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AUTHOR Newberry, Brian

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ABSTRACT

Distance and online education is increasing in importance in the offerings of many universities. As this occurs, instructors are developing ways to use new media to support traditional teaching practices. This is an important effort, as online education is still viewed with a degree of skepticism by some. By successfully transferring accepted teaching practice into online education, instructors are helping to demonstrate that online education can be of high quality. Some instructors are also developing different teaching practices to take advantage of the new media. This too is important, because the technologies of online education may support learning strategies that are not feasible in traditional teaching modes. A subject of importance in both efforts is that of student social presence. Social presence, or the perceived saliency of members of the online group, may be important to the satisfaction of students in online classes. This paper explores issues relating to social presence in online classes and suggests ways to increase student social presence in online classes. The relative richness of seven media types (face-to-face, video conferencing, synchronous audio, text-based chat, e-mail, asynchronous audio, and threaded discussion) is ranked according to four criteria (feedback, multiple cues, message tailoring, and emotions). (Contains 17 references.) (Author/MES)

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Raising Student Social Presence In Online Classes

Brian Newberry
University of Kansas
1122 West Campus Road, JRP
Lawrence, KS 66045
bnewberry@ku.edu

Abstract: Distance and online education is increasing in importance in the offerings of many universities. As this occurs, instructors are developing ways to use new media to support traditional teaching practices. This is an important effort as online education is still viewed with a degree of skepticism by some. By successfully transferring accepted teaching practice into online education, instructors are helping to demonstrate that online education can be of high quality. Some instructors are also developing different teaching practices to take advantage of the new media. This too is important because the technologies of online education may support learning strategies that are not feasible in traditional teaching modes. A subject of importance in both efforts is that of student social presence. Social presence, or the perceived saliency of members of the online group, may be important to the satisfaction of students in online classes. This paper explores issues relating to social presence in online classes and suggests ways to increase student social presence in online classes.

Online Education

There are few topics that span across departments and through the range of academia with more recognition than that of online education. In fact online education is becoming a topic that is reaching beyond the halls of academe and into the corporate world. John Chambers, CEO of Cisco Systems says, "The next big killer application for the Internet is going to be education. Education over the Internet is going to be so big it is going to make e-mail usage look like a rounding error" (MacDonald, 2000). The fact that the corporate world is beginning to take notice of the potential earnings power of online education does not escape the attention of administrators in higher education. In some cases this may be causing a weakening in the resistance to online education that was not too uncommon not that long ago. Too, private providers of online education like the University of Phoenix are greatly expanding their online presence. And this interest in providing online education also includes well-established and venerable institutions including Harvard, Yale and others (Carr, 2000).

The increase in the offering of distance education is a trend that has been documented by the National Center for Education Statistics which in a December 1999 report entitled "Distance Education at Postsecondary Education Institutions: 1997-98" reports, "... distance education appears to have become a common feature of many postsecondary education institutions and that, by their own accounts, it will become only more common in the future" (Lewis, Snow, Farris, Levin, and Green, 1999. p. vi). The same report indicates that public two-year and four-year institutions are the most likely to offer distance education (Lewis et al. p. 15) with 78% of public four-year institutions and 62% of public two-year institution reporting that they offer some distance education opportunities (Lewis et al. p. iii). The trend seems to be clear, with the number of distance education course offerings and enrollments approximately doubling from the levels reported in 1994-95 (Lewis et al. p. vi). While the distinction between distance education and online education is sometimes difficult to extract, this report states, "The percentage of institutions using asynchronous Internet-based technologies, however, nearly tripled, from 22 percent of institutions in 1995 to 60 percent of institutions in 1997-98" (Lewis et al. p. vi). Clearly distance education is becoming online education and online education is being offered by more and more institutions.

