (Diaz, S., Swan, K., Ice, P., & Kupczynski, L., 2010, p. 23). Learners are able to speak to each other, share ideas and information (Irwin C., and Berge, Z., 2006); and, they have the ability within a community of inquiry to project themselves emotionally as well as socially (Rourke, Anderson, Garrison, & Archer, 1999 in Stodel, E., Thompson, T., Macdonald, C., 2006). They perceive the other person in the communication as being a 'real' physical person" (Kreijns, K., Kirschner, P., Jochems, W., & Buuren, H., 2007, p. 180). It is important for the social space to be sound, and it is designated to be sound if it is "characterized by affective work relationships, strong group cohesiveness, trust, respect and belonging, satisfaction, and a strong sense of community" (Kreijns, et al., 2007, p. 179). In addition to the importance of social space, it is also important for social psychological processes such as forming groups and establishing their structures as well as sustaining social relationships to be embraced. To ignore, forget, or neglect these processes would be considered a pitfall (Kreijns, Kirschner, & Jochems 2003 in Kreijns, et al. 2007).

Assuming that students will work together is the pedagogy behind online discussion forums; this is different from their working independently in traditional distance education. This brings about the need for a new theoretical model to explore as well as explain the educational experience. As a result, the Community of Inquiry (COI) framework was born. This framework was introduced by Randy Garrison, Terry Anderson, and Walter Archer in 2000. It is social constructivist in nature, and built upon the premise of John Dewey's (1938) idea of practical inquiry (Swan, K., & Ice, P., 2010). A brief review of the COI and research surrounding social presence will be discussed.

LITERATURE REVIEW

The premise of the COI framework evolves around the notion of higher-order learning being best supported by a community of learners who are engaged in critical discourse and reflection. This framework identifies three core elements-teaching,

cognitive, and social presences. An overlap of these three elements provides structure to comprehend the dynamics for a deep and meaningful online learning experience. A study was conducted to explore the relationship among the three core elements.

There were 287 student participants from four institutions in Canada and the United States involved in the study. Results revealed that the COI framework is useful in understanding the complexities of the causal relationships among the three core elements. "The framework has provided the theoretical foundation for the development of an empirical survey instrument that opens the possibilities for conducting a wide range of studies that were not possible using qualitative methodologies, such as transcript analysis alone" (Garrison, D., Cleveland-Innes, M., & Fung, T., 2010, p. 35).

To ascertain learners' perspectives on what was missing from the online learning process, Stodel, E., Thompson, T., & Macdonald, C., (2006) conducted a qualitative study using the theoretical model of online presence—the COI framework created by Garrison. One of the categories identified by Stodel, et. al (2006) was that of social presence. He cautioned, however, that the educational experience is more than the development of a social community. Rather, defined learning outcomes must be achieved, and cognitive development must be promoted. Interactions must be systematic and structured as opposed to being social and loose.

Stodel's, et. al (2006) study revealed evidence of social presence. He discussed the categories of emotional expression, group cohesion, and open communication. Social presence appeared to be greater within small groups as opposed to a whole class. First, with regard to emotional expression, there was evidence of self-disclosure. Learners shared personal stories such as information about families, vacations, hobbies, and professional interests. Learners felt they were able to get to know each other better than they would have if they were in a face-to-face class.

However, they felt that humor was lacking in the course; they seldom used emoticons. Second, group cohesion was evident. Learners assisted each other with technical problems, course requirements, and resources they thought might be helpful to each other. Finally, open communication occurred between learners. They responded to each others' message, signaled agreement as well as asked questions. However, there was a need to post comments that challenged and provoked learners to reflect and stimulate in-depth discussion as opposed to simply saying 'I agree' or 'good point'. There should be a focus on encouraging learners to engage in meaningful discourse that fosters higher order skills.

While social presence indicators were present within this study, learners identified social presence as still being what they missed most in online learning. One learner noted, "I just want to have the feeling that the communication is real and that I [am] talking with a real person in real time" (Stodel, et. al, 2006, p. 13.) Learners also stated that they questioned who wrote postings when they read them.

They felt that learners remained faceless. Several learners expressed annoyance at postings because they were not able to put a face with the discussion. Learners reported missing the ability to be able to steer the conversation.

The concept of anthropomorphism towards computers was noted as two students revealed they yelled at their computers out of frustration over something that was posted instead of yelling at the person who wrote it. It was noted that the increase in social presence would likely reduce the application of anthropomorphism.

PURPOSE OF THE STUDY

One implication for practice noted by Stodel, et. al (2006) was to explore the use of diverse technologies to enhance communication and to foster social presence. To support this stance, they noted the argument of Haythornthwaite, Kazmer, Robins, and Shoemaker (2004) in that synchronous communication fosters community building and "provides simultaneous many-to-many contact that helps stave off feelings of isolation" (p. 48).

