



Literature Review

Forming communities of learners online: The culture and presence of asynchronous discussion groups

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Introduction

In recent years, online learning has become a growing concern for both governments and learning institutions. Such is the optimism projected by the introduction of online learning to tertiary education, that it has been likened to the discovery of paper and the invention of the printing press (Rudestam & Schoenholtz-Read, 2002). Termed *revolutionary* by its advocates, the emergence of online learning is considered instrumental to the transformation of the landscape of higher/further education (Shapiro & Hughes, 2002). Since the 1990's, online education has experienced astronomical growth especially in the US (Berenson, Boyles & Weaver, 2008). By 2003, nearly five percent of all university students were involved in degree programmes where all the content was presented entirely online, representing an estimated \$2.4 billion in tuition fees (Gallagher, 2003). This is supported by research by the Sloan consortium that shows the number of students in higher education enrolled in an online course during the fall 2006 term was close to 20% of the total population of 17.6 million students (Allen & Seaman, 2007). The advent of web technology has brought a range of study options for students. These options range from the traditional face-to-face teaching and correspondence-learning through to complete online courses where all contact and resources are available to students on the Internet (Allen & Seaman, 2007). This shift to online learning represents the most dynamic sector of adult education and is becoming the dominant mode of instruction in distance learning (Edelson & Pittman, 2001).

Online learning has been described as having the capacity to “inevitably transform all forms of education and learning in the twenty-first century” (Garrison & Anderson, 2003, p. 2). Not only is online learning seen as giving access to those learners previously excluded through geography, financial considerations or time restraints (Kanuka & Rourke, 2008), but online learning also promises to be more cost effective. Online learning allows for economies of scale in that once an online course has been developed, the class size is only limited by server capacity and bandwidth (Cook, 2007). According to Leonard (1997), an estimated 80% of the costs of facilities, faculty and administrators could be eliminated by offering online learning, savings which could then be passed on to the students.

Furthermore, online learning also signals a shift in pedagogy that has “the potential to significantly enhance the intellectual quality of learning environments and outcomes” (Garrison & Anderson, 2003, p. 2). Proponents of online learning see the social software tools of Web 2.0, such as wikis, weblogs and really simple syndication (RSS) feeds, as having the capacity for facilitating greater learner choice and autonomy (McLoughlin & Lee, 2007). This represents a real transformation in terms of connectivity for students who chose to study through distance learning. The traditional mode of curriculum delivery for distance learners is through correspondence courses whereby students receive course materials through the post and



only have contact with their lecturers by the phone or email. With no opportunity to discuss their assignments with their peers, distance learners miss out on the normal social interaction that happens in the face-to-face classroom. This mode of studying leaves students reporting feelings of alienation and isolation (Galusha, 1997).

The transition to online learning for these students represents a significant shift towards greater connectivity and collaboration with other learners. However, the presence of Web 2.0 technology may not produce in itself collaboration. Cecez-Kecmanovic and Web (2000) state that: "We cannot assume that by providing technologically advanced environments such as web-mediated group work and discussion spaces, and instructing students about the task, purpose of group work and norms of behaviour, successful collaborative learning will naturally take place" (p. 83). For students who have previously studied through correspondence, it is vital that the institution has an understanding of the setting of the virtual learning community and how that can facilitate or hinder the kind of social interaction that will provide a welcoming environment.

This paper explores different conceptualisations of the virtual community, with particular attention to the phenomena of asynchronous discussion forums. It discusses Garrison and Anderson's (2003) three indicators of presence in an online learning environment within a context of the dynamic building of culture in an online community. The paper focuses on culture as the product of social interaction and through Latané's (1996) Dynamic Social Impact Theory and identifies and explains the processes of culture formation that impact on the role of e-Lecturers in supporting student learning in an online learning environment.

Virtual learning community

Jones (1997) identifies four components necessary for the facilitation of community in a virtual settlement; these are a minimum level of interactivity between participants, a variety of communicators, a common public space such as a discussion board, and a minimum level of sustained membership. For this to occur there must be an alignment between the technological capacity of the Internet platform and the educational philosophy of the host institution. The way in which the virtual learning community is structured is critical to the shape and effectiveness of the online culture that emerges.