With the question; "should we adopt online education?" having been answered in the affirmative, the question has become; "How should we implement online education?" This issue has been examined by many, for example the University of Illinois Faculty Seminar released a report entitled "Teaching at an Internet Distance: the Pedagogy of

Online Teaching and Learning" which says, "...online teaching and learning can be done with high quality if new approaches are employed which compensate for the limitations of technology, and if professors make the effort to create and maintain the human touch of attentiveness to their students" ("Teaching at an Internet Distance," 1999). Another important consideration in the question of how to do online education is, to what degree traditional teaching methods can be used, or adapted to work online? There is a compelling reason for this. Those who have taught for a period of time develop a set of practices that work for them. Through use, these practices become comfortable and validated and most importantly are accepted by the academic community as appropriate and expected. As Meyen, et al. (1999) stated, "While the demand for Web-based instruction is high, many in academe are extremely cautious with regard to its pedagogical soundness." When developing online educational opportunities, faculty are sensitive to the fact that their work may elicit closer scrutiny than is typically the case in the traditional face-to-face teaching methods. In such situations, there is a strong desire to develop online resources that closely resemble the institutionally accepted practices."

This is to be expected in a period of time where there is a transition between instructional delivery systems. And while many do call for re-thinking the nature of the teaching-learning process in higher education, there is some truth in the old principle that good teaching is good teaching. There are many parts and components to a quality educational experience, whether that experience is online or not. These include aspects that can be attributed to the content provided by the instructor, the content provided by other sources such as texts, and aspects of the course attributed to the qualities of interactions or experiences in the class.

Aspects of content or information transmission fromthe traditional classroom that are easy to replicate in the online environment include instructor-created text-based hand outs, slide presentations, providing of readings, and use of text-based materials from various sources. Where online education has a problem replicating the traditional classroom are in aspects relating to interactions and classroom experiences. The use of technology-mediated communication changes the way these interactions can and do occur. Because of this, it is these types of interaction issues that are most interesting to examine. If an instructor wants to create an online class these problems must be addressed. What then is good practice, in terms of classroom interaction and how can good practice be taken online?

Looking at the much circulated, "Seven Principles for Good Practice in Undergraduate Education" by Chickering and Gamson (1987) we find guidelines for good practice that emphasize interactions in an educational setting. The seven principles are:

1. Good practice encourages student-faculty contact.
2. Good practice encourages cooperation among students.
3. Good practice encourages active learning.
4. Good practice gives prompt feedback.
5. Good practice emphasizes time on task.
6. Good practice communicates high expectations.
7. Good practice respects diverse talents and ways of learning.

These principles of good practice emphasize the creation of a learning environment that ensures high levels of interaction, cooperation, and communication. In many cases there is the perception that the technology used in online classes fails to adequately support person-to-person interaction. This is despite the fact that some researchers find that it is possible to develop personal relationships and communities via computer mediated communications (Chenault, 1998) and others, including Kraut, et al. (1998) find that "interpersonal communication is the dominant use of the Internet at home. If the Internet technology commonly used in people's homes is primarily used for interpersonal communication, why do students in online classes complain that they miss the interaction with their peers that they get in face-to-face classes? Are there things that can be done to better replicate the sense of being engaged in an educational experience with others? If there are, what are they?

Theories

Theories that seem appropriate for developing an understanding about what can be done to improve the person-to-person interactions in an online class are media richness (Trevino, Lengel, and Daft, 1987) and social presence (Short, Williams and Christie, 1976). Media richness is the ability of a medium to carry information. The

information transmission ability of a medium has at least two components, data carrying capacity and symbol carrying capacity (Sitkin, Sutcliffe, and Barrios-Choplin, 1992). In media richness theory, media technologies are rated or ranked according to their message carrying capacity. The criteria for rating media are based on the media's ability to: relay immediate feedback, transmit multiple cues such as body language, permit tailoring the message to the intended receiver, and relay communicator feelings or emotions (Daft and Lengel, 1984). Applying this rating system to technologies that are currently available for online education, the following matrix of media richness comparisons can be developed.

