Community in Online Higher Education: Challenges and Opportunities

Lily A. Arasaratnam-Smith[1] and Maria Northcote[2]
[1]Faculty of Education, Arts, and Social Sciences, Alphacrucis College, Parramatta NSW, Australia;
[2]Centre for Advancement of the Scholarship of Teaching and Learning, Avondale College of Higher Education, Cooranbong NSW, Australia

Abstract: Exploring the challenges and opportunities associated with the concepts of community and communication in online higher education, this paper reconsiders the intention to replicate face-to-face learning and teaching strategies in online learning environments. Rather than beginning with the assumption that face-to-face education is the prototype for quality, the authors appraise the online learning environment as a unique medium which, by its nature, necessitates unique communication, community-building, teaching and learning strategies. This paper proposes an in-depth analysis of the potential unique affordances associated with online learning contexts as existing in their own right. The concepts of community and communication are explored in relation to online Communities of Practice (CoPs). The nature of face-to-face and online learning contexts are considered, especially in the light of the possibility of redefining "face-to-face" within the online realm, in addition to physical learning contexts. The paper identifies unique ways in which online communication (in the context of learning) is different from face-to-face communication, and consequently four ways in which this can be an advantage for students; namely, there is a measure of social egalitarianism, emphasis on verbal/written proficiency, time for reasoned response, and social agency. The paper provides grounding for further research into strategies that forge rich online learning experiences and suggests an empirical study as a next step.

Keywords: online community, Computer Mediated Communication (CMC), Communities of Practice (CoPs), nonverbal communication

1. Introduction

The advent of new technologies has facilitated the possibility of education that is outside the face-to-face synchronous classroom; asynchronous education, to be consumed at the convenience of the student. While online learning is arguably limited in its availability to students who have access to technological facilities necessary for this mode of learning, it does present unique opportunities as well as challenges. Research in traditional face-to-face classroom environments demonstrates the merits of collaborative active learning and learning communities that form due to peer-engagement (Buchenroth-Martin, DiMartino, & Martin, 2017; Rojas-Drummond & Mercer, 2003; Vygotsky, 1933/1978). The face-to-face, physical, interpersonal contact that imbues the sense of a learning community in a traditional classroom has been reported as being scarce in the online learning mode (Akyol & Garrison, 2008; McInnerney & Roberts, 2004; Swan, Garrison, & Richardson, 2009). The dilemma facing the modern educator, who is often expected to teach in both on-campus and online learning contexts, is the online application of learning theories that acknowledge the importance of social constructivist learning theories (Herrington & Standen, 2000; Swan et al., 2009).

Many educational institutions have, however, attempted to re-create the relational dynamics of a physical classroom in an effort to create that sense of community in online classes. Such efforts include forums, synchronous chats with tutors and/or fellow classmates, personalising online course functions, and the use of designated social media (such as blogs, wikis, Facebook sites), to name a few (Cochrane & Withell, 2013; Huertas, Casado, Córcoles, Mor, & Guerrero-Roldán, 2007; Mbati, 2013). In other fields such as public relations and human networking, the role of social media has also been instrumental in enhancing organisational learning (Leak, 2016; Qi & Chau, 2016), regulating and empowering communication (Burleson, 2016) or even posing threats to organisations and governments (Chandramouli, 2011). Andreatos (2012) reminds us of the benefits of the self-directed nature of many of these social media tools for modern learners, either individually or in teams, and the value of individuals being able to test their understanding and knowledge with the online community which is often not as easy to do in face-to-face contexts. Similarly, the study by Murchú and Sorensen (2004) has further validated the online option for the delivery of a masters program as such a course enables students to "build on the ability to work together, pool resources and accelerate learning" (p. 1). The benefits of online courses, and online activities and tools have been reported as improving the quality of learning, increasing engagement and encouraging motivation of students (Imlawi & Gregg, 2014; Parkin, Hepplestone, Holden, Irwin, & Thorpe, 2012). Educators and researchers have reported on the potential value

of online communities as hubs of learning and their potential to foster centres of learning that engage groups of learners and individuals alike (Garrison, 2006; Lowenthal, 2010; McDonald, 2014). While the value of creating the feeling of community in an online learning environment is sought by modern educators, the extent to which these strategies are effective in cultivating "community" in an online context is a question that must be explored further.

Notwithstanding the many studies that can be found to support claims that effective learning can occur in online learning contexts, Means, Bakia and Murphy (2014) remind us of the "contradictory studies concerning the effectiveness of online learning" (p. x) and the problem with research studies that do not clearly outline the course aspects that the researchers are attempting to investigate and evaluate. In this light, our paper attempts to put forward a discussion of a specific aspect of learning that purports to impact a sense of community and, subsequently, a sense of online learning community. Additionally, amidst the many claims of the advantages and potential value of online learning, some literature continues to report low course completion rates and high dropout rates in some contexts, especially for MOOCs (Jordan, 2014; Khalil & Ebner, 2014), whereas others cite a reversal of such trends (Shea & Bidjerano, 2014).

It is our position that the first step in building online communities is to acknowledge that, at our current level of technology, we fall far short of capturing the richness and complexity of face-to-face communication in online learning. In fact, attempting this is an effort that detracts us from building effective online learning experiences. However, online communication offers unique opportunities that can and must be used toward the goal of building a sense of community amongst online students. Andreatos (2015), in his discussion of the use of MOOCs for individual and organisational learning, even goes as far to suggest that online courses, are essential (not just an alternative to face-to-face learning) for the contemporary professional to remain engaged in lifelong and continuous professional learning. While our paper discusses the affordances of both online and face-to-face collaboration and the sense of community it promotes, we do not posit that online community-building tools and activities should seek to fully replicate the attributes of face-to-face collaboration; rather such tools provide a different experience from the collaborative learning experiences offered by face-to-face learning scenarios.