One of the most influential commentators on the virtual community is Howard Rheingold. Rheingold (1993) saw virtual communities as having the same capacity for facilitating interaction between people as the physical environment. He considered online communities to have the "capacity to challenge the existing political hierarchy's monopoly on power communications media, and perhaps thus revitalise citizen-based democracy" (Rheingold, 1993, p. 14). The proliferation of online communities would exemplify a power structure model that is decentralised, informal, eclectic and essentially self-governing. In such an arena, individuals would be able to articulate their opinions, engage in debate and exert a more direct influence on society (Hass, 2004). Thus the virtual community was perceived as a force for greater democratisation of society. Goodfellow (2005) asserts that this idealisation of the virtual community has transferred significantly to educational practice in western formal and informal contexts.

Advances made in technology from Web 1.0 Read-Only Web to Web 2.0 Read-Write Web have accelerated the trend to a more participatory model of the virtual community. Web 2.0 allows virtual communities to synthesise



technologies such as Blogs, Facebook, and Del.icio.us and attain a greater level of reciprocity. According to Siemens (2008), Web 2.0 is characterised by social software, shared information, negotiated meaning and the mutual creation of knowledge. For students and faculty these advances allow for customisation, personalisation, and rich opportunities for networking and collaboration beyond the classroom (Byrant, 2006). Web 2.0 encourages an open culture whereby students are empowered to contribute, communicate, and collaborate to develop and share ideas, recasting students from passive consumers of content to active participants or co-producers of knowledge (Klamma, Cao, & Spaniol, 2007). McLoughlin and Lee (2007) state that with the innovation of Web 2.0 “we are witnessing the rapid expansion and proliferation of technologies that are less about ‘narrowcasting’, and more focused on creating communities in which people come together to collaborate, learn and build knowledge” (p. 664). Hence the technological affordances of Web 2.0 facilitate the formation of online learning communities.

The proliferation of Web 2.0 technologies in formal educational settings is entirely compatible with social learning theories. These theories stress the centrality of the social context in learning and postulates that learning through dialogue is fundamental, particularly in higher education (Maurino, 2007). According to this paradigm, all higher mental processes take place between people before they are internalised, meaning that the process of articulating ideas and receiving feedback from a peer is essential for the learner’s cognitive development (Dysthe, 2001). In order to facilitate this process in an online environment, the learners and e-Lecturers must be engaged in a “continuing iterative dialogue” (Laurillard, 2002, p. 71).

For a virtual learning community to develop, participants need to have common interests and see each other as being valuable contributors to the group. Marsh and Richards (2001) argue that the learners need to be in communities of equals where they should be prepared to engage with and contribute to open, critical discussion of ideas. By creating a community of learners it is hoped that the learners that will support and guide each others’ learning so that collaborative learning will take place. Collaborative learning is characterised by the sharing of authority and knowledge between teachers and students (McInerney & Roberts, 2004). In comparison to cooperative learning, which is considered more structured, more prescriptive about classroom techniques and more directive to students about working in groups, collaborative learning is about acculturating learners into knowledge communities (Oxford, 1997). Thus collaborative learning and social learning theories share similar intellectual roots.

Increasingly the virtual domain is being seen by educators, instructional designers, developers and pedagogues in universities as offering a place dependent space for social and collaborative learning in which people can construct new social and cultural realities (Goodfellow, 2005; Abdelnour, 2002). Supporting Rhiengold’s (1993) democratic vision of virtual communities is the view that online learning communities provide learners with networks of mutual support, are the providers of information, and are the “carriers of the culture and corporate experience of the discipline” (Williams & Humphrey, 2007, p. 130). The creation of this community and the values it comes to hold are therefore central to the success of online learning. Thus the creation of a virtual learning community that allows the individuals rich opportunities to network and collaborate will facilitate for the emergence of a unique classroom culture that will establish norms of peer interaction (Rovai, 2001).



However, it is important to note that although recent technological advances encourage learner participation, this can be negated in a formal learning environment where the students' authority is ignored by the e-Lecturer whose intervention is symptomatic of an asymmetric power structure which "prevent[s] the construction of new knowledge" (Wiley, 2003, p. 24). In such asymmetrical interactions, communication lines tend to focus not around the learners but around the e-Lecturer whose authority rests on status, power and knowledge (Dysthe, 2001). Thus, in a virtual community where the voice of the learner is stifled, the culture which emerges is reflective of the existing hierarchical power structures supported by the e-Lecturers and the institution they represent. Therefore, it is essential to provide a critical analysis of the virtual environment where the learners and the e-Lecturers negotiate the values and norms that guide their interaction.

