Social Presence in the Online Learning Environment

Josie Fisher
School of Business, Economics and Public Policy, University of New England, Armidale, Australia
Email: jfisher@une.edu.au

Fredy-Roberto Valenzuela
School of Business, Economics and Public Policy, University of New England, Armidale, Australia
Email: fvalenz2@une.edu.au

Sue Whale
School of Business, Economics and Public Policy, University of New England, Armidale, Australia
Email: swhale2@une.edu.au

ABSTRACT

This paper presents one aspect of the findings of an exploratory study conducted at UNE during 2010 that measured the perceptions of management students regarding their online learning experiences, particularly the development of social presence by lecturers in this environment. An online survey was emailed to postgraduate, off-campus students and undergraduate, on- and off-campus students who are enrolled in a coursework degree in management. Results suggest that social presence is not being successfully developed by lecturers, with discussion boards and chat rooms receiving relatively low evaluations.

Keywords: business education; e-learning; learning environment; management courses/curriculum
INTRODUCTION

This paper presents the findings of an exploratory study conducted at UNE during 2010 that assessed the perceptions of management students regarding their online learning experiences, particularly the development of social presence in this environment. An online survey including both closed- and open-ended questions (developed using Qualtrix) was emailed to 474 off-campus postgraduate and 699 on- and off-campus undergraduate students who are enrolled in a coursework degree in management. To date, 62 responses from postgraduate and 41 from undergraduate students have been received, which indicates a response rate of 13% and 5.9%, respectively.

SOCIAL PRESENCE LITERATURE

Most of the literature relating to social presence credits Short, Williams and Christie (1976) with the development of the initial theory of social presence in order to ‘explain the effects a communication medium can have on the way people communicate’ (Lowenthal in Press, p. 1). Social presence was conceptualised as an aspect of communication which impacts on interactions (Lowenthal in Press). Vygotsky’s social development theory states that ‘social interaction is vital to cognitive development; all higher-order functions originate as the relationships among individuals’ (Misanchuk & Anderson 2001, p. 1). Moore (1989) proposed learner-learner, learner-content and learner-instructor interactions as vital in education, while each of the seven principles for good practice in undergraduate education suggested by Chickering and Gamson (1987) relates to interaction. ‘Learning is a very human activity. The more people feel they are being treated as human beings—that their human needs are being taken into account—the more they are likely to learn and learn to learn’ (Knowles 1990, p. 129).

Learning is widely considered to be impacted by social interactions. Dabbagh and Bannan-Ritland advocate the necessity to ‘monitor and support continued interaction and participation’ and to ‘stay aware of students who “fade back” and attempt to draw them into both social and educational interaction to facilitate community (2005, p. 90). The literature supports the view that successful
online communities facilitate active learning through a learner centred design. ‘Because of the high level of learner control in a flexible online environment, it may encourage not only learning of new content but improved personal learning strategies or learning of new ways to learn’ (Reushle, Dorman, Evans, Kirkwood, McDonald & Worden 1999, p. 3). When these spaces include instructor guidance and support, they are more likely to foster trust and social presence which in turn increase comfort, motivation and participation.

Garrison, Anderson and Archer (2000) describe social presence as ‘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’. Irwin and Berge discuss socialisation in online environments in terms of establishing connections, sharing information and ‘being able to mingle’ (2006, p. 1). They propose a definition of online presence as ‘the value of interaction in online learning lies in its contribution to the participants’ (teacher and learner) ability to establish a sense of being in the virtual environment’ (Irwin & Berge 2006, p. 2), and propose that social presence is about relationships and connections with others.

