

Online Learning Community Research - Some Influences of Theory on Methods

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ABSTRACT

This paper presents different perspectives on research in the field of online learning communities. To highlight the range of theoretical backgrounds and frameworks that are influencing research in this area, a brief outline is given of investigations into social networks and bonding; affordances of online communities; identity and presence; and community 'building'. This serves to emphasise the diversity of approaches being applied, and the value of drawing from the theory of a wide range of disciplines. Combined with the difficulties of even attempting to compare methodologies or results across studies in this area, the need for some form of common ground is very clear.

Keywords

Online learning community; Methodology; Theory; Social networks; Affordances; Identity; Sense of community

OVERVIEW

In addition to reporting on the impact of ICT (Information and Communication Technologies) (Squires et al, 2000) researchers have begun turning their attention to the significance of online community in learning and teaching (Rovai, 2002; Swan 2002; Tu & Corry 2002). Yet, as Paccagnella (1997) notes the "interpretative flexibility of computer networks also means that academic researchers have been studying them from a wide range of perspectives and with a variety of methods". This is reflected in the range of disciplines that can offer insights into the study of online learning 'communities' – disciplines such as anthropology, education, linguistics, psychology, and sociology. While Paccagnella goes on to reference a range of studies outside of the domain of education, there are numerous learning-related studies that would match with his categories. For example, ethnographic accounts of specific online learning communities (Davis & Denning, 2000; Rice-Lively, 1994); evaluative studies of costs and benefits (Bacsich, & Ash, 2000; Brown, 2001); analysis of social climate /networks (Oren, Mioduser, & Nachmias, 2002; Wegerif, 1998); comparisons of face-to-face and online learning communities (Rovai, 2002); electronic surveys (Weedman, 1999); innovative gender studies (Yates, 2001) among others.

Online learning communities have thus become a popular focus for research. This paper will therefore start with a brief overview of some of the research approaches used for online learning communities, in particular highlighting the theoretical frameworks that have informed the choice of methodologies. In relation to online learning, researchers tend to adopt approaches used in their original subject area. It has been suggested that this may lead to theories from less well-represented disciplines being overlooked (Oliver et al, 2002). Reviewing previous and ongoing work from across the disciplines is therefore vital. The intention in this paper is not to attempt to provide one unified theory, but rather to start to review the main theoretical areas that are likely to contribute to research in this area, and in doing so to draw attention to some of the key issues for research in networked learning and online learning communities.

One such issue relates to how we might categorise different kinds of online communities. A general classification schema suggests using the following characteristics: attributes, such as shared interests; supporting software; extent of relationship to physical communities; boundedness, i.e. the extent of social relationships within and outside of a community (Lazar and Preece, 1998). In relation to learning communities, though, we will also want to consider such relevant context categories as education sector, (eg school, further/higher education, continuing professional development), subject discipline, learner experience (of subject, of learning) whether the intended learning is considered to be formal or informal, etc. There are several points for debate regarding the importance of contextual factors, about how "FTF and CMC data carry

knowledge of field”, i.e. the natural setting of the research, and how they might be defined by field (Mann & Stewart, 2000). This extends to questions of what contextual data needs to be recorded to ‘define’ the field of study, and how this might be achieved so as to support field investigation from a range of perspectives, as identified above, or to ground comparison between cases where it is sensible to do so.

Much of the research in this area gives community an almost exclusively positive status. If, however, pedagogy is to “reflect less hierarchical, and more participative principles” then the potentially negative consensus-driven views of community should not be forgotten (Hodgson & Reynolds, 2002). Research should also therefore look to investigate whether in setting boundaries some learners are excluded, or if the pressure to conform results in the devaluation of differences. Research itself clearly needs to reflect on issues of inclusion and alienation. It needs to ensure appropriate triangulation of methodologies, so that they do not inadvertently conspire to silence individuals by only using methods such as transcript analysis, which by definition only takes account of people who contribute to discussion.