Asynchronous discussion forums

A central feature of online learning and the source of much of the optimism surrounding its transformative nature is the growing adoption of computer tools to foster online collaboration. The most commonly used tool in the context of facilitating online collaboration is the discussion forum (De Wever, Schellens, Valcke, & Van Keer, 2006). Discussion forums have been lauded from a pedagogical perspective for giving learners the space for the exploration and investigation of topics under the supervision of lecturers. This emphasis on the social construction of knowledge is central to the success of online learning. Gunawardena, Lowe and Anderson (1997) describe asynchronous communication as an important pedagogical tool that "enables groups that are separated in time and space to engage in the active production of shared knowledge" (p. 410). As such, much of the evidence suggests that not only are asynchronous environments conducive to learning, but in the way in which they encourage critical thinking, they may be superior in some respects to traditional classroom pedagogy (Potter, 2008). Garrison and Anderson's (2003) three indicators of presence support an analysis of these claims.

Social presence

Garrison and Anderson (2003) suggest "it is inconceivable to think that one could create a community without some degree of social presence" (p. 49). Social presence has been defined as "the degree to which participants in computer-mediated communication feel affectively connected to one another" (Swan & Shih, 2005, p. 115). Social presence is the learners' ability to project themselves as real people, with their own concerns, interests and motivations and is integral to social learning theories that situate learning as a social process. One factor that facilitates participant interaction is the choice of communication system. The degree of social presence afforded to learners varies according to the delivery system used to disseminate the communications and also the philosophy of the educational institution and the value they place on social learning theories.

Koh, Kim, Butler and Bock (2007) confirm that social presence is a critical factor for effective communications and that the need to support community members in developing a sense of social purpose within their text based exchanges is imperative. Social presence facilitates learning by setting a convenient climate in which learners are able to express themselves as individual participants and establish the norms and values that as a group they perceive as being important (Caspi & Blau, 2008). The degree to which students feel a part of the community has repeatedly been seen as an



important factor in student satisfaction and success in online courses (Swan & Shih, 2005). However, because of the lack of verbal cues, communications that take place in an online learning format can be perceived as being impersonal.

Tu and Mclsaac (2002) report that social presence is impacted by the students' social relationship and that the four major social relationships that emerge in order of importance are: demonstrating care, exchanging information, providing services, and maintaining existing status. Caring and information exchanges in social relationships are considered to impact online interactions positively, while status and service relationships result in negative formal communications. When students perceive the greatest presence of others in online discussions, they also project more of themselves in the forum (Caspi & Blau, 2008). Allowing students the space to interact without feeling the need to directly address the discussion topic as chosen by the e-Lecturer is essential for building the communicative community (Moore, 2002).

Cognitive presence

Much of the discourse about online learning derives from the belief that online learning and computer mediated communication, as represented by the asynchronous discussion forums, represent a shift away from instructivism, where knowledge is being seen as transferred from the lecturer to the learner, to constructivism where the learner shapes their own knowledge (Coates, 2006). In discussion forums, learners are free to communicate with one another and through discussion establish their own interpretation of course material and construct their own knowledge. Cognitive presence refers to the notion that asynchronous discussion forums will facilitate critical reflection and discourse. This assumes that the goal of an educational experience should be a deep and meaningful learning outcome (Garrison & Anderson, 2003). Just as social presence can influence affective outcomes in terms of learner satisfaction, so too can cognitive presence.

According to Garrison and Anderson (1993) the first phase of cognitive presence is the triggering event, associated with conceptualising a problem or issue. In a discussion forum this would involve the e-Lecturer presenting a topic that generates curiosity and questions among the learners and also encourages the learner to be reflective in their response. The second phase is exploration that involves the learner searching for relevant information and ideas. In a discussion forum this would include brainstorming ideas, learners offering supportive or contradictory ideas and concepts, and the soliciting of narratives that reflect the learners' own experiences. The third phase is integration which involves the learner using the new information and applying it to their current schema. The fourth phase is resolution; this sees the learner critically assessing the viability of the proposed solution through direct or vicarious application (Garrison & Anderson, 2003). Moore (2002) suggests that with time, the preponderance of discussion will be less around social factors and that the discussion forum will take on a stronger cognitive presence.

