Students’ Perception of Social Presence and its Influence on their Learning in an Online Environment: A Case Study

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Abstract
This qualitative study investigates students’ affective domain in an online class. Garrison, Anderson and Archer’s Community of Inquiry Model (2000) and Rourke et al.’s Social Presence Templates (2001) were used to analyze transcripts, surveys, and interviews of all participants. The results of this study illustrate the nature of social interaction in an online environment confirming teaching, cognitive and social presences go hand in hand. Recommendations for instructors to create a community of learning are provided.

1. Objectives

The purpose of this study is to investigate the role of social presence in online learning environments, its relationship to students’ perceptions of learning and satisfaction, and to provide some recommendations for the instructors and/or instructional designers in their future online course development.

2. Theoretical Framework

The importance of cultural and social context in constructing knowledge is recognized by many researchers in the field. Instructional methods from this view focus on dialogue, instructor co-learning, and the joint construction of knowledge. (Bonk & Wisher, 2000)

Computer Mediated Communication (CMC) supports a collaborative learning experience at a distance and independence of time and space. In designing online instruction, the learner’s perspective, especially motivational and emotional influences on learning cannot be ignored.

Garrison and Anderson (2003) believe that the technology of online learning made it possible for both private reflection and public discourse within a community of learners (p. 23). They call this the “Community of Inquiry Model”. In their research on the “Community of Inquiry Model”, Garrison and Anderson defined it as a teacher-guided, non-authoritarian community where societal knowledge is revealed in an equivocal, multidisciplinary manner and its goal is to structure relationships (order) to achieve understanding and develop ‘rationality tempered by judgment’ (Lipman, 1991, p. 8). They listed three elements that interconnect and influence students’ learning: cognitive presence, social presence, and teaching presence.

Cognitive presence is defined as the extent to which learners construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry (Garrison, Anderson, & Archer, 2000, p. 11). Social presence is viewed as socio-emotional communication in text-based communication. 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). They find that instructors should bring all the elements of a community of inquiry in a balanced and functional relationship congruent with the intended outcomes and the needs and capabilities of the learners (Garrison & Anderson, 2003, p. 29). Among these three elements, this study is concentrated on the social presence, the socio-emotional part in text-based communication.

There are two types of social presence; innate and cultured. In earlier stages, social presence was considered being inherent in the medium itself, and technologies offer participants varying degrees of social presence (McIsaac & Gunawardena, 1996, p. 427). Later some scholars purported that social
presence can be conveyed both by the medium and by the people who are involved in using the medium for interaction (McIsaac & Gunawardena, 1996, p. 427). Gunawardena and Zittle (1997) claim that characteristics often associated with CMC---interactivity, collaboration, and reflectivity ---are not inherent within the medium, but can result based on design, moderator’s roles, participation patterns, and involvement (p. 23-24).

In this belief, Garrison, Anderson, and Archer (2000) define social presence as the ability of learners to project themselves socially and affectively into a community of inquiry as “real” people through the medium of communication being used. Because CMC would be judged initially low on social presence, the role of the participants in compensating for lack of cues becomes more important.

Research on distance learning has demonstrated that social presence affects not only learning outcomes, but also the students’ and the instructor’s satisfaction with a course. In their study of a televised classroom, Hackman and Walker (1990) found that system design and teacher immediacy behavior increased perceived social presence, which impacted student learning and satisfaction. In their study, immediate behavior enhanced closeness in the teacher-student relationship.

Garrison and Anderson (2003) state that social presence needs to be established first, in order to sustain cognitive presence. They argue that there must be an effective presence of the remaining elements of a community of inquiry—teaching and cognitive, to establish the optimal level of social presence for the specific educational goal (p. 54).

Richardson and Swan’s study of online education (2003) found that students with high overall perceptions of social presence also scored high in terms of perceived learning and perceived satisfaction with the instructor (p. 73). There was a strong correlation between perceived social presence and instructor satisfaction. Their findings correspond to Gunawardena and Zittle’s research (1997), and confirm that learning is a social activity and that individuals learn more from their interactions with others than from reading materials alone.