In order to explore these issues, however, we must first address what we mean by "community", after which we discuss how the concept of community is developed in general and in learning-specific communities using the CoP framework. Aspects of communication including social dynamics, agency, nonverbal and verbal cues and communication response in educational contexts for learning purposes are also explored. Lastly, we conclude with a commentary about the unique nature of online communication for learning purposes and suggestions for future research.

2. What is Community?

"Community" is a word that is used liberally in the educational context. Generally speaking, there is a distinction between geographical communities and relational communities (Gusfield, 1975). The former refers to clusters of people sharing and inevitably interacting in a geographical space such as a town or neighbourhood, and the latter refers to groups of people who are drawn together in a relationship due to common interests or goals (even if they do not share a geographical space) such as a disciplinary academic organisation, religious group, or other interest group. In as much as a community is composed of a group of people with shared interests and/or proximity, community has a social (group) and psychological (individual) element to it.

In an early work, McMillan and Chavis (1986) propose that community consists of a sense of belonging amongst members, a sense of agency or ability to have a say/influence, a sense of fulfilment of their needs, and an emotional connection amongst members. Koh and Kim (2003) take the notion of community further into the virtual space and propose that virtual community has three dimensions, namely, "(1) membership—people experience feelings of belonging to their virtual community, (2) influence—people influence other members of their community, and (3) immersion—people feel the state of flow during virtual community navigation" (p. 77). More recently, Bowers and Kumar (2017), in their comparative analysis of students' perceptions of teaching and social presence in face-to-face and online learning environments, have noted the potential of online courses to develop a stronger sense of "presence" than face-to-face courses: "results indicate that students' perceived stronger teacher and social presences in the online section compared to the

face-to-face section" (p. 1532). While face-to-face communities have been compared to online communities in the past, such recent research has begun to emphasise the unique nature of online communities as being more significant than the attempt to replicate or transfer face-to-face experiences to online contexts. Interestingly, in the field of counselling, Hanley, Ersahin, Sefi and Hebron (2016) found that students accessing counselling services tended to use online services in different ways from face-to-face services. While many researchers debate the benefits and limitations of face-to-face versus online learning contexts, many prefer a blended approach which employs a combination of learning strategies and resources from both face-to-face traditional and online contexts (Torrisi-Steele & Drew, 2013; Twelves & Arasaratnam, 2012-2013). Thus, it is the different affordances of each context, including face-to-face, blended and online, that appear to be of more significance to recent educators who work in either of these contexts.

Virtual communities, while sharing some qualities, are different from physical communities. In educational contexts where learners and teachers work together to achieve learning, or where groups of interested individuals band together to investigate an issue, such learning and teaching groups have been referred to as Communities of Practice (CoPs). McDonald and her colleagues have studied the phenomena of Communities of Practice (CoPs) in educational contexts, including online or digital CoPs (for example, McDonald, 2014; Reushle & McDonald, 2012). They have built upon Wenger and his colleagues' (Wenger, 1998a, 1998b; Wenger, McDermott, & Snyder, 2002) view of a CoP as being made up of a domain of knowledge, a community of individuals who are united in shared practice, a community which confirms an individual's identity as well as the group's competence. McDonald and her colleagues' work has highlighted the value of the way in which CoPs "provide a context for sustained professional conversations around identified domain and practice issues" (McDonald & Star, 2006, p. 4). Such benefits are easily applicable to a range of educational contexts such as undergraduate education, postgraduate education, professional learning and training.

While some of the barriers to sustaining virtual CoPs have been identified such as the difficulties in sharing knowledge through online technologies and their transient nature, as compared to some more organically formed CoPs (Hanisch & Churchman, 2008), other researchers have identified more positive features of virtual CoPs. For example, Barnett et al. (2012) found that trust can be built online between participants in virtual CoPs and that virtual CoPs work well if the participants work towards a specific goal. Furthermore, Truman (2013) found that some virtual communities developed online collaborative problem solving capacities. The interplay of social interaction and the formation or definition of selfhood in an online context has also been studied, to an extent, within online communities. For example, Koole's (2010) work on the place of self in online communities within online learning networks has established that "a sense of self is inherently connected to one's sense of belonging within a community (-ies)" (p. 241), and Crampton and Ragusa (2015) found that students believed that a sense of belonging and connection in an online educational context impacted their academic success.

Belonging is one of the fundamental aspects of membership in a group (Furman, 1998; Strayhorn, 2012), including virtual groups of students within distance learning courses (Crampton & Ragusa, 2015) or students engaged in blended learning contexts which incorporate online and on-campus course components (Masika & Jones, 2016). Relational communities form due to shared interests, as Gusfield (1975) notes. Within the context of faith-based education, for example, it can be presumed that colleges presumably inculcate students with particular values, and the extent to which one feels part of the faith-based learning community is arguably influenced by the extent to which one subscribes to these values. It must be noted, however, that it is possible for one to not subscribe to a particular faith while sharing the values of that faith. In other words, an educational institution that operates with a Christian ethos, for example, would appeal to students who want elements of spirituality and morality to be an integral part of academic curriculum and culture, even though they may not personally profess to be a Christian. A student of another faith (or no religious affiliation) could thus still feel a sense of belonging to a faith-based college if s/he, at least to an extent, shares the values of that community. Support, camaraderie, and connection, all characterise one's belonging to a particular group.

