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Social presence in online learning communities

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Abstract

Tools for online communication are increasingly used in education, but they are not without problems. One significant difficulty is a lack of social presence. Social presence relates to the need for users to feel connected with each other and to perceive each other as real people. Low social presence can be a particular problem in text-based asynchronous systems such as discussion forums. These do not offer visual or auditory cues to communication, and there can be long delays between messages. This can lead to feelings of impersonality, and hence disengagement from online learning.

The more recent literature on social presence suggests that it is influenced by the behaviour and interactions of participants, as well as by the characteristics of the communication medium. Learners in an online community can therefore increase social presence by communicating in ways which are perceived as 'warm' or 'sociable', and can compensate for the lack of richness of the medium. Moreover, features of communication systems can be used to encourage these types of interactions, and to ease communication. For example: use of member profiles can help participants feel that they know each other better; and use of synchronous communication can avoid frustrating delays between messages and responses.

These possibilities, which are advocated in the research literature, also emerged from interviews carried out with students at the UK Open University. These interviews aimed to explore students' experiences of using online communication in a distance learning course, and their ideas for improvements to online communication systems for learning. The interviews revealed problems, such as poor communication and misunderstandings, associated with a lack of social presence. Students highlighted system features that they found useful, or would like to have available, which would help to address these issues. In particular, they suggested that increased use of member profiles would help them get to know each other better, and that synchronous communication tools such as instant messaging would be of practical and social value.

It is concluded that social presence in online learning communities can be enhanced by changes to the design and use of communication systems, together with attention to styles of communication within these environments.

Keywords

Social presence; online communities; learner's experience; synchronous communication; member profiles.

Introduction

In recent years there has been considerable interest among educators in the use of online communication for learning. With the prevalence of virtual learning environments and 'web 2.0' software, online communication is now used to support learning and build community in universities, colleges, schools and other organisations. This has considerable benefits for learners and for teachers, but it also raises problems. One common difficulty is that learners can find online environments impersonal, resulting in low levels of engagement and participation, and hence less effective learning. This feeling of impersonality can be characterised as a lack of 'social presence' (Short et al. 1976).

Social presence theory relates to whether participants feel that they are interacting with real people when they are online (Gunawardena & Zittle, 1997). Low social presence can be a particular problem in text-based asynchronous communication, for example in online discussion forums, because of the lack of body language, and the delays between messages. Some learners therefore find this type of communication cold and impersonal.

This can prevent them from participating confidently and openly in online learning. In the extreme it can lead to withdrawal from the online environment (Wegerif, 1998).

This paper explores the theoretical concept of social presence in relation to online learning communities. It suggests that social presence is not simply a characteristic of the communication medium, but also of the way learners use it to relate to each other. Based on a review of published literature, and interviews with students, the paper discusses two features of communication environments which may help to increase social presence. These are: member profiles; and synchronous communication tools. The paper discusses the extent to which these features might enhance a sense of presence for members of an online learning community.

Benefits and problems of online communication for learning

Many educators and researchers have reported on the benefits of online communication for learning. Online communication offers increased opportunities for dialogue and collaborative activities, and overcomes limitations due to distance and time. For example, Browne (2003), reporting on experiences from an online Masters degree, found that the quality of discussion from students was very high. Staff and students commented on the value of having time to reflect on others' contributions and hence give more considered responses. Coppola et al. (2002), who interviewed 20 online teachers, found that staff had a closer relationship with their students online than face-to-face:

In spite of the lack of nonverbal expression, faculty found that their relationship with the students online was more intimate, more connected. (p. 179)

In this study, staff reported that communication was improved generally. This was in part because of the convenience and efficiency of group-based asynchronous interaction. It was also because online communication seemed less public to students than face-to-face communication. McConnell (2006) argued that the use of online communication in a social constructivist framework can provide significant benefits for students. The course he discussed placed a strong emphasis on collaborative learning and community. Questionnaires to students demonstrated that they valued the approach, and McConnell concluded (p. 89):

The results are extremely encouraging, showing that when e-learning courses are designed with some care and attention to the meaning of learning in groups and communities, students' experiences can be very positive.

The benefits of online communication for learning are considerable, but practitioners and researchers have also identified problems. Rowntree (1995) pointed out difficulties arising from the textual nature of most online communication environments:

It lacks the visual and auditory cues on which we usually rely in interpreting other people's meanings (and their responses to what we have said). (p. 210)

He discussed how this can have a negative affect on students, particularly those new to online learning. In an evaluation of the course Rowntree was discussing, Wegerif (1998) reported the view of one student that:

It is a cold medium. Unlike face to face communication you get no instant feedback. You don't know how people responded to your comments; they just go out into silence. This feels isolating and unnerving. It is not warm and supportive.