These strongly support that social presence need to be cultivated in online classes through careful design and strategy, and that instructors actively teach the students social practice and use of the software elements that help to establish social presence (Stacey & Fountain, 2001).

3. Methods of Inquiry and Data Sources

This study is a qualitative case study using a combination of qualitative and quantitative data collection methods. This is an instrumental case study, which uses examination mainly to provide insight into an issue or to redraw a generalization of online courses in a degree-seeking higher educational institute (Stake, 1994, p. 437). Salkind sees the strong point of qualitative study as a unique approach with a different set of underlying assumptions reflecting a different worldview of how individuals and group behavior can be best studied (2002, p.143). This researcher strongly believes that online learning is a collaboration among the course instructor and the students and it could be best described as a group behavior through qualitative methods.

Participants

This 400 level English online class offered at a university in the Midwest initially had 18 students enrolled. There were 15 students who attended the first face-to-face session and participated in the Pre-survey. Two students dropped out after the first session. The demographics of these online class students were gathered and analyzed based on the remaining 13 students. Among them, one student dropped out during the middle of the semester resulting in 12 active students with successful grades at the end of semester.
Data Sources

At the beginning of this study, the researcher attained an approval from the publishing company of “E-Learning Companion: A Student’s guide to Online Success” (Watkins & Corry, 2005) for use of their survey, “E-learning Readiness Self-Assessment”, and named it a “pre-survey” in this research to examine students’ computer skills and their computer working patterns.

A mid-term survey was developed to measure students’ perception of interaction and social presence in their online class. Survey questions were constructed based on Rourke, Anderson, and Garrison’s Social Presence Cues in their article, “Assessing Social Presence in Asynchronous Text-based Computer Conferencing” (2001), and modified after seeking feedback from the instructor of the online class, where the researcher did her pilot study.

The interview was a semi-structured process through the theoretical sampling method. Each face-to-face interview session (two) were audio taped and transcribed for further analysis and other interviews were done via emails.

To triangulate survey and interview data, a focus group was conducted. The participants of this focus group were junior/senior level undergraduate students who showed their interests of taking online classes in the near future. Through discussions with the researcher for clarification purposes, the survey and interview questions were modified based on their feedback by the researcher.

A “half-way survey” was developed and administered by the course instructor to assess students’ progress and satisfaction levels in this class and used for data analysis upon the instructor’s approval.

The researcher attended two face-to-face class meetings during the course and did class observations. All online course documents and synchronous and asynchronous chats from Blackboard Learning Systems were examined. Three whole class live chats and each group’s weekly chats (four group’s synchronous and asynchronous chats) were coded and analyzed by Rourke et al’s “Social Presence Template” and its “Social Presence Density” formula (2001). Social presence density (SPD) is calculated as sum of raw number of instances divided by the total number of words. This researcher thinks SPD is more meaningful comparison of transcripts than the raw numbers of social presence instances.

In addition to using multiple sources of data and setting up case study databases, evidence and member checks were used to increase the validity of this study. This strategy allows the researcher to make sure that the study is based on participant’s voices.

4. Results

The participants in this study were heterogeneous groups in their age, gender, student and work status (part time/full time) and online experience, etc. This online course was somewhat restricted in the sense of class meeting time. Three-time whole class live chat sessions went against the notion of distance education’s “any time, any where” learning. Some students complained the designated online whole class chats sessions which were set up during their work hours and the inflexibility of scheduling. Most of them seemed to get the enough interactions through the group and class chats, but some longed for more.

Most of the social presence coding was based on synchronous chats in the course. At the beginning of group chats students’ interactions were primarily at the lower levels of communication, only sharing information and discussion dissonance. With the progress of the class most of the groups developed a relationship among them as in McDonald and Gibson’s study (1998) and the length of chat sessions and social presence density were increased. Initially most of the students did not see the importance of social presence, thinking their learning in this class was an individual matter even though they negotiated meanings and confirmed understanding throughout group chats and whole class chats. In their Half-way
survey and other postings, they expressed the value of group discussion before the whole class discussion. While the numbers in affective and interactive social presence increased significantly, cohesive social presence increased drastically. See the table below.