We propose that intellectual connection is also an important element in a learning community, an aspect of community that Wenger (1998b) refers to as a domain of knowledge, also explored by McDonald and her colleagues in an online context (McDonald, 2014; McDonald & Star, 2006; Reushle & McDonald, 2012). By intellectual connection we mean the ability to exchange and express ideas without feeling under-stimulated or challenged beyond one's capacity. The knowledge that one is able to make a difference in the community to which one belongs is an important aspect of one's sense of affiliation with that community (McMillan &

Chavis, 1986) and has been found to influence retention rates in blended learning contexts (Masika & Jones, 2016).

Agency, one could argue, is a fundamental aspect of perception of freedom and as such an essential component of a learning community in which all members feel free to influence and be influenced. The ability to have some say in one's own learning process and to know that one's ideas are making a difference in the learning community are important aspects of feeling intellectual connection. In fact cognitive presence, along with social presence and teaching presence, is described by Garrison and Cleveland-Innes (2005) as a required component of a community of inquiry, especially to ensure the community is purposeful and the learning is meaningful. The sense of belonging and sense of agency in community indicate that there is an element of relationship to community, whether physical or virtual. And human relationships develop through communication.

3. (Computer Mediated) Communication

Interpersonal communication is often characterised as a dynamic process of sending and receiving messages within a socio-cultural context which, along with the personalities involved, influences the way in which messages are perceived. Communication has verbal and nonverbal components, both of which contribute to the experience of communication. Nonverbal cues play an important role in not only complementing verbal messages but also substituting for them, and in some instances contradicting them. When verbal communication contradicts the accompanying nonverbal message, the nonverbal message is perceived as the more accurate one (Jones & LeBaron, 2002).

In online learning interactions, the aspect of communication that suffers the most is nonverbal; the online environment being described by Hosler and Arend (2012) as "void of the tonal, visual and verbal cues found in the traditional classroom" (p. 148). Emoticons are an effort to replicate some version of nonverbal expressions. While video chats enable access to facial expressions and tone of voice, technology is yet to replicate the subtle nuances communicated by proxemics (for example, standing close to another person to communicate solidarity or intimidation) or haptics (giving someone a hug, for example). In terms of learning, nonverbal cues in communication have been claimed to impact learning outcomes for students, especially when conflict arises (Okon, 2011). Babad (2007), for example, found that nonverbal communication gestures such as students' perceptions of teacher enthusiasm and teacher immediacy. Further, there is evidence to suggest that teachers' nonverbal cues (when communicating with the student in a mode where these cues are accessible) play a significant role in influencing student performance in online learning (Niari, Manousou, & Lionarakis, 2016).

Nevertheless, despite claims by some researchers about the value of nonverbal communication for teaching and learning purposes (Babad, 2007; Hosler & Arend, 2012; Okon, 2011), and while there is general acceptance that nonverbal cues assist face-to-face communication in general, York (2015) claims that "There is inconsistent data on the effect of nonverbal communication used by instructors and the impact on student learning within the higher education environment" (p. 1). However, his study that investigated the role of nonverbal immediacy in relation to student learning in a higher education context did clearly conclude that "instructors' nonverbal immediacy effects student learning", implying that "professional development programs in higher education could benefit from providing nonverbal communication training to instructors" (p. 5). How such a finding could be applied or considered in an online learning context has yet to be fully investigated, especially if the affordances of video conferencing are utilised in which students and teachers can view one another's facial expressions and gestures, albeit via digital means. Typically, however, technology-dependent communication, in fact, fails significantly short of replicating the tangible and rich communication possibilities offered by face-to-face learning interactions. No matter the economic and pragmatic imperatives to concede that online communication adequately replicates face-to-face communication, an honest appraiser cannot help but acknowledge that technology-mediated communication (in its current form) cannot replicate face-to-face communication.

This is not to say, however, that there aren't interpersonal and relational advantages to technology-mediated communication. In face-to-face communication, we are subjected to all social expectations that accompany such an interaction. In other words, when you see the person with whom you are communicating, you cannot help but make certain assumptions about the person (based on his/her appearance, smell, posture,

mannerisms) and have certain expectations of that person based on those assumptions. Inevitably, your expectations dictate how you respond to that person, which in turn influences how that person responds to you. In an online forum, often used for learning purposes, on the other hand, you are presented with an opportunity to interact at an intellectual level – at least to an extent. As long as you are literate and able to articulate your ideas in written (typed) form, you have the opportunity to communicate your ideas and interact with others without the hindrance of preconceptions based on appearance, smell, or mannerisms. Competence in online communication is based on a different set of skills in which some people may excel, despite other perceived shortfalls that may debilitate their face-to-face communication.

4.   The Social Uniqueness of Online Communication

Research in computer mediated communication (CMC) has identified certain factors that influence competency in CMC, such as knowledge of how to communicate in a computer-mediated context and the motivation to engage in CMC (Bunz, 2005), and predispositions to CMC in terms of apprehension about or aversion to using technologies (Kelly, Keaten, Hazel, & Williams, 2010). In online and blended education, the types of interactions may include asynchronous online forums, synchronous textual and audio/video chatting, email, and phone conversations, to name a few. In the way of introduction, the lecturer might have a pre-recorded video greeting. Students may be given the opportunity to share brief profiles, including a photo. Perhaps there is a round of introductory forum posts for the class members to get to know one another. These types of interactions are distinct from synchronous face-to-face communication in a number of ways and they are often employed in courses that are facilitated in a completely online mode or a blended mode incorporating elements of both face-to-face and online education.

