Online Communication Forums and their Influence on Learning

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Abstract

This paper examines how student-to-student online communication informs learning. Based on her own experience as an online student, and supported by research from a wide body of literature, the author defines conditions found within asynchronous forums. The author argues that the present, text-based, online forums affect students' learning experiences, namely because of their restrictive boundaries. She identifies the limitations herein, relating challenges, and explores ways to improve motivation and dialogue. Embodied, collaborative, learning experiences are discussed, and ways to foster these within e-learning forums are explored. Although more sustained research is necessary to further understand the degree of learning achieved through online collaborative communication, the author nonetheless proposes measures that could improve the student's learning experience within online forums; such as providing a more balanced, organic, collaborative environment that reflects student-centered needs. This paper not only serves as reflection material for all those who have experienced online learning communities, but from an educational point of view, it serves to inform higher-learning institutions that it is critical to evaluate online communities of inquiry, in order to better understand how these influence student learning.

Online Communication Forums and their Influence on Learning

This paper is fuelled by my own interest on how online communication informs learning, based on my seven-year student experience within online forums, and my recent theorizing on the topic. Even though online forums have been designed with the intent to foster communities of inquiry; (Garrison, Anderson, and Archer, 2000) I would argue that students are not necessarily able to construct meaning through this present mode of communication. Based on my assumptions related to my own online experience, this essay seeks to demonstrate that it is challenging to communicate one's learning clearly, logically and profoundly based on present, online, forum formats. My argument is threefold, firstly, this paper will define how the conditions imposed by asynchronous forums affect students' learning experiences; secondly, it will examine the role of student-to-student interactions in achieving embodied learning; and thirdly, it will explore ways in which online forums can be improved, providing a call for action and recommendations.

Relevance of This Topic

Higher learning institutions rely more and more on online forums as the primary means to achieve collaborative learning; thus, from an educational point of view, it is important to critically evaluate this type of communication to better understand how it influences learning. Since student-to-student interactions are critical to learning (Anderson, 2004), it is primordial to explore if and how these forums foster communities of inquiry, and if students are able to construct meaning herein. Supported by findings, this paper seeks to propose a series of measures that could provide a more flexible, organic environment offering multiple ways to communicate one's learning, thus improving the student's learning experience.

Research and Methodology

My research method is qualitative, and relies on reading material from primary and secondary sources. My perception of collaborative e-learning is based on many theoretical insights and perspectives that have framed my thinking over the years. As such, it is important to acknowledge the subjectivity of this paper; consequently, I will draw from a wide body of literature to develop my thesis argument and forward my claims as objectively as possible.

Literature Review

Since this essay seeks to demonstrate that it is challenging to communicate one's learning within asynchronous forums, it is important to define the conditions herein. Various sources served to support my thesis and argument, such as Garrison et al. (2000) who state that online forums should foster communities of inquiry; while Anderson (2004) believes student-to-student interactions are critical to learning, and Andresen (2009) supports the idea that the process of discussion is a critical factor in learning.

Other literature was perused to define how online forums influence learning, as well as explore if and how these foster communities of inquiry. Xin and Feenberg (2005), Andresen (2009), and Jahnke (2010) help identify limitations of collaborative learning. Downes (2004) outlines what online forums should provide for a deep, learning experience to take place, whereas Janhke (2010) and McConnell (2005) relay conditions that foster learning while clarifying ideas and concepts concerning online forums. Andresen, (2009) provides an interesting perspective on effectiveness of online forums and student performance; whilst Gafni and Geri (2010) further define the challenges of collaborative learning, and explore ways to overcome them.

Other sources examined proposed a series of measures that could provide a better learning environment. For example, Matzat (2010) examines sociability within online

communities to promote motivation; whereas Daneshgar, Van Toorn, and Abedin (2009) discuss cognitive load, motivation and participation, as well as how message exchanges and social factors influence communication.   Mason (2011) suggests ways to enhance collaborative learning within asynchronous discussion groups, resulting in improving academic discourse and knowledge construction. Likewise, Pate, Smaldine, Mayall, and Luetkehan (2009) believe that collaboration is intimately linked with interacting and socializing. Heckman and Annabi (2006), Barab and Duffy (2000), Utecht,(2007), Daneshgar et al. (2009), and Sweller (2005) are equally valuable sources, for they outline the importance of dialogue and what can limit or facilitate communication.