This comment highlights problems with asynchronous communication tools such as discussion forums. Asynchronous tools can be frustrating because of the time lag between sending a message and getting a response (Bonk et al., 2001). This time lag makes decision-making particularly difficult (Sproull & Keisler, 1991 p. 69).

Vonderwell (2003) identified problems with students not engaging each other in dialogue, and finding the online environment impersonal. One student commented:

It is not like a person to person interaction. It's more like computer to computer interaction. (pp. 83-84)

McConnell (2006) also reported problems related to the interpersonal aspects of online communication. Students sometimes felt isolated, dominated by other participants, or anxious about presenting their ideas publicly (p. 69-70). Murphy et al. (2001) drew together a collection of case studies where early adopters of online communication for learning discussed their practice and experiences. A major concern was low participation and interactivity, together with other issues caused by lack of immediacy and of non-verbal cues. Some students perceived the medium as 'faceless', and misunderstandings could arise. The tone could become unpleasant, even leading to 'flame wars'. Problems of this kind were particularly off-putting to students who were new to online learning.

Social presence in online learning communities

The brief review of benefits and problems above has highlighted a number of issues concerned with how students relate to each other in an online environment. These issues are important because they affect levels of participation and interaction, and therefore have an influence on learning. Unless students feel comfortable in an online environment, they may not participate openly, and so may not gain the benefits that an online learning community can provide.

In the literature on online communication these social issues are often conceptualised as relating to a lack of social presence. If there is social presence, participants feel that they are communicating with real people, even though the communication is mediated by communication technologies (Lombard & Ditton, 1997). The concept of social presence originated with Short et al.'s (1976) analysis of human communication via different media, where it was defined as the:

degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships. (p. 65)

Definitions of social presence have been given subsequently by other researchers. That of Gunawardena and Zittle (1997, p. 8) expresses the idea clearly and succinctly:

the degree to which a person is perceived as "real" in mediated communication.

Social presence is an important precursor to collaboration and fruitful discussion (Garrison & Anderson, 2003). Learners need to feel a link with others if they are to genuinely share ideas and exchange views. This does not mean that the focus is on social interaction or 'niceness' at the expense of intellectual exchanges; it means that learners develop trust and respect for each other, and for each others' ideas:

[...] social presence does not mean supporting a 'pathological politeness' where students will not be sceptical or critical of ideas expressed for fear that they might hurt somebody's feelings and damage a relationship. Social presence means creating a climate that supports and encourages probing questions, scepticism and the contribution of more explanatory ideas. (Garrison & Anderson, 2003, p. 50)

Social presence can be viewed as primarily influenced by the medium of communication. From this perspective, a videoconference offers higher social presence than a discussion forum because participants can hear each others' voices and see each other. These visual and auditory aspects are characterised as 'cues' which aid communication (Preece, 2000, p. 151). The synchronicity of the medium also has an important role to play (Dennis & Valacich, 1999). This focus on the medium of communication is in line with Daft and Lengel's (1986) concept of 'media richness', which considers the affect of the difference communication channels that a medium provides.

However recent research considers that the behaviour and attitudes of the participants makes a significant contribution to the degree of social presence experienced, and a number of educational researchers have focused on this aspect. For example, Gunawardena and Zittle (1997) investigated the experience of social presence of learners who were communicating online. A questionnaire given to participants measured (among other characteristics): participants' sense of social presence; and their satisfaction with the online learning experience. The results suggested that social presence was a strong predictor of satisfaction. The authors concluded:

In spite of the characteristics of the medium, student perceptions of the social and human qualities of CMC [computer-mediated communication] will depend on the social presence created by the instructors/moderators and the online community. (p. 23)

Rourke et al. (2001) used a different approach to measuring social presence, considered as part of the 'community of inquiry' framework for online learning (Garrison & Anderson, 2003). They carried out a content analysis of students' messages in order to establish a measure of social presence. They commented that, when social presence was high:

[t]his environment of approachability and closeness encourages the students to regard the conference and their interactions as valuable and educationally profitable.

Swan (2002) used Rourke et al.'s (2001) method to analyse social presence in an online postgraduate course, and argued that her findings supported an equilibrium model of social presence, where:

participants in online discussions make up for the lack of affective communication channels by engaging in a greater number of verbal immediacy behaviours (p.43).

These researchers all point to the behaviour of participants in online learning communities as influencing the degree of social presence, and compensating for the text-based medium's lack of richness. When using a medium which does not itself provide cues to support communication, some students use the content, timing and style of their messages to add 'social glue'. However, this takes effort, time, and sensitivity, so not all students will do this.