Stacey (2002) reports that behaviour of the teacher in terms of modelling social presence factors resulted in the emulation of these behaviours by students. ‘The teacher’s role developing a secure learning environment and modelling social presence factors and continuing to monitor and facilitate conference interaction was a major factor in the success of this interactive process in online learning’ (Stacey 2002, p. 293). Hung (2002) discusses the role of the educator in facilitating online interactions as necessary to prompt student transactions. Motivation for participation arises from carefully structured responses from moderators, using a “guide on the side” approach (Bonk & Dennen 2002; Dabbagh & Bannan-Ritland 2005; Martyn 2003; Rovai 2002; Siew Woei & White 2010). This approach is developed through prompting student reflection in an informal setting (Bonk & Dennen 2002), as opposed to the transmission model which can deter responses and interaction. Rovai (2002) indicates that learner interaction, while essential, must be fostered by instructors through quality
interactions, while Albon and Jewells indicate that ‘personalities, teaching philosophies and attitudes to learners are factors affecting the engagement of students’ (2009, p. 312).

Aragon (2003) suggests that deliberate strategies by course designers, instructors and students are required for the creation of social presence in an online collaborative environment. These include welcome messages, incorporation of audio, structured activities, prompt responses, frequent feedback, use of humour to reduce social distance and personalisation. Aragon also suggests that personal storytelling creates credibility for instructors. He notes that ‘creating social presence is not the sole responsibility of the instructor’ (2003, p. 66).

MANAGEMENT RESEARCH

Arbaugh, Desai, Rau and Sridhar (2010) reviewed the research related to online and blended learning in business and management disciplines. The authors selected 75 of these studies which related specifically to the discipline of management. Based on this review, Arbaugh et al. concluded that ‘online learning certainly can be an effective medium for the delivery of management education’ (2010, p. 46). The authors identified research by Arbaugh and Hwang (2006), Garrison and Cleveland-Innes (2005) and Shea and Bidjerano (2009) which suggested that teaching presence is more likely to produce an effective online environment than social or cognitive presence particularly in management education. They also found evidence which indicated that learner-instructor interactions are more influential than student-student interactions in terms of learning outcomes (Arbaugh et al. 2010; Arbaugh and Benbunan-Fich 2007; Marks, Sibley and Arbaugh 2005; Williams, Duray and Reddy 2006).

In 2000, Arbaugh conducted a study in a blended course to investigate the effects of ‘technological, pedagogical, and student characteristics on student learning in Internet-based MBA courses’ concluding that pedagogical factors (i.e. those reflecting instructor input) were significantly associated with student learning (2000a, p. 9). ‘These findings suggest that graduate business teachers and
programs should give attention to cultivating their skill in facilitating and generating student interaction’ (Arbaugh et al. 2000a, p. 11). In a similar study, Arbaugh (2000b) examined the factors necessary for effective internet-based MBA courses. One of these factors was that perceived instructor emphasis on interaction was positively associated with student satisfaction. While there were limitations to this study including the small sample size and the concurrent enrolment of the participants in face-to-face courses, Arbaugh suggested that ‘pedagogical approaches may be more important than the technology in determining the effectiveness of these courses’ (2000b, p. 49).

Clouse and Evans (2003) investigated the impact of several variables on teaching and learning in an online environment including synchronous and asynchronous instructional methods, student ability, learning styles and personality types and technological skill. The study also examined performance differences between on-campus and off-campus graduate business students. “This research demonstrated how the use of synchronous and asynchronous lecture and discussion methods can improve learning for both on-campus and off-campus students” (Clouse & Evans 2003, p. 198).

Lear, Isernhagen, LaCost and King found that ‘for most students interactivity for developing community was very instructor-driven and was accomplished through class design and instructor participation. Instructor interactive design and presence influenced the sense of community and learner engagement. Key activities at the beginning of the class were important; however, instructor responses and assignments needed to build on beginning activities as the class moved through the semester’ (2009, p. 95). In particular, 81% of the students in the study indicated that the instructor (either alone or in combination with students and /or content) was the major contributing factor to community development.