In exploring ways online forums can be improved, the idea of embodied learning can be further examined through Ziemke (2002), Valera, Thompson and Rosch (1991), Schellens and Valcke (2004), and Scarmaldia and Bereiter (1996) - all excellent sources in providing different viewpoints on embodiment and cognition in relation to learning. In further researching ways to foster embodied learning, Rakab (2010), Gee (2003), and New London Group (1996) provide valuable information on what students require to achieve a fulfilling learning experience; whilst Daneshgar et al. (2009), and Mason (2011) provide great insights into balancing cognitive load, motivation and participation, as a transition between cognitive science and human experience.

Defining Online Forums

The idea of communicating to facilitate collaboration within e-learning environments has reinvented discussion as a means of teaching and learning. Individuals can now choose from a variety of Web 2.0 communication tools to connect with their peers and instructors. This essay will focus on online, asynchronous, communication forums within higher-learning establishments, and study how this mode of communication allows participants to relate and make meaning of their learning. As Andresen (2009) states, the process of discussion is a critical

factor in the learning process, thus I can argue that communication forums *should* influence learning positively. This essay does not question the need for collaborative communication within e-learning platforms, but rather seeks to determine how online communication can better reflect and accommodate learner needs, and thus provide the student with a fuller learning experience.

Identifying Limitations

As the popularity for distance learning grows, so does the need to communicate in an effective manner within the physical confines of e-learning forums. Whether communication takes place in a traditional manner or through online forums, the focus still needs to be on learner achievement and satisfaction. (Fulford and Shang, 1993; Shang and Fulford, 1994; as cited in Andresen, 2009) In the absence of more classical Face-to-Face dialogue, online communication should provide opportunities for students to equally reflect, criticize, inquire and appropriately react to one's learning. (Downes, 2004) Yet, as per my experience, students are expected to communicate for the most part using text-based communication, with a proposed number of words and posts, within specific time frames. Higher-learning institutions have high expectations when students communicate within these forums; students are expected to achieve knowledge building through critical inquiry despite the set boundaries of asynchronous forums. How exactly do students feel about communicating within the confines of these e-learning forums?

Student Perception

A student's perspective concerning online learning is important. After all, they are the ones who use this social platform to clarify ideas and concepts, develop critical thinking skills, and communicate their knowledge. (McConnell, 2005) Yet, in my experience, beyond end of term general evaluations, students are hardly ever consulted concerning how online forums

support or benefit their learning. In reality, students find it difficult to accomplish high levels of

cognition within the imposed requirements of present online forums. (Greer 2005, as cited in

Jahnke, 2010) Also, when faced with the paradox of communicating one's learning within the

boundaries of asynchronous forums, learners can experience a sense of dissonance and

misunderstanding while trying to achieve knowledge building through critical inquiry. (Xin and

Feenberg, 2005) According to Jahnke (2010), online students feel interactivity, group

construction of knowledge, ability to revisit communicated learning, and awareness of student

identities are quite central in the learning process. This points to the need for particular

conditions to foster learning within online communities of learning.

Identifying Conditions within Online Forums

Sociability

Jahnke's (2010) study revealed that students feel interactions in relation to learning need

to have social, emotional and intellectual dimensions. Matzat (2010) relates that the reason

members are often not sufficiently motivated, is because their learning experience is limited to

communicating with online communities. Likewise, Pate et al.'s (2009) study of learner groups

determined that in order to make sense of learning, students need activities that support

externalization and internalization. Pate et al. (2009) also relate that for distance learning to

work, a balance between academic and social dialog is essential.

Dialogue

Forums are in itself powerful learning tools, but only if students engage in dialogue.

(Kovacic, 2004; Yang Li, Tan, and Teo, 2007, as cited in Mason, 2011). A strong community of

learning is above all composed of participating members, thus if collaborative learning is to

occur within online forums, it is vital that a majority of students actively participate. (Barab and

Duffy, 2000, as cited in Daneshgar et al., 2009) However, just communicating for

communicating sake is not enough; the frequency and quality of dialogue can have various effects, and many obstacles can get in the way of deep, meaningful student-to-student interactions.

Communicating hurriedly without a chance to reflect can impede relationship building within a learning community. (Heckman and Annabi, 2006) While limited language or sporadic communication can also disturb learner interaction - disrupting the flow of conversation, it can in turn interrupt connectivism in learning. (Barab and Duffy, 2000) Moreover, social presence, which is an important element of developing online relationships, can be diminished; while chat forums can limit dialogue, making it difficult to engage in meaningful debates. (Utecht, 2007)

The exchange of messages in a web-based learning environment offers both advantages and disadvantages; for example, asynchronous modes create temporal delays. (Friedrich et al., 2001, as cited in Daneshgar, et al., 2009). Another challenge to overcome is the extra cognitive load that web-based collaborative learning requires when learners have to combine operating complex technology, responding to complex subjects, and communicating with their peers. (Seller et al., 1998; Van Bruggen et al., 2002, as cited in Daneshgar et al., 2009). Consequently, depending on how well learners adjust to these demands, some participate actively and others choose to remain passive learners. (Fries, 1995, as cited in Daneshgar et al., 2009) How then can students become motivated to participate within these forums, and what hinders their motivation?