Teaching presence

Garrison and Anderson's (1993) third category of presence is teaching presence. The role of the lecturer is integral to the success of the online learning experience for the learners. Tu and Mclsaac (2002) report that



instructors with higher social presence are viewed by learners as more positive and effective which leads to an increase in affect toward the instructor and the course. Garrison and Anderson (2003) found that to encourage the community to be self-sustaining, the e-Lecturer must carefully consider the nature and timing of their responses, they posit that too many responses may stifle the learner's voice while not enough may leave them feeling abandoned. Garrison and Anderson (2003, p. 70) developed six indicators of teaching presence:

- o Identifying areas of agreement/disagreement
- o Seeking to reach consensus/understanding
- o Encouraging, acknowledging, or reinforcing student contributions
- o Setting climate for learning
- o Drawing in participants, prompting discussion
- o Assessing the efficacy of the process

Conrad (2004) found that the lecturer's awareness of issues of collaborative learning, of learners' social presence, and of the role of community in online learning environments is instrumental in the way that the community is formed. This forming of the community has been recognised as the "most difficult thing to accomplish in a course, and the most crucial thing" (Conrad, 2004, p. 37). Liu (2007) suggests that discussion forums with constant interaction, encouraged by the e-Lecturer, help to develop trust and reciprocity between community members (Liu, 2007). Coates (2006) supports this view commenting that the e-Lecturer should maintain a high level of participation in the discussion forums to encourage student participation.

Formal educational institutions have both a philosophical and a pragmatic interest in establishing a community of practice whereby the communities are corrective, identifying self-activating units that are capable of significant self management. This allows the e-Lecturer more time to concentrate on a larger number of learners, reduces their teaching load and repositions the responsibility on informal structures and organisations. Many researchers agree that the driving force behind the effectiveness of an online learning community is social presence (Garrison & Anderson, 1993; Koh, Kim, Butler & Bock, 2007). Through the facilitation of participant interaction over a prolonged period of time, patterns of behaviour that are reflective of the group norms and values will emerge. How this virtual online culture emerges is the focus of the following section.

Exploring culture

There are multifarious definitions of culture, Schien (1996) identifies the phenomena of culture as "the set of shared, taken-for granted implicit assumptions that a group holds" (p. 236). These assumptions in turn influence how the members of the group understand and respond to their environment. Rousseau (1990) identifies the content of culture as being the norms and values that shape people's patterns of behaviour which create an environment in which certain behaviors are encouraged and receive support. In a social learning culture that stresses the importance of values such as collaboration, support and demonstrating care for people, participants who demonstrate these values will be rewarded. In a classroom or learning environment, the student becomes apprenticed into a particular learning culture or environment through activities and through the modeling and coaching of the instructor and others (Oxford, 1997).



One of the most widely used and quoted studies on culture is the seminal work of Geert Hofstede. Hofstede (2005) defines culture as “the collective programming of the mind” (p. 5). This hardwiring of the mind, Hofstede (2005) suggests, is achieved while the child is very young and these psychological constructs essentially stay with that individual for the rest of their life. Moreover, these “patterns of feeling and potential acting” (p. 4) are transferred onto the next generation, so that generations may pass with core cultural values changing very little. Hofstede (2005) acknowledges that culture does change and uses the metaphor of the layers of the onion to help explain the way that culture can be seen as both static and dynamic.

The outer layer of the onion represents the superficial layers of culture, these are the symbols, heroes and rituals; the practices of culture which are the visible aspects of culture. These can change very rapidly either when different cultures come into contact with one another or when technology intercedes to push change. The inner layer of the onion are the core values of culture, which are considerably more stable than the outer layers and can remain unchanged for generations (Hofstede, 2005). For example, the use of the Internet has radically changed the way that people communicate thus changing cultural practices. However, the underlying assumption that informs the content of what they communicate will not be affected since these assumptions come from core cultural values which may take generations to change.