Research by Haythornthwaite et al. (2000) suggests aspects of online and blended learning environments which may help to support social presence. The researchers studied the development of an online community in a part-time Masters degree consisting of an initial face-to-face 'boot camp' followed by study via asynchronous and synchronous communication. Interviews with students revealed that the face-to-face period helped give a clear sense of others who were part of the community. One student commented:

Even though they would be just a name on a screen in the chat room or on the webboard, you still had the memory of knowing them from boot camp, which was such an intense experience. That gave you a connection. It was almost like they were there. You could imagine them. (Haythornthwaite et al., 2000)

Students also said that synchronous communication was helpful in alleviating feelings of isolation, and some students used email in a near-synchronous way when online at the same time as others. Haythornthwaite's findings suggest that members of an online learning community might benefit from:

- a way of visualising each other when they are online;
- the additional use of synchronous communication.

These possibilities are discussed in the following two sections.

Member profiles to enhance social presence

In a text-based medium such as a discussion forum, there are few visual cues to distinguish one participant from another. To compensate for this, many practitioners of online communication advocate the use of member profiles. Zimmer et al. (2000), in their discussion of building online learning communities, advise:

setting up the community in a way that allows individuals to gain an understanding of who is addressing them in what can be an impersonal textual environment. This could include: photos, résumés and biographies and general introductions to the online group.

Barab et al. (2003) encouraged members of their Inquiry Learning Forum (ILF) online community to create member profiles so that they could learn more about one another. Similarly Bonk et al. (2001, p. 81) asked students using their 'Smartweb' system to write information, such as their hobbies and where they lived, into their student profile.

It is recommended practice to include a photograph in a member profile. Mason & Bachsich (1998, p. 255) advocated the use of photos 'so that users can remind themselves of the person who has sent a particular message'. Nicol et al. (2003, p. 273) described a system used by the Open University of Catalonia, where:

each online contribution is accompanied by a digitized thumbnail picture of the sender in order to personalize contributions with a social reference.

The Moodle virtual learning environment adopts a similar approach, with messages including a photo or image representing the sender.

Synchronous communication and social presence

The preceding discussions have focused primarily on asynchronous communication, but synchronous communication may offer higher levels of social presence because of the immediacy of the interactions. McInnerney and Roberts (2004) suggest that asynchronous communication may not provide the necessary immediacy for social interaction, but that when using synchronous communication:

a sense of social presence develops that often leads to a greater sense of community. (p. 75).

Research exploring the possibilities of synchronous communication is considered below, beginning with investigations of synchronous chat and moving on to consider instant messaging.

Synchronous chat

In a synchronous chat system (often called a chat tool or chat room) participants are online at the same time, so there is minimal delay between communications. This makes chat a lively and engaging medium, and some educators have been keen to explore its possibilities.

Honeycutt (2001) compared the use of chat and email for peer-review tasks in courses on writing. When using chat, it was found that student reviewers exhibited greater personal involvement with the student writers. Pilkington et al. (2000) investigated the use of synchronous chat and discussion forums by full-time and part-time students using the *WebCT* virtual learning environment. The researchers reported that students' interactions were of good quality, but participation by the part-time students was low, largely because of the timing of the sessions. Neither of these tools adequately fulfilled the distance students' needs for a sense of presence, but students felt that chat was better for this purpose, because of the speed of response.

Instant messaging

Like chat, instant messaging (IM) is primarily text-based, but it adds a level of awareness of others who are online. Users can define lists of 'contacts' or 'buddies', and the IM tool will notify the user when these people come online. The user can see at any time the status of others (e.g. 'online', 'offline' or 'busy').

Nardi et al. (2000), studying the use of IM in the workplace, suggested that it is used to 'maintain a sense of connection to others' (p. 79). Senders often used a short enquiry message, such as 'Are you there?', and waited for a response before proceeding. Compared with similar communications via email, IM messages gave a greater sense of a shared context. One participant commented:

You feel like you know where other people are, so you feel like you're not the only one working on a weekend. To me it's just fascinating to know that someone else is somewhere else doing something while you're doing something. You feel like you're in this world together, so you create a little universe. (p. 85)

Hrastinski (2006) investigated an instant messaging system in a distance learning course. The course already used asynchronous communication, but students found the time lags frustrating. Students used the IM system mainly for their course work, rather than for social interaction. This was partly because students did not know each other well, and partly because there was not a critical mass of students online. Nicholson (2002) also investigated the use of IM in a distance learning course. The course was mainly taught asynchronously using the

WebCT virtual learning environment , but at the request of students, an IM service was provided. Some students were ambivalent about contacting other students whom they did not know, but the students who used IM reported feeling a stronger sense of community than those who did not. One student commented:

Nothing else I used to communicate was as funny and friendly and warm as the conversations I had via IM. (p. 369)

As the brief reviews in this section have shown, findings on the potential of synchronous communication for education are mixed, but there is an indication that real-time chat and instant messaging can be beneficial for enhancing social presence. In particular, when using an IM system, students may feel reassured to know that their classmates are online and can easily be contacted in real time for help or just to keep in touch.