Motivation

In his findings, Mason (2011) relates that students under study did not participate in online forums and were unmotivated, because of time pressures. Another leading factor for lack of motivation was poorly explained course requirements, which misinformed students concerning the importance of dialogue and social interactivity in the learning process. (Pate et

al., 2009) Mason (2011) adds that many participants felt either guilty or pressured in participating within the forums in a particular way, rather than using dialogue as a means to achieve and experience learning.

Higher-learning forums expect students to share knowledge building through communication, yet interactions are often centered on regurgitating summaries of course content, rather than engaging in a meaningful discussion to build on knowledge. (Mason, 2011) Based on peer testimony and my observations, some students are intimidated by the complexity of the language used, and thus abstain from engaging in dialogue for fear of not measuring up to standard. Obstacles in dialogue can hinder social interactivity, which in turn can disrupt communities of inquiry.

Importance of Social Interactivity and Collaborating

Pate et al. (2009) reinforce the idea that social interactivity within online environments is primordial for affective learning to take place. The online environment must have a social element that fosters embodied learning, where individuals are able to make sense of their learning through valuable interaction. Students need to be shown that situated learning becomes the core of a course when the right balance of collaborating, socializing, and interacting occurs within online communities. (Pate et al., 2009) The instructor has an important role to play in fostering an environment that is safe and welcoming and promotes collaboration between peers.

Role of Instructor and Course Design

The instructor has a primordial role in setting the necessary foundation and learning structures that will motivate and guide learners to interact actively. (Tu and Corry, 2003, as cited in Pate et al., 2009) It is up to the instructor to initiate a strong collaborative online learning community from the start, clearly outlining expectations, but also sustaining dialogue. (Tu and Corry, 2003; as cited in Pate et al., 2009) Student satisfaction in the learning experience is

greatly improved by the presence of the instructor, and this is an important factor in motivating students to actively participate in dialogue. (Swan and Shih, 2005, as cited in Mason 2011) Andresen (2009) outlines the challenges to overcome within online forums, such as distance and time, and discusses the importance of a facilitator in these types of forums, reminding us that knowledge-construction can occur only if there is careful planning. If the design of a course is well thought out, then a learning community should naturally come about as students move together in their learning from one context to the next. (Pate et al., 2009)

Now that the limitations of online learning have been established, and the underlying conditions within communities of learning outlined, it is important to examine the role student-to-student interactions and online environments play in fostering embodied learning.

Fostering Embodied Learning within Collaborative E-learning Forums

Definition of Embodied Learning and Cognition

Ziemke (2002) defines embodiment, as the relation of mind, body and spirit – are computers or even online forums capable of embodiment? Cognition is identified, as a place where significant inputs and outputs take place – so if participation is lacking the process of cognition is likely to suffer. Valera et al. (1991) believe knowledge is likened to our bodies, language and social history – do communication forums provide the type of environment for this sort of experience to materialize? I would argue that at present asynchronous online forums do not support embodied experience; rather, online forums appear to have been designed to cater to the needs of a cyborg population. However, humans are living organisms, and machines are heteronomous – making it a challenge to communicate from one to the other and achieve embodied learning. (Ziemke, 2002) Present online forums limit social embodiment, as social exchanges are essentially text-based, limiting social information processing.

Embodiment as Knowledge Building

Does collaborative learning within asynchronous forums result in improving academic discourse and foster knowledge building? (Schellens and Valcke, 2004). This is a question that has yet to be answered. Nonetheless, in their research Schellens and Valcke (2004) denote that the critical impact of environment affects knowledge building, such as group size, flexible rules, and proper guidance. Within larger groups, communication can become disembodied, students exchanging unmindful reflections within the confines of asynchronous forums. (Schellens and Valcke, 2004) Theoretical reflections within online communication can at times be qualified as disembodied, unmindful reflections, but they don't need to be. (Varela, et al., 1991) Consequently, based on findings it is important to revisit the design of online formats, exploring ways online forums can provide a more flexible, holistic environment that offers students multiple ways to communicate   their learning.