A shift from an essentialist to a negotiated perspective of culture recognises the ability of the individual and the group to be contributors of their own unique culture. In the latter, people negotiate, within their groups, the norms which will guide their actions, behaviours, individual roles and places within that society. Viewing culture as a negotiated process is more empowering in that the individual or the groups are seen to be creators of their own values and norms of behaviour as part of a self-organising complex system rather than simply being inheritors of antiquated beliefs (Latané, 1996). Computer-mediated communication provides a medium for observing how such cultures grow, since such a medium is able to group together a large group of people at the same time and record all episodes of communication between participants (Latané, 1996).

A constructivist understanding of culture contextualises participants immersed in a social network, interacting with each other to form their own culture and group identity. As such the participants develop their own group norms and ways of behaviour (Wang, Sierra & Folger, 2003). In an online learning environment, the online postings to a group discussion board will encourage social interaction from which overtime a particular culture will emerge. This culture will shape participants' responses and attitudes to each other and the course they are taking. This view of culture as existing at a micro level is supported by Shaprio and Hughes (2002) who recognise that within an academic course there “is a little micro-community of its own, with its own distinctive culture” (p. 96).

In the online learning environment, communities develop their own conventions for interaction and for what is acceptable and not acceptable behaviour (Baym, 1995). The way culture is formed is an examination of the way these tensions are resolved. This concept of culture is highly context dependent and observable in its formation. By examining the formation of culture within a virtual environment, it will empower the host institution to better guide that formation for the benefit of the learners.



Dynamic social impact theory

Dynamic social impact theory (DSIT) provides an explanation of how everyday communications can create and change culture from the bottom-up (Latané, 1996). DSIT discusses the creation, maintenance, structuring, and alteration of attitudes, beliefs and belief systems, and the dynamics of social influence (Fink, 1996). According to this theory, individuals participate in collective organisations and these organisations affect and are affected by individual behaviour. Communication is integral to the formation of culture, since communication and its media determines the extensivity of neighbourhoods, the sources and immediacy of the messages, and the number of others whose behaviour can be observed and thus be influential via social comparison process (Fink, 1996; Conway & Schaller, 2007). Communication here refers to any of the numerous ways that people use to express their beliefs, attitudes, preferences and behaviours to others, this can be verbal or behavioural (Harton & Bullock, 2007).

DSIT posits that the extent to which a person is influenced by another person is a joint function of strength, immediacy, and number of communications. A person may be considered to have influential strength if they have high status, are especially articulate, or in some other way are compelling in the way they position their argument. The second factor that may influence the way another person thinks is the immediacy of the sources. Research cited by Harton and Bullock (2007) suggests that people are more influenced by those with whom they are in close contact with than by those who are far away. This tendency for people to be more influenced by nearby rather than faraway people gives rise to local patterns of consensus in attitudes, values, practices, identities, and meanings which can be interpreted as subcultures (Latané, 1996).

The third influential factor is the number of sources communicating, which suggests that the more people that attempt to communicate something, the more influential it is. DSIT suggests that the way in which participants interact, leads to the evolution of four markers of culture. These four markings, which can be expected to be seen when culture is being formed, are clustering, correlation, consolidation, and continuing diversity (Harton & Bullock, 2007).

Clustering

The most robust prediction of DSIT is clustering (Harton & Bullock, 2007). This is where people's opinions converge towards a higher level of consensus within the broad population, these emerge as local clusters that will show at a regional scale and will be discernable when examined from a broader global perspective. Harton and Bullock (2007) cite studies that demonstrate that people's preferences and behaviours on a variety of topics ranging from legal decisions, attitudes and money will become increasingly similar the more they communicate with one another. These clusters of opinions will avoid being dissolved into a larger mono-cultural group because some people will always have more status, be more compelling communicators than others (diversity in strength), or they will not have the same opportunity to communicate (diversity in immediacy) (Conway & Schaller, 2007).

This suggests that people are more influenced by their closest neighbours, and so clusters of group members with similar opinions emerge in groups.



Studies repeatedly show that where people's preferences were initially randomly distributed, after communication a clustering of attitudes emerge in virtually every group for every type of issue tested (Harton & Bullock, 2007). Therefore, within a natural environment, repeated acts of communication over time and space will combine to create local clusters of people. These clusters will be similar to each other but will be distinct from other clusters of people within the broader population (Conway & Schaller, 2007).

