Momentum in online discussions: The effect of social presence on motivation for participation

Cathy M. Weaver and Peter R. Albion
Faculty of Education
University of Southern Queensland

Abstract

Compared to earlier forms of distance education online education is characterised by increased opportunities for productive interaction of learners with content, instructors and peers. Although online courses typically include discussion spaces for interaction, relatively little has been published about what motivates students to participate in the discussions. This study investigated the effect of social presence on motivation for student participation. Data were collected from 60 students over a semester using a sequential exploratory design. A significant relationship was found between social presence and motivation but most students reported a decline in perceived social presence during the semester. The findings suggest actions that might be taken by facilitators of online courses to enhance student motivation for participation in course discussions.

Keywords

motivation, social presence, online education, participation

Background

Interaction is understood to be critical to the learning process (Ertmer & Newby, 1993). 'The learning community is the vehicle through which learning occurs online … without the support and participation of a learning community, there is no online course' (Palloff & Pratt, 1999, p. 29). Interaction in distance education courses can be with content, instructors, and peers (Moore, 1989). Online education incorporates all three types of interaction, but, compared with previous forms of distance education, provides more flexibility in the interactions among participants.

If interaction is critical to learning and the forms of interaction in online education are different from those in previous forms of distance education, then it is important to understand what might motivate learners to engage most fruitfully in those interactions. The most common form of interaction in online education is the asynchronous discussion group, but engaging students in discussion and maintaining the momentum to enhance learning is a challenge to online course facilitators. This study investigated the effect of social presence on learners' motivation to participate in discussion groups associated with online courses with a view to better understanding how to initiate and maintain momentum for learning.

Motivation

State motivation can vary or change at any time and describes a student's motivation for a specific class, activity or task (Christophel, 1990). Dornyei (2000) describes it as a 'constant (re)appraisal and balancing of the various internal and external influences that the individual is exposed to … even within the duration of a single course, most learners experience a fluctuation of their enthusiasm/commitment, sometimes on a day-to-day basis' (p. 523). Trait motivation is a more enduring predisposition towards learning (Christophel, 1990) which is relatively stable and resistant to situational influences. State motivation is most likely to be significant in influencing the level of student participation in online discussion which has been found to vary throughout the duration of courses (Postle et al., 2003).

Christophel (1990) investigated the relationship between teacher immediacy and student state motivation in college classes. Teacher immediacy was defined as the amount of 'perceived physical and/or psychological closeness between people' (Christophel, 1990, p. 325). Examples of immediacy behaviours include smiling, having a relaxed body posture and position, speaking to the students rather than to the chalkboard, using humor, and modulating the voice. The study found significant relationships between learning and both immediacy and motivation. Immediacy was found to modify motivation, which, in turn, led to increased learning. Non-verbal immediacy and state motivation were more highly predictive of learning than either verbal immediacy or trait motivation.

A subsequent study used a test-retest design in which data were collected twice during a course to determine if state motivation and teacher immediacy changed during a semester (Christophel & Gorman, 1995). The study also collected data about student perceived sources of motivation and demotivation. They found that, although there were no significant differences in the distributions of types of motivator and demotivator across the semester, student motivation was typically perceived as a student owned state but demotivation was perceived as a teacher owned problem. That is, negative behaviours by teachers appeared to have more impact on student demotivation than positive teacher behaviors had on motivation. Christophel and Gorman also found that state motivation levels were modifiable by teacher behaviour.

Social presence

Social presence refers to 'the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships' (Short et al., 1976). The construct of social presence can be traced back to Mehrabian's (1969) concept of *immediacy* (Rourke et al., 1999, para 4), and its conceptual similarity to immediacy is evident. Rourke et al. note that a point of difference between social presence and teacher immediacy is that social presence is a function of both learners and teachers.

Social presence predicts learner satisfaction with online learning environments (Gunawardena & Zittle, 1997). Moreover, it is not merely an attribute of the medium. Different users may experience social presence differently and its perception can be modified by participant behaviours. Indicators of social presence include personal forms of address, acknowledgement of others, expressions of feeling, paralanguage, humour, social sharing and self-disclosure (Polhemus et al., 2001). The similarities — allowing for differences in communication media to immediacy behaviours listed above — are apparent.

Research focus

Compared to previous forms of distance education, online education appears to have inherent advantages in its capacity to support forms of interaction that promote learning. Those advantages can be realised only if learners participate in activities such as online discussions. That participation is, in turn, dependent upon learners being appropriately motivated. Immediacy behaviours have been shown to affect learner motivation in face-to-face classes. Thus, this study was designed to investigate the relationship between social presence, as an online equivalent of immediacy, and motivation for participation in course discussions. Several specific research questions were framed within this broad focus for research. This paper reports some of the data and conclusions from a more expansive study.

Method

The study adopted a mixed method approach, Sequential Exploratory Strategy (Cresswell, 2003), in which an initial collection of quantitative data is analysed and qualitative methods are then applied to elaborate on the quantitative results. Quantitative data were collected using self-report measures of social presence and motivation administered using online questionnaires in the third and fourth weeks (T1) and eleventh and twelfth weeks (T2) of the semester. Qualitative data were collected using open questions included in the online questionnaires and by semi-structured interviews conducted by telephone with self-selected volunteers following the second questionnaire administration.

Two instruments were used to assess learner perceptions of social presence. A Social Presence Behaviours Scale was constructed by the first author, based on the 12 social presence indicators identified by Polhemus et al. (2001), with seven additional items derived from the findings of Rourke et al. (1999) and Tu (2000). The second instrument was based on that of Gunawardena and Zittle (1997) with references to the specific system of that study substituted by generic terms such as 'online discussions'.