First, unlike in face-to-face communication, each individual has a certain measure of control in how his/her self is presented to the rest of the group. In other words, one could select a flattering photograph, position one's self in a certain way in front of the camera if video chatting is available, and can dispense with divulging other physical characteristics such as height, smell, markers of affluence (such as expensive attire), and even age, to an extent. Social expectations of dress code and even personal hygiene are typically moot in many forms of online communication. To the extent that one's physicality pre-disposes others' responses to him/her (Arasaratnam, 2011), online communication serves as an equalising medium.

Secondly, nonverbal codes play a significant role in face-to-face communication. Frequency of eye contact, posture, proximity, use of gestures, and tone/volume of voice, all play a role in pre-empting how one is perceived (Lewis, 2007). In asynchronous online communication such as forum posts, none of these elements are relevant. The most socially awkward and reclusive person could be the most vocal and assertive in presenting his/her opinions, if s/he is confident in written articulation. The obsoleteness of nonverbal skills presents opportunities for self-expression of some individuals who may never have that opportunity in a face-to-face classroom. Leong (2011) even suggests that online learning environments can "enhance opportunities for social presence and cognitive absorption" (p. 24) which may improve students' attitudes to their learning.

Thirdly, in asynchronous online learning forums, real-time conversation turn-taking skills are obsolete. One could carefully form one's thoughts before sharing with a group, without the pressure of interjecting into a dynamic rapidly moving conversation. Anyone who is self-conscious about their voice, accent, language skills, or inability to interrupt, is relieved of this type of social pressure in a written forum. Even in synchronous online communication (audio, video, and/or textual), there is greater opportunity for participants to interject their thoughts because they have the opportunity to message the lecturer or raise their hand to be visible to the whole group. Asynchronous communication also allows for thoughtful considered responses to others' ideas over time, unlike face-to-face communication.

Finally, there is a measure of independence and agency in socialising in online communication that is not present in face-to-face communication or face-to-face learning contexts. In face-to-face classrooms, friends often sit together or perhaps friendships form over time and students cluster together. A student might feel left out if s/he is not part of such a group. In an online classroom, however, clusters or friends are not so readily visible. Individual classmates may email each other privately to form friendships – or choose not to form friendships – without the social pressure of fitting in. The very nature of online education that can be isolating and disengaging to some (Hun Lim, Morris, & Kupritz, 2007) can also be liberating to others who do not perform well in face-to-face socialising.

In sum, there are at least four distinct ways in which online communication is different from face-to-face communication: it is, to an extent, an equalising medium (socially egalitarian), it relies heavily on written communication rather than nonverbal (verbal/written proficiency), it does not necessitate refined conversation turn-taking skills (time for reasoned response), and it alleviates social pressure of fitting in (social agency). These distinctions are also relevant in online learning contexts, especially those in which online interactions and communications feature as core learning activities.

Having identified some unique aspects of communicating online, it is also necessary to identify some of the unique skills required in online communication. Apart from the necessity of being proficient in the use of relevant technology, online communication typically favours those who are articulate in written-communication. Further, frequency of communication is also associated with likeability and overall sense of community (Dawson, 2006). Hence those who are habitually connected to online technologies have an edge over those who 'log on' only at certain pre-scheduled times. The written communicator must also engage with the art of expressing emotions that are usually expressed through nonverbal cues in face-to-face communication.

Sherblom, Withers, and Leonard (2013) identify four influences on the likelihood of students' participation in online discussions. These influences reiterate previously observed uniqueness of online communication. First, students need *knowledge* of how to participate in CMC, particularly developing familiarity with the peculiarities of this medium. Secondly, students need *skills* in CMC strategies. Just as face-to-face communication requires certain skills, so does CMC. Thirdly, students need to overcome CMC *apprehension*. The authors note that this does not necessarily have to do with fear of technology, but rather communicating in an unfamiliar context (i.e., participating in a 'classroom' discussion is different from texting a friend) using a different medium. Fourthly, students are influenced by *motivation* (or lack thereof) to engage in online discussions. The authors observe that if lecturers are familiar with these four influences, then they can implement deliberate strategies to encourage students to engage in meaningful online communication and interaction.

Optimising students' experiences of online learning should therefore take advantage of the uniqueness presented by this mode of communication. In the next section we present some findings from previous research in cultivating communities online, and explore how these findings may be optimised in practice, in relation to the four distinct ways in which communicating online is different from face-to-face communication.

5.   Social Dynamics in Online Learning

Prior research in online learning has identified several findings that are salient to the present discussion. Many of these previous studies, however, are based on the premise of replicating the types of learning communities in face-to-face classrooms, to enable online students and faculty to participate in the benefits of such communities. Based on our premise that the richness of face-to-face communities cannot be replicated online but that online learning provides unique opportunities absent in face-to-face learning, we now review the findings of previous studies with the goal of delineating these in light of our premise. The discussion is structured around the four ways in which online communication is different from face-to-face communication.

6.   Socially egalitarian

We noted that online communication facilitates a measure of egalitarianism because of the lack of immediate access to physical and other socio-economic markers that inevitable influence social perception in face-to-face communication. One of the known instruments in online community research is Rovai's (2002) Classroom Community Scale (CCS) which consists of two sub-scales, namely "connectedness" and "learning." Connectedness taps into feelings of belonging, shared values, emotional and intellectual connection. The learning dimension identifies the unique aspect of a classroom as a community formed by the common goal of learning, including incorporating the interactions of both faculty staff and students. Connectedness or sense of belonging is a demonstrably significant part of having a sense of community. However, in face-to-face interactions, often there is an initial phase of introductions and getting to know one another, during which those who are perceived as attractive and/or socially competent have an advantage over others. Kraus (2006) proposes that:

People do not simply choose affiliations; they have to negotiate them with others and are positioned within them by others. Their distance to some collective identities or their closeness to others must be expressed by them – and affirmed or rejected by present others. This does not entail the individuals not disposing of concepts of belonging which are available in a specific situation, but rather that belonging must be negotiated, tested, confirmed, rejected or qualified again and again and not simply shown. (p. 109)

This implies that the formation of one's sense of belonging to a community is a process in which others actively participate. In online communication, students have the opportunity to start on somewhat equal footing in this process of connecting without being disadvantaged by factors that may debilitate them in face-to-face communication. McInnerney and Roberts (2004) suggest that the lack of belonging experienced by some online learners in the form of isolation has the potential to be the difference between success and failure for many students. Similarly, faculty feelings of isolation impact on the performance of faculty staff (Dolan, 2011). If lecturers are cognizant that online communication could be a socially egalitarian platform, they could facilitate the maximisation of this advantage. For example, lecturers could encourage students to engage in an introductory exercise in which each student posts a profile picture that is the view outside their window rather than of themselves. This way, students could communicate about an interesting fact about one another before knowing what the other person looks like.

7. Verbal/written proficiency

We observed that nonverbal codes play an extremely limited role in online communication. It follows that students rely almost entirely on their written and occasional verbal proficiency to communicate. This could be liberating to students or teaching staff whose written proficiency far outweighs relational and nonverbal proficiency. While many lecturers have successfully used live video chats and similar forms of communication to replicate face-to-face communication as closely as possible (Ball & Leppington, 2013), we propose that the absence of nonverbal codes does not necessarily have to be seen as a disadvantage in online learning. This is an opportunity for lecturers to provide clear and instructive guidelines for 'written' decorum in forum communication, for example, and facilitate the active participation of those students who may have been awkward in a face-to-face classroom. Dawson (2006) notes that increased opportunities for online student interactions increase the sense of community amongst them. While these interactions may include live video chats, the lecturer still has greater opportunity to moderate the discussions and involve students in a way that is not always possible in face-to-face classrooms where shy students self-select out of an active discussion and may feel further embarrassed if called upon. The immediacy of being 'in public' is diminished online – thus arguably less challenging for shy students.

8. Time for reasoned response

One of the dynamics in live interactions is the participants' ability to 'jump into' a conversation and voice their opinions. Some do this better than others. Active participation in a face-to-face group discussion necessitates confidence, assertiveness, and a reasonable command of the language. Even in dyadic conversations, the timing of communication is such that when a question is asked, one is expected to respond within a very short amount of time (typically under a minute) to keep the conversation flowing. This dynamic does not always lend itself to reasoned responses or responses that are preceded by extended reflection. Further, in-class group discussions often tend to be dominated by a few vocal students (unless appropriately moderated by the lecturer) and exclude others. Students with an accent or with limited language skills, for example, may be shy to voice their opinions in a group. There is evidence to suggest that even amongst students who are fluent in English, some international students are uncomfortable diving into a group discussion due to cultural norms of conversation-taking or politeness (Arasaratnam, 2002).

Asynchronous online forums allow for students to present reasoned responses without the social pressures that are prevalent in face-to-face communication. Additionally, written communication eliminates accents and allows participants to express ideas without being inhibited by differences in speech. Students do not have to feel that they are interrupting someone, when expressing an opinion. The time available for reasoned responses in online forums has the potential to encourage in-depth discussions informed by periods of individual reflection that may not always be possible within the time constraints of a face-to-face session.

Lecturers too have the ability to provide reasoned responses to questions, unlike having to 'think on their feet' in a face-to-face classroom. Additionally, lecturers can be deliberate in providing feedback for most if not all comments in a forum discussion if they choose, unlike in a face-to-face discussion. Limon and Boster (2003) demonstrate that positive performance feedback increases group members' perception of cohesion and belonging. Taking this to the classroom level, this could be in the form of feedback from the lecturer to student groups in regards to their assigned group tasks or collective forum participation. Although, just as in face-to-face learning contexts, lecturers who dominate online communication can reduce the amount of interaction or, at least, students' willingness or motivation to interact (Salmon, 2013).

9. Social agency

We observed earlier that online interactions present the opportunity for learners to choose their friends (and have the option of being chosen as a friend) without the pressures of infiltrating pre-existing clusters of friends that are often present in face-to-face settings. Students can choose to target certain classmates with whom they want to communicate further via email based on shared ideas, without the hesitancy of holding back just because they are always surrounded by the popular students, for example. Research shows that students studying by distance perceive that their sense of connection with their fellow learners impacts the quality of their learning, especially in terms of how a social identity is formed (Crampton & Ragusa, 2015). Online communication lends a measure of freedom in the types of people with whom a student can connect. Schrader (2015) articulates this as follows:

> …with technology, the classroom is broader and participation more equalized. The moral implication of participation amongst equals are more likely to be achieved via computer and technology mediated social networking. Each person has equal access (if possessing the technology) to participation. Technology potentiates active diverse communities of learners who may be judged more on the content of their contributions than on the color of their skin, socioeconomic status, or other feature (p. 29).