Correlation

In order for cultures to emerge, there must also be significant differences along correlated bundles of attributes (Conway & Schaller, 2007). When clusters emerge, there is a loss of independence as individuals essentially begin to form groups. Group attitudes tend to overlap over a range of issues (Harton & Bullock, 2007). This correlation can emerge as a result of individuals becoming more similar to one another, but it can also emerge because participants begin to share the same schema on issues. This means it is not just the opinions that change but also the way the opinions are formed and presented. Harton and Bullock (2007) give an example:

In one study, participants who discussed a subset of human rights issues developed more coherent factor structures of the entire list of human rights issues after discussion. Furthermore, these factor structures differed by group, suggesting that the content of the individual discussions, rather than just thinking about the issues, led to these changes (p. 527).

This tendency toward cultural-level correlation of attributes is another inevitable byproduct of interpersonal communication (Conway & Schaller, 2007).

Consolidation

Whereas clustering and correlation address what culture is, consolidation addresses how cultures change. Consolidation is essentially a tendency toward majority influence because as minorities are exposed to the majority view, the numbers supporting the majority view will increase (Harton & Bullock, 2007). Conway and Schaller (2007) highlight that "plenty of evidence, from a range of sources, suggests that communication alone is sufficient to produce this state of popular consolidation" (p. 3). However, this may be more subject to initial conditions than clustering or correlation, and DSIT does not predict that it will always occur (Harton & Bullock, 2007). The process of consolidation has been directly tied to the impact that strength, immediacy, and number of communicators have on social influence and so consolidation does occur regularly in small discrete groups as long as there is an initial majority.

Continuing diversity

The final feature of culture identified by Latané (1996) is continuing diversity. This occurs because the spatial distribution of communication protects some minority viewpoints from influence, meaning there is rarely a complete obliteration of the minority resulting in continuing diversity. This explanation accounts for the existence of subcultures in society within the larger majority culture.



Since online learning is a relatively new phenomenon, the area of how culture is formed online is relatively unexplored. Previous understandings of how cultures have formed have focused on face-to-face encounters which have been restricted to geographical proximity (Latané, 1996). This meant that other factors such as appearance, body language, manner of dress, age, etc. were considered a lot more influential. In online learning, many of these characteristics are not obvious and therefore have less significance. In the context of online learning, the culture which the group exhibits is a phenomenon that is inherently dynamic and negotiated through interaction (Reeder, Macfadyen, Roche & Chase, 2004; Scollon & Wong Scollon, 1994). However, participants may experience obstacles that limit their participation.

Obstacles to culture in an online learning environment

Two obstacles identified as being common in asynchronous learning are nonparticipation and literacy. Central to social learning theories is the notion of the active participation of the learners. An online learning community relies on the input of the participants to exchange ideas and to learn from one another's past experiences. Without participation, there is no social interaction, no community and no culture. Hopkins (2007) suggests that Web 2.0 users are more voyeurs rather than creators and that active participation through the generation of content is incredibly low:

The 1% rule (1% make content, 10% add, 89% just view) overstates it. Of US internet visits to YouTube, only 0.16% were to upload videos, 0.2% of Flickr visits were to load photos. Wikipedia bucks the trend: 4.59% of visits are to edit or create entries. Those tend to be older than the average Wikipedia visitor (over 35) and more likely to be male (p. 4).

Therefore, one cannot assume that all learners will actively participate in online discussion. Fung (2004) found that students in online learning were quite passive in raising questions and sharing ideas through the discussion forum. Two reasons put forward for this lack of participation were the unfamiliarity with a mode of learning which requires students to be more self motivated and driven than those in face-to-face environment, and lack of time. Changing dynamics in student perception of tertiary education, perpetuated by the flexibility and remoteness of distance learning, suggests that students are managing a lifestyle in which university study plays only a part. This is captured by Levine and Cureton (1998):

What this means is that higher education is not as central to the lives of today's undergraduates as it was to previous generations. Increasingly college is just one of a multiplicity of activities in which they are engaged every day. For many, it is not even the most important of these activities; work and family often overshadow it (p.14).