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Call for action – Recommendations

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Designing Online Communication Forums

As outlined in this essay, many factors can affect student motivation and student participation. It would be beneficial for course designers and instructors to understand what motivates students' participation within online learning communities, and especially consider how various factors can affect learning outcomes. Accordingly, e-learning forums should be designed with collaborative, peer-to-peer, interactive, and user generated content in mind. Forums should also provide more authentic tasks so students fully engage and achieve deeper learning. (Mason, 2011) Assignments need to focus on authentic learning material, and the value or worth of the task needs to be clearly outlined. (Biggs, 2003, as cited in Mason, 2011) Furthermore, questions and topics could be more successful in generating deep, complex

interaction if dialogue is initiated with open-ended questions. (Fung, 2004, as cited in Mason, 2011)

Time and Flexibility

Students need to be given more time to become more knowledgeable about course content. Forums should provide an environment where students have the time to carry out a task, think about, discuss, and apply concepts and new knowledge. (Littlejohn and Higgison, 2003, as cited in Mason, 2011). Providing scaffolding activities within lessons, would allow learners to get beyond their proximal zone when ready, so they don't feel pressured in communicating knowledge they have not yet acquired. (Rakab, 2010) It is also important for instructors to clarify and emphasize the importance of the language used to communicate one's learning, and students be given the time and tools to identify, state, discuss, and negotiate content in order to have a fulfilling learning experience. (Rakap, 2010; Gee, 2003; and New London Group,1996)

Cognitive Science and Human Experience

Cognitive load, motivation, and participation, as well as how message exchanges and social factors influence communication within online forums need to be addressed, so the transition between cognitive science and human experience can be smoother. (Daneshgar et al. 2009) Salmon's 5 stage model provides great ways of motivating students to participate: such as facilitating access to technology; presenting tasks through scaffolding to reinforce socialization; motivating interaction among learners; using real, personal situations and experiences to hone critical thinking skills; and lastly, encourage independent learning, building, and reflecting on learning. (Mason, 2011)

E-learning Environment

Through my own personal collaborative learning experiences over the years, I came to realize that a safe and trusting learning environment fosters reflection on experiences, allowing

meaningful dialogue to take place. (Cranton and Wright, 2008) As such, I noted that embodied learning experiences occur most often within a student- and knowledge-centered community of inquiry, where knowledge can more easily be applied to new contexts. (Bates and Pool, 2004)

Diversifying Modes of Communication

E-learning environments should embrace embodied cognition. (Scarmaldia and Bereiter, 1996) The flow of communication could be improved by varying the method of communication to include multimedia modes of communication. (Sweller, 2005) It is important to provide students with the opportunity to communicate in ways that respect their learning styles and needs. (Dall'Alba and Barnacle, 2005)

Further research

Daneshgar et al (2009) propose an interesting model on the effectiveness of web-based collaborative learning, which focuses on cognitive load, motivation, participation, message exchange, as well as social and environmental factors. Further application and study of this model could provide a way to improve online discussion. Although Mason (2011) did an extensive study as to why students are motivated within collaborative forums, the study did not look at the degree of learning achieved; consequently, more research is necessary in this domain to really determine the influence online collaborative communication has on learning.

Further research is also needed to examine how social embodiment can better be fostered through online forums, such as the introduction of various communication means to better suit learner style and needs. (Valera et al., 1991) This type of study could help determine if and how using various asynchronous and synchronous tools to communicate learning provides students with a better learning experience.

Conclusion

Online forums should be a place where a student can develop critical thinking, and take control of their own learning in a social context. (McConnell, 2005) Collaborative interactions among peers are meant to foster communities of inquiry, where participants construct meaning through sustained communication. (Garrison et al., 2000) Thus, if the right balance of collaborating, interacting and socializing is present within online forums, one can determine that situated learning takes place, as each student engages in meaningful, mutual, reciprocal communication. (Pate et al., 2009)

Building strong, vibrant social online communities benefits learning. (Garrison, 1997; and Garrison et al., 2000) I believe it is possible to create a bridge between cognitive science and human experience, as students communicate through time and space. (Varela et al., 1991) Since experience provides access to all the relevant phenomenological evidence, online communication needs to address various patterns of thinking, feeling, perceiving and acting so embodied learning can occur.

One can conclude then, that it would benefit both students and higher-learning institutions if e-learning environments would view online communication forums as an opportunity to practice embodied cognition within a community of practice. Even though further research is needed in this domain, I can ascertain that immediate measures could be taken to improve the flow of communication. A first step would be to eliminate restrictive boundaries, and secondly to encourage participants to use a variety of Web 2.0 multimedia communication tools to relate their learning. E-learning forums should offer students an environment that is more organic in nature, where they can openly express themselves in varying ways, and experience embodied learning.

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