They also noted the argument of Wang and Hewlin (2001) who contended that social presence is enhanced by chatrooms in ways that can not be accomplished using asynchronous communication. Chatrooms afford the ability to provide immediate feedback and answers to questions, provide encouragement, foster learner perceptions that educators genuinely care and are invested, personally connected, and engaged with them.

The purpose of this study was to examine innovative synchronous technology and pedagogy as a means of promoting social presence in online learning. The technology selected was Centra. Centra is a synchronous software system that incorporates real-time audio and video. Students actually see each other and talk to each other simultaneously.

METHODOLOGY

Research participants included 93 participants; 46 information technology undergraduate students, and 47 vocational and technical education graduate students at a large urban university in North Carolina. The university offers doctoral, masters, and baccalaureate degrees in liberal arts, professional fields, and sciences.

Of the participants, 25 were male and 68 were female. The usual traditional methods of trying to promote social interaction among students in online classes were as follows: Students were placed in groups of no more than five or six students each. Synchronous chats were held in the Blackboard chat room. Drawback to this method was that every word had to be typed. Slow typists were often left out of the conversation and the instructor had to hold up the conversations so that everyone could catch up. The Blackboard Discussion Forum, which is an asynchronous form of communication, was used to try to establish a sense of social presence.

Discussions were posted with a given deadline. Responses to each post had to be made by a given deadline. The responses were usually very brief and many times not of higher order skill quality. The instructor had to encourage students to provide more in-depth feedback. For introductions, participants used an asynchronous method to post a picture of themselves on their Home Page within the Blackboard system and typed an introduction for the rest of the class to access. However, in order to access this information, students had to go into the communication link, select roster, select list all twice, and finally click on each student's name in order to obtain the information that had been posted.

Additionally, this feature became unusable because of a defect that caused home pages to disappear once they had been completed. This problem eventually could not be corrected. While the Blackboard system serves its purpose, it was evident that new and more innovative methods of communication between students and teachers in online courses needed to be found.

In response to personal needs for developing more effective ways of producing social presence in online courses along with recommendations from researchers, synchronous technology, Centra, was adopted as a means for fulfilling both the learning needs and the social psychological needs of online learners. Centra is a Web-based software application that enables real-time synchronous communication, collaboration, and learning. Participants were able to see each other and talk to each other simultaneously. They were able to work, learn, and communicate together online through use of content creation tools to develop interactive presentations and learning content. The interfaces were easy to use, very user-friendly for the live virtual classes; and a content library was available to access previously recorded sessions. Participants were able to share apps from their own personal computers for everyone to see.

All participants were required to have a video camera and a microphone. Chat sessions were mandatory and accounted for 30% of the final course grade. Participants were provided with a tentative course calendar for the semester that identified due dates and assignment information to be covered for the semester as well as the weeks in which chat sessions would occur. Participants were divided into groups of no more than six students. Each individual group was then responsible for collaborating to schedule chat times convenient for everyone in the group. Since the teacher participated in every session, preference time choices were assigned on a first-come-first-serve basis.
This approach allowed participants to work around work schedules, family responsibilities, and other courses they were enrolled in for the semester. The teacher was available to meet seven days a week from 8 a.m. until 11 p.m. Sessions generally lasted from one to one and a half hours in length.

As a rule, chat sessions could not be made up so if a participant missed a session, a grade of zero was given (except for extenuating circumstances). If there were an extenuating circumstance, no grade was given and that missed session was not averaged into the final grade.

For the beginning of the chat sessions, participants created an introduction of themselves that revealed their name, major, department, and year/level of school. Also provided was information about their family, job, interests and hobbies, tentative career plans, most memorable success, details of what they considered to be their perfect vacation, three links to their favorite websites; and finally, they identified their favorite animal and used three adjectives to describe this animal. Later in the semester, they were required to remember the three adjectives to describe the animal and translate these adjectives to how well they worked together with their group members. As introductions were made, group members were allowed to ask each other questions about information that had been provided.Course content was used to engage participants in critical reflection and discourse. Discussions were case-based, research-based, and debate oriented in nature. Participants were expected to demonstrate higher order skills during these assignments. Responses focused on discussion of content itself, as well as on reflections of how the topic could relate to the world, to the participant personally, and to the participant professionally.

Each group member provided feedback to each discussion presented. In addition to verbal feedback, Centra's emoticon features were frequently used that showed laughter, applause, to raise hands for a turn to speak, and to interject 'yes' and 'no' if the need arose. During the course of the chat sessions students were allowed to briefly go off course and discuss personal information about them if they desired.

Table: 1
Survey questions used to ascertain social presence

COI Instrument	Centra Survey
A.10 Instructor actions reinforced development of a sense of community	12. Instructor promoted an atmosphere of an online community
A.17 I felt comfortable conversing through the online medium	22. I felt comfortable communicating through Centra with my classmates
A.16 Online or web-based communication is an excellent medium for social interaction	33. Centra made me feel more comfortable using technology for both audio and video interaction with others
COI Instrument	Centra Survey
A.18 I felt comfortable participating in the course discussions	43. I like using audio and video to communicate with other students/teacher
A.14 Getting to know other course participants gave me a sense of belonging to the course	41. I felt like a member of the class in this online course
A.22 Online discussions help me to develop a sense of collaboration	40. Use of Centra helped provide a sense of community within the class.
A.15 I was able to form distinct impressions of some course participants.	42. I felt I came to know the other students in this online course.