Depending on their motivation, some learners may only participate in activities which they consider will aid their performance on assignments. One way to ensure a high participation rate in online discussions would be to make participation compulsory and link them to grading. However, this would conflict with one of the main drivers behind online learning which is to provide for a more democratic and autonomous educational environment.



This lack of participation may not mean that students are totally inactive. As noted in the literature surrounding participation in Web 2.0, a considerable percentage of participants are lurkers, this means that their participation is limited to learning through monitoring what others are saying. However, Rovai (2001) argues that lurkers threaten the sense of community among learners, and while it is probably true that lurkers learn through reading others' ideas, when too many students become lurkers, this obviously affects others' active involvement. When there is a lack of responses, online learners doubt whether their messages are read and feel a lack of social presence. This may lead them to withdraw from online discussions. Preventing active participants from becoming lurkers and attracting lurkers to become full participants are other important functions of e-Lecturers.

Two common causes for lack of participation are that the moderators take for granted that social interaction will automatically take place just because the environment makes it technologically possible. The second reason is that there is a tendency to restrict social interaction to educational interventions aimed at cognitive processes while social (psychological) interventions aimed at socio-emotional processes are ignored, neglected or forgotten (Kreijns, Kirschner, & Jochems, 2003).

Although there is a lot of literature concerned with the facets of collaborative learning and the building of community around establishing specific tasks especially designed to elicit learners to work together in groups, Kreijns et al. (2003) point to the significance of activities that are not specifically content-related, which can often foster a community more than the predetermined course-related tasks. The kind of conversations that can be initiated by impromptu encounters show an abundant exchange of socio-emotional and affective information contributing to impression formation, creation of social relationships, group cohesion and a sense of community. Rovai (2001) supports this hypothesis and comments that "community was stronger in the program that provided learners more and diverse [non-task] opportunities to interact with each other and that the most important community components in which groups differed were spirit and trust" (p. 105).

Given the diversity of cultural and linguistic backgrounds among learners in tertiary classrooms, one other potential obstacle for creating an online community may be lack of communicative competence for learners for whom English is not their native language. For learners who have English as a second or foreign language, linguistic dissonance includes: low speed in reading, writing and in constructing ideas in English; misunderstanding during discussion with native English speakers; and disruption of learning plans. Learners with limited proficiency may exhibit lower levels of interaction with English-speaking participants and reduced effectiveness of communication. This is exacerbated by the absence of gestural and bodily elements of communication as well as locational factors (Dillon, Wang, & Tearle, 2007).

Such difficulties with language may give rise to problems such as a lack of confidence, which in turn causes a disconnection between native speakers and non-native speakers. The use of unfamiliar terminology makes students struggling with English more perplexed and less confident while communicating with peers in the discussion forums. In Dillon et al.'s (2007) study, some of the native English speakers in an online doctoral programme explained that they preferred to communicate with other native English speakers because it was more straightforward for them. This was also true of the international students, most of whom felt more comfortable when communicating with those who have English as a second or foreign



language rather than native English speakers. A perceived lack of communication literacy skills such as typing, reading and writing may lead learners to develop communication anxiety (Tu & Mclsaac, 2002).

Conclusion

This article has looked at different perspectives of the virtual community, the role of asynchronous discussion forums, and indicators of social, cognitive and teaching presence. Web 2.0 technologies can play an important role in enhancing the kinds of interaction and participation that are fundamental to social constructivist theories of learning. By creating a virtual community where all learners feel they are able to make a valuable contribution the e-Lecturer is establishing the conditions for meaningful learning. The most important presence for the building of community is social presence, following this is the teaching presence. In this kind of learning environment the teacher acts as a guide and a facilitator, their role in creating the virtual climate is central to the building of connections between the learners. The third presence is the cognitive presence, this is the curriculum, the content and skills that are being studied.

The configuration of these three elements within an asynchronous discussion forum, will determine the form the community will take. For a culture to emerge from the community there must be social interaction between the participants, the participants must be in a group for a consistent period of time and the communication must be legible to all participants. Over a period of time, the markers of culture will be correlation, clustering, consolidation and continuing diversity. In an online culture however, where participants have the freedom to disengage by simply not logging on, instead of getting diverse cultures, a single dominant culture may emerge to the exclusion of all others.

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