Robinson and Kerry (2008) explored techniques in teaching and learning which contributed to class connection and cohesiveness. The participants were students enrolled in short (3 week) programs in Real Estate and Road Transport and Logistics and a case study approach was employed to provide
qualitative data. One of their findings was ‘that without the complete social communication process
including body language, gestures, eye contact, instant response to questions by the tutors’, and ability
to exchange information with peers, most students and staff struggled’ (2008, p. 107). Moreover,
‘[t]he students clearly believed that the onus was on the institution and teaching staff, including
supporting learning advisors, to create a more vibrant learning environment and to foster a stronger
sense of community’ (Robinson & Kerry 2008, p. 113).

RESEARCH QUESTIONS
An exploratory study was conducted to obtain students’ perceptions regarding the efficacy of online
learning and social presence in the online environment. The following research questions were
established for this part of the investigation:

1. What is the usage of online learning tools such as emails, discussion boards, chat rooms,
podcasts, videos, audio files and how do students evaluate these tools?

2. How do students perceive the social presence of lecturers in the online environment?

METHODS
An online survey consisting of a questionnaire that contained open-ended and closed-ended questions
was developed. This instrument was approved by UNE’s Human Research Ethics Committee
(HE10/115). Open-ended questions were used to ask students for their opinions regarding:

1. Aspects of online learning that have made it easier for them to achieve their learning
   outcomes/goals, and/or participate in class discussions compared to face-to-face teaching (e.g.,
   lecturers, tutorials, workshops, intensive schools, etc.).

2. Anything that has made online learning more difficult.
Closed-ended questions were used to determine the usage of different e-learning tools, such as chat
rooms, discussion boards, and emails, among others. In addition, students’ perceptions regarding the
way these tools were managed by lecturers were probed. Finally, closed-ended questions were also
used to identify respondents’ demographics such as level of competency in the online environment, type of access to internet, number of subjects competed, gender and first language, among others.

The online survey was sent out to students who are undertaking either postgraduate or undergraduate coursework study in management at University of New England (UNE), Australia using Qualtrix survey design software. Invitations were sent to 474 off-campus postgraduate students and to 699 on and off-campus undergraduate students. To date, 62 responses from postgraduate students, which represents a response rate of 13%, and 41 responses from undergraduate students, which represents a response rate of 5.9% have been received. Table 1 shows that 80% of these postgraduate students were enrolled in an MBA and 69% of the undergraduate students were enrolled in the Bachelor of Business (BBUS); they had passed more than 5 units (subjects); over 92% of students have broadband internet access; more than 95% have a high or medium level of competency in the online environment; almost all have English as their first language; and 53% of postgraduate students are male and 60% of undergraduate students are female.

Insert Table 1 here

Two different types of data analyses were performed: qualitative and quantitative. Open-ended questions were analysed using the freeware software WeftQDA. Matrixes were developed that contained the main concepts that arose from the opinions of students regarding online learning. Closed-ended questions were analysed using the software SPSS statistics 17.0. Frequencies, percentages, means, standard deviation, ANOVA and Chi-Square tests were performed in order to answer some of the objectives of the investigation.

RESULTS

The qualitative findings show that postgraduate students ranked the learning management system (LMS) used by UNE as the second most valued aspect of their learning experience (18%), while
undergraduate students ranked it third (16%). Students made several comments related to the LMS system itself, and also mentioned more specific tools such as discussion boards and chat rooms. The fact that lecturers and students may post messages on the discussion board and check the answers to those comments asynchronously seems to be very valuable to students. However, when questioning students regarding the negative issues of online learning, students mentioned that by far the most negative aspect is the lack of interaction between lecturers and students. This issue was identified by 32% of postgraduate students and 27% of undergraduate students. Students mentioned a “lack of facilitator involvement”, which “makes it very difficult for students to engage in the topic when the coordinator/lecturer does not encourage or lead interaction on the discussion page”. As identified in the literature review, social presence is related to building communities in the online environment and the role of the facilitator is key in the development of social presence. These students’ comments indicate that in a significant number of their subjects successful online communities were not developed.