With this freedom, however, students need guidance in forming online relationships. Walther and Bunz (2005) identify six rules to facilitate trust, liking, and performance in virtual groups. First, they suggest that members of the group should start communicating with each other straight away, soon after joining the particular group. Secondly, members should communicate frequently with each other. Third, in a group project where tasks need to be completed, the authors propose that members should multi-task the functions of organising and executing the tasks (instead of first organising what needs to be done, then allocating tasks, and then executing the tasks). Fourth, members of the group should explicitly acknowledge that they have read other members' posts on a forum or other online communication medium. Unlike in face-to-face environments where acknowledgement of messages can be given nonverbally and contextually, the online environment necessitates more intentional communication in written forums to ensure that the lack of a textual response to an online message is not interpreted as a lack of acknowledgement of the communication. Fifth, and related to the previous point, members of the group should specify how they are responding to another person's message. The authors observe that, unlike in a face-to-face environment where silence can be interpreted within the context of nonverbal cues, in an online environment a non-response may be difficult to interpret. Finally the authors suggest that online groups should set deadlines for relevant tasks and faithfully adhere to them, as a way of building trust between group members. If, for example, a task is to complete a group project as part of an assessment, then agreeing on deadlines for each member to accomplish minor tasks that lead up to the completion of the project (and adhering to them) would serve to build trustworthiness and help the group members rely on one another.

10. Conclusion and Next Steps

McLuhan (2005) once observed that the medium is the message. Communication is indelibly influenced by the medium through which it happens. Online learning is a unique experience, no doubt shaped by the medium through which the teaching and interactions are shared. To understand "community" in an online learning environment, one must heed McLuhan's words and understand the nature of this different medium through which communication happens. It is neither practical nor logical to replicate strategies for fostering community in face-to-face classrooms, in an online learning environment. The unique medium necessitates unique strategies. Identifying the specific ways in which the uniqueness of online communication provides certain advantages, is a step toward identifying the strategies that could be used to cultivate community in online

'classrooms'. There may be opportunities for redefining the term "face-to-face" to encompass online learning contexts (with the assistance of video conferencing facilities in which teachers and students can see each other) and for this term not to be solely applied to physical learning contexts. Online course environments do not simply offer an opportunity for face-to-face learning activities to be transferred, converted or replicated in an online context, as has been documented by many researchers (Ball & Leppington, 2013; Davis, 2001; Ko & Rossen, 2004). Rather we espouse that the online learning context is unique and not necessarily the 'poor cousin' of on-campus learning that continually requires defence and justification. In fact, in some cases it may be a viable alternative to, and improvement on or replacement for face-to-face learning.

While this paper has briefly explored some of these strategies, an empirical study is needed in which students' sense of community in an online course is measured before and after the implementation of intervening strategies. A pre-test/post-test model to survey students' sense of community in an online setting prior to and after the implementation of one or two specific community-cultivating strategies would provide us with valuable information toward implementing initiatives that provide online students with the rich experience of community – strategies that do not necessarily involve the replication of face-to-face methods. Findings from such studies may provide evidence to support or refute the ways in which online learning communities afford different or similar benefits from physical, face-to-face learning communities. We hope that this paper will serve as a stimulus for such studies.

References

Akyol, Z., & Garrison, D. R. (2008). The development of a community of inquiry over time in an online course: Understanding the progression and integration of social, cognitive and teaching presence. *Journal of Asynchronous Learning Networks, 12*(3-4), 3-22.

Andreatos, A. S. (2012). Educating the 21st Century's Engineers and IT Professionals *New Media Communication Skills for Engineers and IT Professionals: Trans-National and Trans-Cultural Demands: Trans-National and Trans-Cultural Demands* (pp. 132-159). Hershey, PA: IGI Global.

Andreatos, A. S. (2015). The use of MOOCs in the Continuing Education of Individuals and Organisations. In e. b. D. A. Mesquita & P. Peres (Eds.), *Furthering Higher Education Possibilities through Massive Open Online Courses. Polytechnic of Porto. Portugal* (pp. 49-79). Hershey, PA: IGI Global.

Arasaratnam, L. A. (2002). *Competing cultural voices: An ethnographic study of international students in American graduate education*. Paper presented at the Annual Convention of the Eastern Communication Association, New York City, NY.

Arasaratnam, L. A. (2011). Communication and social cognition *Perception and communication in intercultural spaces* (pp. 1-24). Lanham, MD: University Press of America.

Babad, E. (2007). Teachers' nonverbal behavior and its effects on students *The scholarship of teaching and learning in higher education: An evidence-based perspective* (pp. 201-261): Springer.

Ball, T. C., & Leppington, R. (2013). Community-building learning groups in an online course: A study of functional moves. *The Northwest Journal of Communication, 41*(1), 109-132.

Barnett, S., Jones, S. C., Caton, T., Iverson, D. C., Bennett, S., & Robinson, L. (2012). Implementing a virtual community of practice for family physician training: A mixed-methods case study. *Journal of Medical Internet Research, 16*(3), e(83). doi: 10.2196/jmir.3083

Bowers, J., & Kumar, P. (2017). Students' perceptions of teaching and social presence: A comparative analysis of face-to-face and online learning environments *Blended Learning: Concepts, Methodologies, Tools, and Applications* (pp. 1532-1550): IGI Global.

Buchenroth-Martin, C., DiMartino, T., & Martin, A. P. (2017). Measuring student interactions using networks: Insights into the learning community of a large active learning course. *Journal of College Science Teaching, 46*(3), 90.

Bunz, U. (2005). Using scantron versus an audience response system for survey research: Does methodology matter when measuring computer-mediated communication competence? *Computers in Human Behavior, 21*(2), 343-359.

Burleson, J. E. (2016). *Organization-stakeholder interaction through social media: A tri-level investigation, categorization, and research agenda.* (Doctor of Philosophy), Clemson University. Retrieved from http://tigerprints.clemson.edu/all_dissertations/1666/

Chandramouli, R. (2011, 1-2 June 2011). *Emerging social media threats: Technology and policy perspectives.* Paper presented at the Second Worldwide Cybersecurity Summit: Mobilizing for International Action, London.