COMMUNITY

‘Community’ has long been described as invoking an “emotive charge” (Amit, 2002). In the past, this was thought to be derived from the ideal of *Gemeinschaft* or the “multiplex, long-standing interpersonal relationships of deep intimacy and familiarity”. While this depth of social attachment is perhaps less common in today’s world, the “emotions attributed to collective attachments have hardly disappeared” (Amit, 2002). Researchers have accounted for this anomaly by emphasising the imagined or symbolic nature of community. Indeed, online communities could be likened to Anderson’s (1991) concept of ‘imagined communities’ where “belief in their presence is their only brick and mortar”. Despite this attempt to explain the ongoing appeal of community, we are still left in the “hiatus between idea and action”, questioning how the emotive charge associated with community is brought into effect, and therefore how the positive action it *may* invoke can be researched and realised in the online learning context (Amit, 2002).

INVESTIGATING COMMUNITY IN ONLINE LEARNING

As indicated, research into the significance of online community in learning and teaching is being addressed from a range of perspectives. Influences can be seen from disciplines such as anthropology, education, linguistics, psychology, and sociology. This paper will outline some of the research approaches currently in use, and in doing so highlight the underlying theories that researchers have used to inform their choice of methodologies.

Social networks and bonding

It has been suggested that research into community should focus on social networks of relationships, given that “modern communication technologies such as the internet are opening up opportunities for new forms of human association” (Slevin, 2000). Indeed, Etzioni and Etzioni (1999) refer to community in terms of two attributes: bonding and culture. They describe bonding as “a web of affect-laden relationships that encompasses a group of individuals-relationships that crisscross and reinforce one another, rather than simply a chain of one-on-one relationships”.

In the context of education, relationships or ‘interpersonal exchanges’ have been described as providing the “building blocks for distributed online learning communities” (Haythornthwaite, 2002). This sociological approach advocates the use Social Network Analysis (SNA) to uncover how “connectivity among all members of a social system” is created. SNA can be used to examine the types of resources exchanged (such as social or emotional support, information, goods); frequency of exchange; direction of flow of resources; whether the exchange is voluntary; and so on. In a number of studies, Haythornthwaite (2000, 2002) used questionnaires and interviews to gather data to identify “who talks to whom about what”. The data was then analysed “to see the extent to which group members are in contact with each other, and what types of relations form the basis of the contact”.

Haythornthwaite (2002) notes that SNA can also be used to review the distribution of participation, as well as variations in the level of influence held by individuals within the network. This is particularly important for learning communities, as it may aid in identifying “which types of exchanges matter”. For example, Haythornthwaite (2002) concludes with her findings that “weakly tied pairs are likely to constrain their interactions to class-mandated media” while “strongly tied pairs find many ways to communicate, but also need

many ways to communicate". Questions of choice of media to support online learning communities might therefore better be framed around 'how many' rather than 'which'.

Affordances of online communities

Again focusing on social interaction, Mynatt et al (1998) describe community in terms of bounded sets of relationships. They propose that one useful framework of reviewing communities would draw on Gibson's concept of 'affordances'. (Although criticised by some as being too extreme, the affordance of an object "refers to the perceived and actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used" (Norman, 1998, p.9). They go on to suggest a framework of five affordances of online communities: persistence, periodicity, boundaries, engagement, and authoring. This framework has been applied to an online masters programme "to illustrate the interactions, artefacts, and expectations that shape this community" (Ruhleder, 2002).

Ruhleder (2002) used a range of methods, including on-campus participant observation; reviews of online text and audio interaction logs; and interviews with instructors, staff and students. The data from these were then applied to the five affordances framework. She concludes that the framework does help to "identify and articulate" how the online environment is successful, and suggests that it may represent the start of a "shared vocabulary through which we can share and analyze our experiences".

Identity and presence

The "sense of awareness that creates senses of who I am and who others are can be called a sense of presence" (Cutler, 1995). It has been suggested that creating a sense of presence requires reflection on one's concept of self, followed by personal disclosure. Cutler proposes that disclosing personal information encourages others to do so, enabling greater understanding, and thereby the development of trust and support. In essence, "disclosure creates a kind of currency that is spent to keep interaction moving" (Cutler, 1995).