Social presence in an online learning community: students' views

In this section we will move on to explore in more depth the views of learners on the issues and system facilities discussed above. The context is a research study undertaken at the UK Open University, where students were interviewed and asked for their views on using an online communication system (*FirstClass*) as part of their studies. The interviewees (5 male and 5 female) were distance learners studying a 9-month part-time course on Information and Communication Technologies. The FirstClass system was used for peer learning and to support a group project. Students interacted within:

- whole-cohort forums (with potentially more than a thousand students);
- tutor groups (of about 20 students, together with their tutor);
- small groups forums (4-8 students) for assessed group projects.

Students were asked about any problems they experienced when using online communication in the course, and any suggestions they had for improvements to future online communication systems.

A major theme from these interviews was social presence. Although this term was not used by students, many of their concerns revolved around the concept of social presence. Issues which were mentioned included:

- the need to get to know something about each other;
- the benefits of real-time communication.

When discussing problems, the students commented on the tone of some messages, which could be unpleasant. Related difficulties were that some students dominated the forums and that messages could be easily misconstrued. Specific issues raised by students were the time lags between posting a message and getting a response, and the difficulty of contacting other students if they did not respond to messages. This was a particular problem for group projects.

Students mentioned a number of features of FirstClass which they found valuable. For example, the History feature, which shows who has read a message and when, was seen as valuable for finding out whether a group member was reading the forum messages, even if they had not yet replied. This provided a degree of awareness of others, and of others' activities. A number of students mentioned the value of member profiles and of real-time communication. These two facilities are discussed further below.

Member profiles

In the interviews students mentioned the need to learn more about others. In the whole-cohort forums they would have liked to know who was a student and who was a tutor, and what courses students had taken previously. Students need to know something about the people they are communicating with, so that they can gain a sense of a real person behind the screen. This explains why a number of the students valued the member profile facility (which in FirstClass is called a résumé).

Résumés were mentioned as helpful by a number of students, one of whom said she is "disappointed if someone hasn't got one." Students expressed a wish that more participants would use the résumé feature. The view was that this would help get them to know each other, and would therefore ease communication. Some students

suggested that users should be required or prompted to complete a résumé, or that there should be an icon indicating whether or not a user has a résumé.

Synchronous communication

Synchronous facilities formed a strong theme from the students. Some found the FirstClass chat tool helpful and motivating, particularly when carrying out group work. Some students used the FirstClass forum facilities, but tried to have all members of the group online together. This helped with decision-making and removed the frustrating delay between submitting a message and getting a response.

A facility which many students wanted was an alert when certain people came online, as in the 'buddies' facility of an instant messaging system. Students wanted to be told when members of a particular group (their friends, their project group or their tutor group) logged on. This would enable them to make contact via chat, email or in a forum. Several student also mentioned the possibility of web-cam or voice interaction. As more users gain access to audio and video facilities, and have broadband communication links, multimedia modes of synchronous communication could be of significant value for increasing social presence.

Conclusion

The concept of social presence can be used to shed light on aspects of online communication for learning. Asynchronous online communication can seem impersonal, leading to misunderstandings, poor relationships, or lack of participation. This can be characterised as a lack of social presence, and leads to less effective learning. Learning is a social process which relies on interaction and open communication. If learners do not perceive online communication to be 'real', there is less chance that they will learn from this communication.

Social presence is influenced by features of the communication environment, and also by the behaviours of participants within this environment. Moreover, features of the environment can affect how people behave towards each other. It is therefore of value to consider how communication systems for learning could be designed and used in ways which increase social presence.

One approach is to help learners to feel that they know each other, by encouraging the use of member profiles. Member profiles can help students to learn more about each other, and therefore to feel a more personal connection. A further possibility is to make more use of synchronous communication. Facilities such as instant messaging may help students feel a greater sense of presence by enabling them to communicate in real-time, and be aware of others who are online.

Although features such as member profiles and instant messaging may be helpful, an important consideration is to encourage and exemplify styles of interacting which can increase social presence. This means helping students to attend to the tone and content of their contributions, and to support each other. As one student commented:

It does take time to feel part of a group of real people, not computer-generated answers. But it does happen, especially if you ask for and receive or give help.

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