Cochrane, T., & Withell, A. (2013). Do 21st Century students dream of electric sheep? A mobile social media framework for creative pedagogies. In H. Carter, M. Gosper, & J. Hedberg (Eds.), *Electric Dreams. Proceedings ascilite 2013 Sydney* (pp. 151-161). Macquarie University: Australasian Society for Computers in Learning in Tertiary Education (ASCILITE).

Crampton, A., & Ragusa, A. T. (2015). Exploring the role of technology in fostering sense of belonging in students studying by distance. Sydney: Office for Learning and Teaching, Department of Education and Training.

Davis, A. (2001). Athabasca University: Conversion from traditional distance education to online courses, programs and services. *International Review of Research in Open and Distance Learning, 1*(2), 1-16.

Dawson, S. (2006). A study of the relationship between student communication interaction and sense of community. *The Internet and Higher Education, 9*(3), 153-162. doi: 10.1016/j.iheduc.2006.06.007

Dolan, V. (2011). The isolation of online adjunct faculty and its impact on their performance. *The International Review of Research in Open and Distance Learning, 12*(2), 62-77.

Furman, G. C. (1998). Postmodernism and community in schools: Unraveling the paradox. *Educational Administration Quarterly, 34*(3), 298-328. doi: 10.1177/0013161X98034003003

Garrison, D. R. (2006). Online collaboration principles. *Journal of Asynchronous Learning Networks, 10*(1), 25-34.

Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *The American Journal of Distance Education, 19*(3), 133-148.

Gusfield, J. R. (1975). *Community: A critical response*. New York: Harper Colophon.

Hanisch, J., & Churchman, D. (2008). *Virtual communities of practice: A study of communication, community and organisational learning.* Australia and New Zealand Communication Association/University of Adelaide.

Hanley, T., Ersahin, Z., Sefi, A., & Hebron, J. (2016). Comparing Online and Face-to-Face Student Counselling: What Therapeutic Goals Are Identified and What Are the Implications for Educational Providers? *Journal of Psychologists and Counsellors in Schools*, 1-18.

Herrington, J., & Standen, P. (2000). Moving from an instructivist to a constructivist multimedia learning environment. *Journal of Educational Multimedia and Hypermedia, 9*(3), 195-205.

Hosler, K. A., & Arend, B. D. (2012). Strategies and principles to develop cognitive presence in online discussions. In Z. Akyol & D. R. Garrison (Eds.), *Educational communities of inquiry: Theoretical framework, research and practice* (pp. 148-167). Hershey, Pennsylvania: IGI Global.

Huertas, M. A., Casado, C., Córcoles, C., Mor, E., & Guerrero-Roldán, A.-E. (2007). *Social networks for learning: wikis, blogs and tagging in education.* Paper presented at the Proceedings of EDEN 2007: International Conference, Naples, Italy.

Hun Lim, D., Morris, M. L., & Kupritz, V. W. (2007). Online vs. blended learning: Differences in instructional outcomes and learner satisfaction *Journal of Asynchronous Learning Networks, 11*(2), 27-42.

Imlawi, J., & Gregg, D. (2014). Engagement in online social networks: The impact of self-disclosure and humor. *International Journal of Human-Computer Interaction, 30*(2), 106-125. doi: 10.1080/10447318.2013.839901

Jones, S. E., & LeBaron, C. D. (2002). Research on the relationship between verbal and nonverbal communication: Emerging integrations. *Journal of Communication, 52*(3), 499-521. doi: 10.1111/j.1460-2466.2002.tb02559.x

Jordan, K. (2014). Initial trends in enrolment and completion of massive open online courses. *The International Review of Research in Open and Distributed Learning, 15*(1).

Kelly, L., Keaten, J. A., Hazel, M., & Williams, J. A. (2010). Effects of reticence, affect for communication channels, and self-perceived competence on usage of instant messaging. *Communication Research Reports, 27*(2), 131-142.

Khalil, H., & Ebner, M. (2014). MOOCs completion rates and possible methods to improve retention-a literature review *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 201* (Vol. 2014, pp. 1236-1244). Chesapeake, VA: AACE.

Ko, S., & Rossen, S. (2004). Course conversion *Teaching online: A practical guide* (pp. 36-65). Boston: Houghton Mifflin.

Koh, J., & Kim, Y.-G. (2003). Sense of virtual community: Conceptual framework and empirical validation. *International Journal of Electronic Commerce, 8*(2), 75-93.

Koole, M. (2010). The web of identity: Selfhood and belonging in online learning networks. In L. Dirckinck-Holmfeld, V. Hodgson, C. Jones, M. de Laat, D. McConnell, & T. Ryberg (Eds.), *Proceedings of the Seventh International Conference on Networked Learning 2010* (pp. 241-248). Aalborg, Denmark.

Kraus, W. (2006). The narrative negotiation of identity and belonging. *Narrative inquiry, 16*(1), 103-111. doi: http://dx.doi.org/10.1075/ni.16.1.14kra

Leak, T. (2016). *Likes, Posts, and Tweets Oh My: Social media and the practice of excellence in public relations within professional sports organizations.* (Doctor of Philosophy), Georgia State University. Retrieved from http://scholarworks.gsu.edu/communication_diss/71/

Leong, P. (2011). Role of social presence and cognitive absorption in online learning environments. *Distance Education, 32*(1), 5-28.

Lewis, F. R. (2007). *Focus on nonverbal communication research*. New York: Nova Publishers.