Media Rating (across) Criteria (down)	High	Medium	Low
Feedback	Face-to-Face Video Conferencing Synchronous Audio Text-Based Chat		E-mail Threaded Discussion Asynchronous Audio
Multiple cues	Face-to-Face	Video Conferencing	Synchronous Audio Asynchronous Audio Text-Based Chat E-mail Threaded Discussion
Message Tailoring	Face-to-Face	Video Conferencing Synchronous Audio E-mail	Text-Based Chat Asynchronous Audio Threaded Discussion
Emotions	Face-to-Face	Video Conferencing Synchronous Audio Asynchronous Audio	Text-Based Chat E-mail Threaded Discussion

Table 1: Relative richness of different media types according to four criteria.

Assigning the numerical value of 3 for high, 2, for medium and 1 for low, it is possible to rank the seven different media types into a hierarchy from richest to leanest.

	Feedback	Multiple cues	Message Tailoring	Emotions	Totals
Face to Face	3	3	3	3	12
Video Conferencing	3	2	2	2	9
Synchronous Audio	3	1	2	2	8
Text Based Chat	3	1	1	1	6
E-mail	1	1	2	1	5
Asynchronous Audio	1	1	1	2	5
Threaded Discussion	1	1	1	1	4

Table 2: Numerical values used to rank media types.

Which results in this ranking or hierarchy of communications media, richest to leanest.

Face-to-Face
Video Conferencing
Synchronous Audio
Text-Based Chat
E-mail / Asynchronous Audio
Threaded Discussion

Table 3: Hierarchy of media richness.

Not surprisingly, synchronous technologies (Face-to-Face, Video Conferencing, Synchronous Audio, Text-Based Chat) tend to be rated richer than asynchronous technologies. This raises an important issue, which is, the desirability of creating asynchronous vs. synchronous online classes. One of the advantages of asynchronous online learning that, in the view of some, helps ameliorate the lack of face-to-face contact with teachers and fellow students is the ability to interact with the class according to a schedule convenient to each participant. Recognizing this, many online classes are largely asynchronous in nature. Fewer online classes are as rigidly synchronous as a traditionally taught class while many make use of both synchronous and asynchronous methodologies.

Whether synchronous or asynchronous, if media richness theory is accepted, one would expect to see students in classes using the richest media possible, experiencing the highest levels of social presence. Social presence as Short et al. (1976) describe it is the salience of a person in a mediated conversation. Rourke, Anderson and Garrison (1999) for their work in asynchronous text-based conferences define social presence, "...as the ability of learners to project themselves socially and affectively into a *community of inquiry*." Others have similar definitions with the basic meaning being that social presence is the degree that a person is perceived to be real in a mediated environment (Russo, 2000b). Russo has extended this definition of presence to explain that there are at least four types of presence in online classes. They are a student's perception of other students, a students' perception of the instructor, a student's perception of others' perception of them and an instructor's perceptions of a student (Russo, 2000a, 2000b).

In a recent presentation (2000b) Russo related that her findings indicate that social presence appears to have an impact on student satisfaction and learning. Factors that Russo finds have an impact on social presence and that should be considered are use of technologies that increase the probability of improving impressions of social presence and use of instructional practices which might lead to better establishment of social presence on the part of the teacher and students. Russo's work has also shown that because of the way her online class is structured and the technology that she employed in the development of the instructional components of her class, the social presence ratings of the instructor were much higher than those of the students (Russo, 2000a).

Examining Russo's use of technology as an instructional vehicle reveals that the instructor had two ways of projecting a presence into the class that students typically did not. First was the presentation of her voice in the form of audio lectures. Second was the use of her picture both as a design element in the web site and associated with her voice accompanying the audio lectures. Additionally, Russo's work indicates that students in the class did not use the threaded discussion feature of the class as an effective way to respond directly to each other. While Russo designed her online class to include student projects, Newberry (2000) found that the majority of groups used only e-mail to communicate about their projects. While e-mail has the potential for immediacy, in most cases its richness is no better than any text-based communications system. If an instructor wants to raise the social presence of his/her students, there must be ways beyond text-based e-mail to do so.