Students were asked to tell the instructor what they liked about the class, what they disliked about the class, and what they would change about the class without fear of retribution while communicating through Centra. Students were also required to complete a written survey on Centra.

Ten questions focused on the technology aspect of Centra, eight questions focused on the instructor, and 34 questions focused on the student.

To ascertain whether students perceived the online course as having social presence through use of Centra, seven questions from the Centra survey were correlated with seven questions from the social presence section of Garrison's et. al 2000 COI instrument.

FINDINGS

SPSS was used to analyze the quantitative data from the Centra surveys. Descriptive statistics revealed that the mean for the participants ranged between agree (3) and strongly agree (4) for this model as shown in the Descriptive Statistics table below. The participants felt there was a sense of social presence within the class through the use of Centra.

Table: 2
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
q12 instructor promoted community	93	3	4	3.77	.420
q22 comfortable chat w/classmates	92	1	4	3.54	.619
Q33 more comfortable w/audio-video	73	1	4	3.32	.664

Q40 Centra helped form sense of community	93	1	4	3.47	.618
Q41 felt like member of	92	2	4	3.55	.562

class					
Q42 came to know other students	93	1	4	3.39	.660
Q43 like using audio/video to communicate	93	1	4	3.35	.670
Valid N (listwise)	72				

The Anova table below revealed that this model is significant. The six independent variables jointly predicted the dependent variable, that the instructor promoted a sense of community. In addition, correlation is significant at the 0.01 level (2-tailed) among all of the questions (22 , 33, 40, 42, 12, 43, 41). However, there is no significant correlation between question 33: feel more comfortable with audio-video technology and question 12: instructor promoted community (.156).

Table: 3
Anova[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.564	6	.427	4.112	.001[a]
	Residual	6.755	65	.104		
	Total	9.319	71			

a. Predictors: (Constant), q43 Like using audio/video to communicate, q33 more comfortable audio-video tech, q42 came to know other students, q41 felt like member of class, q22 comfortable chat w/classmates, q40 Centra helped form sense of community
b. Dependent Variable: q12 instructor promoted community

Pedagogy was designed to incorporate suggestions from Stodel et. al (2006), having students work in small groups; developing an introduction assignment that encompassed discussing hobbies, family life, professional interests; incorporating the use of emoticons such as the smiley face for laughter, the applause for kudos, raising of hand for an opportunity to speak. Stodel identified a student who simply wanted to talk with a real person. A student in this study noted that they had actually dropped out of school for two years because they felt isolated and alone. They received failing grades. However, they stated they were so happy to come back to school and be involved in a course where they could actually interact with classmates, see them, talk with them at the same time. They stated it made a world of difference; they no longer felt alone. The student received all (A's) for the semester.

Students were asked what they liked about the class. A majority responded that they liked working in small groups, getting to know each other. This coincides with Stodel's et. al (2006) suggestion that social presence appears to be greater within small groups. Stodel also noted that learners remained faceless and did not have an opportunity to steer the conversation. Both of these obstacles were overcome through use of Centra as learners could both see everyone and all had an opportunity to steer the conversation.

This study supports the stance of Haythornthwaite, Kazmer, Robbins and Shoemaker (2004 in Stodel et. al 2006) in that synchronous communication does indeed promote a sense of community which helps alleviate the feeling of isolation.

Also, the synchronous communication through Centra enhances social presence in ways that asynchronous communication can not as noted by Wang and Hewlin (2001 in Stodel et. al 2006).

IMPLICATIONS

Incorporating synchronous technology such as Centra can have a positive effect on retention rates and should be explored further. Use of the community of inquiry framework should be utilized in assessing social presence, teaching presence, and cognitive presence in a way that demonstrates how all three elements are interrelated. Students noted that they perceived the use of Centra as providing an environment conducive to learning. While all students received good grades, ranging in the A and B category, further study needs to be done to determine if the use of Centra actually had an affect upon grades.

A rating of the instructor by students was extremely high on end-of-semester student evaluations. Instructor ratings were above the department mean and the university mean. Further study needs to be done to determine what elements lead to such a high rating?

CONCLUSION

And, as Garrison, et. al 2000 revealed, teaching presence does have an impact on establishing and maintaining social presence. It was evident that use of Centra had a positive effect on enhancing social presence in online learning. It also had a positive effect on student participation. This was evident because without fail, students asked for additional chat sessions using Centra for the class; and, they scheduled additional sessions among themselves without the instructor to discuss projects, assignments, and other classes. They were taught how to schedule their own group sessions. Many commented that they were going to miss the Centra sessions.

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