With respect to the usage of online learning tools, quantitative results show that over 94% of the postgraduate and undergraduate students who participated in the investigation had experience with discussion boards and emails (see Table 2). However results show much lower usage of other online learning tools and significant differences between postgraduate and undergraduate students. Only 50.8% of postgraduate students indicated they had experience with chat rooms, which can be considered low for programs offered almost 100% online. Undergraduate usage of chat rooms is significantly lower (38%). Regarding other more specific tools such as podcasts of lectures, special podcasts and special vodcasts (i.e., podcasts and vodcasts that have been recorded by lecturers to discuss specific issues or concepts), postgraduate students’ responses indicated that they did not have much experience with these types of tools (27.9%, 26.2% and 11.5%, respectively). The usage of these tools among undergraduate students was significantly higher (67%, 52% and 21%, respectively).

Insert Table 2 here
In order to determine how other variables may be affecting the usage of online learning tools, a deeper comparison was undertaken between participants’ gender, level of competency in usage of online learning environments and types of online learning tools used. Chi-Square tests show that level of competency is the only variable that affected students’ usage of online learning tools. In particular the study shows a significant difference in the usage of chat rooms: students with high level of competence with online learning tools use significantly more chat rooms (55%) compared to students with medium and low level of competency (30%). Levels of competency in usage of online learning environments showed no statistical difference among the other online learning tools (i.e., discussion boards, emails, podcasts, special podcasts and special vodcasts). Gender also did not show a statistical difference in any of the online learning tools.

With regard to the evaluation of these tools, Table 2 shows the average response for each tool under study. All of the means are above 3 (score range: 1 to 5). However, one of the tools most used by students – emails – scored the lowest mean (3.09 for postgraduate and 3.05 for undergraduate students), which may be explained by the number of hours (28 and 29 hours, respectively) taken by lecturers to answer emails (students expect emails to be answered quickly). On the other hand, the tools rated highest were not frequently used by lecturers. This suggests there is an opportunity to enhance online learning by increasing the use of these tools.

It is relevant to highlight that the tools that received the highest evaluation (podcasts and vodcasts) were not interactive unless reflection and discussion was encouraged and led by lecturers in another online forum. From comments received, this does not seem to have been the case. These tools, although popular with students, did not contribute greatly to building community nor teacher presence. The use of these tools without an opportunity for students to engage with the content suggests they were being viewed by lecturers simply as a way to transmit information rather than creating an opportunity to encourage responses and interaction between lecturers and students. Discussion boards, which were the most frequently used, were not evaluated highly suggesting that social presence was
not successfully developed and the benefits of using these forums was therefore not obvious to students. As the literature suggests, the input of lecturers is key to modelling behaviour and encouraging participation and interaction. Likewise chat rooms, although a significant number of students had experience with these, their evaluation was relatively low again suggesting that this forum did not successfully facilitate collaborative learning.

In order to determine if there is any difference in the above evaluations attributable to demographic variables such as level of experience with the online environment, number of subjects completed, internet access and gender, a set of ANOVAs were performed. Results showed no statistical difference in the evaluation of the different online learning tools by any of these variables.

CONCLUSIONS

This study, which is part of a larger research project, provides some important insight into the efficacy of online learning and teaching based on students’ own perceptions of their learning in this environment. The results clearly demonstrate that both postgraduate and undergraduate students recognise the value of the full range of online tools, however, their level of experience with podcasts and vodcasts, in particular, suggests that some lecturers have been slow to adopt these tools. This finding suggests that the effectiveness of online learning could be enhanced by the use of the more ‘advanced’ tools. The findings also show low evaluations of the tools that have the potential to be developed into learning communities, such as discussion boards and chat rooms. This suggests that most of the students who participated in the study have not experienced the benefits of an online community in which social presence (understood as the ability of participants to identify and interact with the community) has been effectively developed.