Practical Implications

Developers of online learning environments who are concerned with raising social presence of students are pursuing a number of strategies that can be emulated. These strategies can be conceptualized as impacting media selection, structure of activities, or individual communication practices. In each of these areas there are some specific recommendations that can be made that should help to ensure higher levels of interaction, cooperation, and communication among students. These strategies should be considered in the context of the difficulty or costs associated with them. The difficulty and/or cost of any strategy will depend on many institutional variables such as whether a particular media technology is available for use at the institution where the course is offered, if a modification in instructional practice fits within the time or technical development constraints of the class, or if effective ways of helping students learn communication strategies can be implemented.

Media selection choices that can affect student social presence are fairly simple. Many online class environments make use of simple static web pages that include photographs. Referring back to Russo's (2000a) thoughts about the use of the instructor's photograph in her online class being partially responsible for the perception of a higher degree of social presence on the part of the instructor, it is no great leap to think the same could work for students. Therefore, placing student pictures in a course website where they can be seen by fellow students may help raise social presence. Typically, inclusion of pictures in a web page is a low-cost and easily accomplished option for

raising social presence. Because richer media should tend to facilitate social presence of those using it, a course developer could examine ways that allow students to place their voice into an online environment. While there are low-technology options for facilitating the inclusion of student voices in online environments, they are not always reliable or high quality. Reliable, high quality methods of including student voices in online environments require greater technology investments and can be expensive if technical development personnel resources are used to make this happen. Synchronous media types tend to help create greater social presence, so if possible, media such as text-based chat or audio conferencing should be selected for appropriate activities. However, many synchronous media types require greater levels of technical equipment or knowledge on the part of students, which makes them more difficult to implement.

It is possible to develop or modify course activity structures to help create greater development of social presence. One common structure is a face-to-face first session. Having students interact in a face-to-face mode early in the class allows them to begin forming personal relationships that may be maintained or extended via online activities. Another way to alter activity structures to help raise student social presence would be to ensure that students work in small groups with each other. Because it seems to take more time to build a relationship in an online environment, it might be advisable to form persistent student groups that work together online via computer-mediated communications, on a variety of topics throughout the course.

Effective interpersonal communication practices can be an important way for students to raise their social presence in an online class. These effective interpersonal communication practices are similar or identical to face-to-face practices, but they tend to be harder to achieve in mediated contexts. Because of this it may be useful for an instructor to review these, and model for students ways to implement them in computer-mediated environments. A specific technique includes restating what another has communicated. While cutting and pasting another person's words is possible, this is not as effective at raising social presence as taking the time to restate the points made by another in your own words. Another technique students may use to raise social presence is to ensure that they respond to others as quickly as possible. Further, students should make sure that their responses are appropriate and related directly to the other person's previous communications.

Conclusion

Raising student social presence in an online class may help to better replicate some subjective impressions of quality of experience on the part of students. Media richness and social presence theories can provide information to the developers of online courses in their attempts to achieve this. There are various factors that might be considered in such an attempt. These include technological factors, such as using media technologies that have the greatest ability to carry information. Also included are structural factors that include designing class and student interactions in such a way as to ensure that students communicate more effectively and at deeper levels with each other.

Currently there is a transitional trend in online education, attempting to fit the traditional practice of the face-to-face classroom to the new technologies. Comparisons between the effectiveness of online education and face-to-face modes are a natural result. Where these comparisons find online education lacking is in the affective impressions of students about their interactions with other students, and in some cases the instructor. This may be because current computer-mediated communication methods tend to use leaner media. As bandwidth increases, hardware innovation infusion increases, and technical ability on the part of students becomes more advanced. Because of this, the use of richer media forms such as desktop video conferencing can eventually be expected to make their way into online education. Too, new forms of electronic communication will no doubt be developed. Until such a time, however, it may be useful to investigate lower-tech ways of increasing the social presence of students in online classes.

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