State motivation was measured using a set of 12 bi-polar adjective pairs as developed by Christophel (1990) with the introduction to the scale referring to online discussions rather than to the specific class as in the previous studies (Christophel, 1990; Christophel & Gorman, 1995). Open questions were added to collect data about learner perceptions of motivators and demotivators.

Core questions for the semi-structured interviews were constructed following analysis of the data collected using the questionnaires. They focused on reasons for selecting online study, preferences for interaction with course facilitators and responses to the content of the messages in the discussions. The interviews were recorded and transcribed for analysis.

Analysis of quantitative data was conducted in SPSS. Qualitative analysis was conducted manually by coding and organising data into emergent themes.

Results

Some 1218 students enrolled in 12 online courses at a regional Australian university were invited to participate via messages posted in the course discussion areas. Because several of the courses were being offered by traditional distance education with the discussions as an optional activity, a high response rate was not anticipated. 95 students completed the first questionnaire and 60 completed the second. Data analysis was confined to the 60 students who responded to both questionnaires. From those, 14 students volunteered to participate in the subsequent interviews.

Table 1: Comparison of social presence and state motivation at T1 and T2

	T1		T2		Paired-samples t test		
	Mean	**SD**	**Mean**	**SD**	**df**	**t**	**p**
Perceptions of social presence	41.0	5.9	39.5	7.1	59	2.06	0.04
State motivation	31.9	6.7	30.5	6.6	59	1.73	0.09

Table 1 compares measures of social presence (Gunawardena & Zittle, 1997) and state motivation at the two data collection times. Paired-samples t tests found a significant change for social presence but not for state motivation. Significant correlations between social presence and state motivation were found at both T1 ($r(58)=0.344$, $p<0.001$) and T2 ($r(58)=0.598$, $p<0.001$).

Participants' ratings of the importance of selected social presence behaviours for maintaining desire to participate were relatively stable from T1 to T2. Of 19 behaviours, only 2 showed significant differences on a paired-samples *t* test. 'Use of personal experiences and examples' was rated less highly at T2 (M=3.65) than at T1 (M=3.83). 'Disagreement with another's comment' also rated less highly at T2 (M=2.67) than at T1 (M=3.15). At both T1 and T2, the highest rated behaviours were 'use of personal experience and examples', 'feedback from others' and 'offers of help from others'. Least important at both T1 and T2 were 'casual conversation', 'use of smileys' and 'sharing of personal information'.

Responses to questions about motivators and demotivators for participation in online discussions were classified and grouped under categories as follows: context (related to factors antecedent to the discussions), structure/format (related to design and implementation of discussions), and social (related to social presence and social learning). At T1 students reported 122 motivators (34% context, 16% structure/format and 50% social) and 109 demotivators (38% context, 28% structure/format and 35% social). At T2, there were 93 motivators (34% context, 15% structure/format and 51% social) and 93 demotivators (41% context, 18% structure/format and 41% social). Chi-squared tests found no significant differences between the patterns of motivators and demotivators at T1 and T2.

Discussion and conclusion

This study confirmed the existence of a relationship between learners' perceptions of social presence and their motivation for participation in online discussions. The highest rated social presence factors were related to course work and the lowest rated were incidental social interactions. The non-significant changes in proportions of structure/format motivators and demotivators are probably attributable to students being more familiar with the systems at T2. Although the increased proportion of social demotivators at T2 was not statistically significant, it did parallel a decrease in perceived social presence. Moreover, responses to open questions and interview data indicated that students looked forward to receiving responses to their postings and were more inclined to post again if they received responses. One persistent theme in the qualitative data was that participation encouraged participation in a form of virtuous circle. Once a minimum level of participation in course discussions is initiated, the momentum is relatively easier to maintain.

Another persistent theme in the qualitative data was the importance that students placed upon the role of the course facilitator as initiator and maintainer of momentum in discussions. This was most evident in the comments of students who experienced infrequent participation by the course facilitator. Providing the initial impetus and modelling, the forms of social presence that maintain momentum are key to successful facilitation of online courses.

References

Christophel, D. (1990). The relationship among teacher immediacy behaviours, student motivation, and learning. *Communication Education, 39,* 292–306.

Christophel, D., & Gorman, J. (1995). A test-retest analysis of student motivation, teacher immediacy, and perceived sources of motivation and demotivation in college classes. *Communication Education, 44,* 292–306.

Cresswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Dornyei, Z. (2000). Motivation in action: Towards a process-oriented conceptualisation of student miotivation. *British Journal of Educational Psychology, 70,* 519–538.

Ertmer, P. A., & Newby, T. J. (1993). Behaviourism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 6*(4), 50–72.

Gunawardena, C. N., & Zittle, F. (1997). Social presence as a predictor of satisfaction within a computer mediated conferencing environment. *American Journal of Distance Education, 11*(3), 8–25.

Moore, M. G. (1989). Three types of interaction. *American Journal of Distance Education, 3*(2), 1–6.

Palloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom.* San Francisco: Jossey Bass.

Polhemus, L., Shih, L-F., & Swan, K. (2001). *Virtual interactivity: The representation of social presence in an online discussion.* Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.

Postle, G., Sturman, A., Mangubhai, F., Cronk, P., Carmichael, A., McDonald, J., et al. (2003). *Online teaching and learning in higher education: A case study.* Canberra: Commonwealth of Australia.

Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (1999). Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education, 14*(2).

Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications.* London: John Wiley & Sons.

Tu, C-H. (2000). *An examination of social presence to increase interaction in online classrooms.* Unpublished doctoral dissertation, Arizona State University, Tempe, AZ.