Various authors have highlighted the significance of identity, presence and trust in online learning communities. Gunawardena and Zittle (1997) used questionnaires and analysed email exchanges for signs of presence. They found that "social presence is a strong predictor of [learner] satisfaction in a computer conference". While McConnell (2002) emphasised the importance of "developing a sense of trust" in his study of three postgraduate online learning groups. McConnell found that those groups with a high degree of trust actively supported each other, which was demonstrated by "making every effort to 'listen' and respond quickly", sharing work and committing themselves to the group.

Community 'building'

Referring to community building, Brown (2001) describes a "three-stage phenomenon" of: making friends online; acceptance or conferment of community, identified as "when students were part of a long, thoughtful, threaded discussion on a subject of importance after which participants felt both personal satisfaction and kinship"; and camaraderie, identified as requiring a "long-term or intense association with others involving personal communication". Wegerif (1998) also investigated the idea of community conferment or sense of community in his study of a course delivered via an Asynchronous Learning Network (ALN). He noted that feeling involved in the community was vital to feeling successful in the course, and gives several recommendations for course design to maximise the social aspects of learning. These included overcoming differential access to the learning environment; encouraging use of a common language/tone; structuring the exercises to move from structured to open to allow familiarisation with the environment and other students; creating opportunities for student-led activities; allowing time for reflection on learning and ensuring the platform used enables structured discussion to take place.

Rovai (2002a, 2002b) has also written extensively on sense of community, proposing that four elements characterise educational communities: spirit, trust, interaction and learning. Spirit includes aspects such as bonding and friendship that impart a feeling of belonging to the student. Trust includes being able to rely on the communications made by the other students and a belief that they want to help other members of the group. Interaction involves both work related and social communications, and can be driven by the instructor or by the group itself. Finally, the learning element provides a mutual goal in the community and group members "grow to feel that their educational needs are being satisfied through active participation in the community" (Rovai, 2002b). Each of these features are undoubtedly important, and indeed many correspond to other models of community such as the attribute of bonding (Etzioni & Etzioni, 1999) discussed above, and McConnell's

concept of trust (2002), however it seems unlikely that they encompass all aspects of community and should be carefully examined to establish whether other elements maybe equally significant.

Rovai (2002b) studied seven asynchronous learning network (ALN) courses and seven traditional lecture based courses using his own 'Sense of Classroom Community Index' (SCCI). The SCCI consists of ten items per element identified above (spirit, trust, interaction and learning) rated on a five point likert scale. Rovai found no significant difference in the feelings of community experienced by students on the ALN compared with the traditional courses. In fact, the five highest scoring ALN courses had an overall significantly higher sense of community than the face-to-face courses, demonstrating that online learning has the potential to fulfil the four elements identified at least as well as face-to-face courses in educational communities. These results are encouraging for proponents of online learning communities; however, this instrument (the SCCI) has not been widely applied and as such requires further verification. Rovai does collect further information in the form of posts to the discussion board and other statistics often collected by the ALN course environment, but does not include any insights gained from these when reporting his results.

CLOSING COMMENTS

Clearly, no one paper can provide a neat summary or model of current research in the area of online learning communities. However, the brief outline above of investigations into social networks and bonding; affordances of online communities; identity and presence; and community 'building' serves to emphasise the diversity of approaches being applied, and highlight the value of drawing from the theory of a wide range of disciplines. In some instances, it can be seen that the application of theory is not extensive, although that may relate to the current stage of development of theory. After all, as De Laat and Lally (2003) note in their discussion of the complexities of applying theory to research into online teaching and learning practice "the challenges to be faced in researching learning are at once attractive, but also formidable". Combined with the difficulties of even attempting to compare methodologies or results across studies in this area, the need for some form of common ground is very clear.

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