While there is clearly a need for teaching staff to be encouraged to develop their skills in building online communities, it seems that this is not an entirely new skill they need to develop. Student responses indicated that successful teachers in face-to-face contexts seemed to be able to transfer their
skills to the online environment creating interactive learning opportunities. Technology should be recognised as a way to create presence in the online community that facilitates the same kinds of rich learning experiences that face-to-face delivery can achieve. Based on these findings it is imperative that more resources be allocated to workshops or other training programs that showcase the potential of online technologies and the role lecturers can play in these forums to create successful learning communities. These workshops are needed not only for lecturers but also for students because the research showed that students with lower levels of competency in the usage of online learning environments tend to use significantly fewer online learning tools.

With regards to future research, at least two areas could be explored in order to better understand the concept of social presence. This research project focused only on students’ perceptions regarding social presence, so future research could aim at determining lecturers’ perceptions regarding the matter. In addition, the present investigation was based on one school of business as the unit of analysis; hence the findings must be validated among other schools of business within Australia and overseas.
REFERENCES


Siew Woei L and White G (2010) The promotion of critical thinking through the use of an online discussion board: Asking the right questions? in Z. Abas et al. (Eds), *Proceedings of Global Learn Asia Pacific 2010* 4277-4283. AACE.

Table 1: Sample Characteristics

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>POSTGRADUATE</th>
<th>UNDERGRADUATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course/Program:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBA</td>
<td>80%</td>
<td>69%</td>
</tr>
<tr>
<td>BBUS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mode of Study:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus</td>
<td>100%</td>
<td>43.0%</td>
</tr>
<tr>
<td>Off-campus</td>
<td>21.4%</td>
<td>35.7%</td>
</tr>
<tr>
<td>Mixed mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Number of Subjects Completed:</td>
<td>5.4</td>
<td>8.2</td>
</tr>
<tr>
<td>Broadband for Accessing Internet:</td>
<td>92%</td>
<td>93%</td>
</tr>
<tr>
<td>Level of Competency in the online environment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>57%</td>
<td>73%</td>
</tr>
<tr>
<td>Medium</td>
<td>40%</td>
<td>22%</td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>53%</td>
<td>40%</td>
</tr>
<tr>
<td>Female</td>
<td>47%</td>
<td>60%</td>
</tr>
<tr>
<td>English as First Language:</td>
<td>93%</td>
<td>90%</td>
</tr>
</tbody>
</table>

Table 2: Usage and Evaluation of the Online Learning Tools

<table>
<thead>
<tr>
<th>TOOLS</th>
<th>POSTGRADUATE USAGE</th>
<th>UNDERGRADUATE USAGE</th>
<th>TOOLS</th>
<th>POSTGRADUATE USAGE</th>
<th>UNDERGRADUATE USAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion Board</td>
<td>96.7%</td>
<td>95.0%</td>
<td>Discussion Board</td>
<td>96.7%</td>
<td>95.0%</td>
</tr>
<tr>
<td>Emails</td>
<td>93.7%</td>
<td>95.0%</td>
<td>Emails</td>
<td>93.7%</td>
<td>95.0%</td>
</tr>
<tr>
<td>Chat Room</td>
<td>50.8%</td>
<td>38.0%</td>
<td>Chat Room</td>
<td>50.8%</td>
<td>38.0%</td>
</tr>
<tr>
<td>Podcast</td>
<td>27.9%</td>
<td>67.0%</td>
<td>Podcast</td>
<td>27.9%</td>
<td>67.0%</td>
</tr>
<tr>
<td>Special Podcast</td>
<td>26.2%</td>
<td>52.0%</td>
<td>Special Podcast</td>
<td>26.2%</td>
<td>52.0%</td>
</tr>
<tr>
<td>Special Vodcast</td>
<td>11.5%</td>
<td>21.0%</td>
<td>Special Vodcast</td>
<td>11.5%</td>
<td>21.0%</td>
</tr>
</tbody>
</table>

*difference significant at a 0.05 level