Limon, M. S., & Boster, F. J. (2003). The effects of performance feedback on group members' perceptions of prestige, task competencies, group belonging, and loafing. *Communication Research Reports, 20*(1), 13-23. doi: 0.1080/08824090309388795

Lowenthal, P. R. (2010). The evolution and influence of social presence theory on online learning. In T. T. Kidd (Ed.), *Online education and adult learning: New frontiers for teaching practices.* (pp. 124-139). Hershey: Pennyslvania.

Masika, R., & Jones, J. (2016). Building student belonging and engagement: insights into higher education students' experiences of participating and learning together. *Teaching in Higher Education, 21*(2), 138-150.

Mbati, L. (2013). Online social media applications for constructivism and observational learning. *International Review of Research in Open and Distance Learning, 14*(5). http://www.irrodl.org/index.php/irrodl/article/view/1579/2709

McDonald, J. (2014). Community, domain, practice: Facilitator catch cry for revitalising learning and teaching through communities of practice. ALTC Teaching Fellowship Final Report 2014. Sydney: Australian Government Office for Learning and Teaching.

McDonald, J., & Star, C. (2006). *Designing the future of learning through a community of practice of teachers of first year courses at an Australian university*. Paper presented at the The First International LAMS Conference: Designing the Future of Learning, Sydney.

McInnerney, J. M., & Roberts, T. S. (2004). Online learning: Social interaction and the creation of a sense of community. *Educational Technology & Society, 7*(3), 73-81.

McLuhan, M. (2005). *Understanding media: The extensions of man*. New York, NY Mentor.

McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of community psychology, 14*(1), 6-23.

Means, B., Bakia, M., & Murphy, R. (2014). *Learning online: What research tells us about whether, when and how*. New York and London: Routledge.

Murchú, D. Ó., & Sorensen, E. K. (2004). Online master communities of practice: Collaborative learning in an intercultural perspective. *European Journal of Open, Distance and E-learning, 7*(1), 1-9.

Niari, M., Manousou, E., & Lionarakis, A. (2016). The pygmalion effect in distance learning: A case study at the Hellenic Open University. *European Journal of Open, Distance and E-learning, 19*(1), 36-52.

Okon, J. (2011). Role of non-verbal communication in education. *Mediterranean Journal of Social Sciences, 2*(5), 35-40.

Parkin, H. J., Hepplestone, S., Holden, G., Irwin, B., & Thorpe, L. (2012). A role for technology in enhancing students' engagement with feedback. *Assessment & Evaluation in Higher Education,, 37*(8), 963-973.

Qi, C., & Chau, P. Y. (2016, 27 June 2016). *An empirical study of the effect of enterprise social media usage on organizational learning.* Paper presented at the Pacific Asia Conference on Information Systems (PACIS).

Reushle, S., & McDonald, J. (2012, 25-28 Nov 2012). *Digital communities: Context for leading learning into the future?* Paper presented at the ASCILITE 2012: 29th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education: Future Challenges, Sustainable Futures, Wellington, New Zealand.

Rojas-Drummond, S., & Mercer, N. (2003). Scaffolding the development of effective collaboration and learning. *International Journal of Educational Research, 39*(1), 99-111.

Rovai, A. P. (2002). Development of an instrument to measure classroom community. *Internet and Higher Education, 5*(3), 197-211.

Salmon, G. (2013). *E-tivities: The key to active online learning* (2nd ed.). London and New York: Routledge.

Schrader, D. E. (2015). Constructivism and learning in the age of social media: Changing minds and learning communities. *New Directions for Teaching and Learning, 2015*(144), 23-35.

Shea, P., & Bidjerano, T. (2014). Does online learning impede degree completion? A national study of community college students. *Computers & Education, 75*, 103-111.

Sherblom, J. C., Withers, L. A., & Leonard, L. G. (2013). The influence of computer-mediated communication (CMC) competence on computer-supported collaborative learning (CSCL) in online classroom discussions. *Human Communication, 16*(1), 31-39.

Strayhorn, T. L. (2012). *College students' sense of belonging: A key to educational success for all students* New York: Routledge.

Swan, K., Garrison, D. R., & Richardson, J. C. (2009). A constructivist approach to online learning: the Community of Inquiry framework. In C. R. Payne (Ed.), *Information technology and constructivism in higher education: Progressive learning frameworks* (pp. 43-57). Hershey, PA: IGI Global.

Torrisi-Steele, G., & Drew, S. (2013). The literature landscape of blended learning in higher education: The need for better understanding of academic blended practice. *International Journal for Academic Development, 18*(4), 371-383.

Truman, B. E. (2013). *Transformative interactions using embodied avatars in collaborative virtual environments: Towards transdisciplinarity.* (Doctor of Computer Science), Colorado Technical University. Retrieved from http://ciret-transdisciplinarity.org/biblio/biblio_pdf/barbara_truman.pdf

Twelves, J., & Arasaratnam, L. A. (2012-2013). Blended learning in postgraduate studies: A contextualised discussion. *Journal of Christian Education, 55*(1), 59-69.

Vygotsky, L. (1933/1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Walther, J. B., & Bunz, U. (2005). The rules of virtual groups: Trust, liking, and performance in computer-mediated communication. *Journal of Communication, 55*(4), 828-846. doi: 10.1111/j.1460-2466.2005.tb03025.x

Wenger, E. C. (1998a). Communities of practice: Learning as a social system. *Systems thinker, 9*(5), 2-3.

Wenger, E. C. (1998b). *Communities of practice: Learning, meaning and identity*. Cambridge, MA: Cambridge University Press.

Wenger, E. C., McDermott, R. A., & Snyder, W. C. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Cambridge: Harvard Business School Press.

York, D. (2015). Non-verbal immediacy's role in student learning. *Journal of Media and Communication Studies, 7*(1), 1-7.