<table>
<thead>
<tr>
<th></th>
<th>Affective SP</th>
<th>Interactive SP</th>
<th>Cohesive SP</th>
<th>Total SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>First session</td>
<td>41</td>
<td>166</td>
<td>63</td>
<td>270</td>
</tr>
<tr>
<td>Second session</td>
<td>47</td>
<td>159</td>
<td>84</td>
<td>290</td>
</tr>
<tr>
<td>Third session</td>
<td>55</td>
<td>230</td>
<td>126</td>
<td>411</td>
</tr>
</tbody>
</table>

*from Rourke et al (2001)’s “Model and Template for Assessment of Social Presence”

There was some disparity among groups and its variability was hard to determine by the demographic information itself. This researcher interprets it to be due to the personal characteristics of the participants. In general female students used higher social presence cues in their chats. Also there was a discrepancy between students’ social presence preference in the midterm survey and their actual use of social presence cues in postings. This researcher interprets it as not only their lack of knowledge in social presence but also learner characteristics in each session. For example, the atmosphere (social presence usage) of three people chats was different from two people chats even in the same group. Each participant communicated differently to other participants depending on whom s/he was talking to, making it very unique and interesting for further research.

Many students’ concerns in these synchronous chats echo with the findings of Branon and Essex’s findings, such as “getting students online at the same time, difficulty in moderating larger scale conversations, lack of reflection time for students, and intimidation of poor typists” (2001, p. 36). The characteristics of a text-based medium as being reflective, explicit, and precise as described by Garrison and Anderson (2003, p. 50) helped some in focusing and elevating the cognitive level of the exchange, but frustrated some who “can't get my thoughts down fast enough”.

5. Discussions

Several issues emerged during data analysis. While the length of chat sessions and social presence density (SPD) increased over time, some students were shown as having the highest SPD in spite of their low utterances and passive participation in chat sessions. Those students were interestingly all males whose utterances stayed low, but ended up having a high SPD. Because the formula was calculated as the sum of the raw number of instances divided by the total number of words, the low number of utterances was weighed more heavily than usual. This researcher interprets that SPD as not describing the whole picture of online learning, and that it is inconsistent with other findings. She believes that a rich narrative is more valuable in describing this online class rather than the SPD itself.

Another issue was the relationship between cognitive presence and social presence. One student had a low cognitive presence but a high social presence. Although in some sessions his social presence was high with low cognitive presence, he encouraged his group members to express their ideas and supported them emotionally. His contribution was valuable in a different way and would be an interesting future research topic.

In this heterogeneous group, each individual’s characteristics emerged over the chat sessions. Some take a role of discussion leader, time keeper, lurker, poster, etc. Their chatting styles varied considerably from one individual to another. Some posted long messages at one time while some preferred short
message postings. Some were very academically oriented, focusing only on the class discussion topic and rushing the discussion in 30 minutes. Another group consisting of all female students was very effective in sharing not only course discussion topics but also their personal stories. All of them showed high SPD and high utterances and stayed in the chat room for over an hour. This group seemed to enjoy the small group live chats very much and expressed their gratitude of having small group chat session before the whole class chat. This researcher believes that it helps to get to know each individual and their characteristics to figure out the online environment.

In general the social presence functioned to support the cognitive and affective objectives of learning in this online class. The findings strongly support that social presence needs to be cultivated in online classes through design and strategy. Some recommended strategies for instructors are:

- have a face-to-face first session to build rapport
- establish small groups early and have a small group discussion before the whole class chat
- model effective communication by inviting individual students and using humor and emoticons, etc.
- guide questions to keep the focus on topics
- provide timely feedback
- have a “Q & A” online forum
- have private one-on-one chat sessions with students, if necessary.

6. Educational Importance of the Study

Smith and Ragan (1999) believe that the traditional separation of “cognitive, affective, and psychomotor domains” is very much under question. They believe that any “cognitive” or “psychomotor” objective has some affective component to it. Rather than viewing the domains as completely separate, educators should strive to integrate them when they design instruction. The social presence functioned to support the cognitive and affective objectives of learning in this online class. These research findings and recommendations will be helpful in understanding the nature of social interaction in a non-verbal environment and how this can be utilized to create a community of inquiry.
References


