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High Wire Act: the Perils, Pitfalls and Possibilities of Online Discussions

Karen Armstrong

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***Abstract*—**Online discussions are an important component of both blended and online courses. This paper examines the varieties of online discussions and the perils, pitfalls and possibilities of this rather new technological tool for enhanced learning. The discussion begins with possible perils and pitfalls inherent in this educational tool and moves to a consideration of the advantages of the varieties of online discussions feasible for use in teacher education programs.

***Keywords*—**online discussions, computer-mediated communication (CMC), computer-supported collaborative learning (CSCL), e-learning, teacher education

I. INTRODUCTION

THE world of online instruction is generally considered to be a major advancement in education. To date, although the instructional benefits of online discussions have been explored in a variety of studies [1] – [12], the research can still be considered to be in its infancy as online discussions have not been universally adopted in the majority of education courses. This paper considers the pitfalls, perils and possibilities for enhanced learning offered by online discussions.

There are various contexts in which online discussions are used in teacher education courses. They can be incorporated in face to face classes. They can be used in distance learning through platforms such as Blackboard, WebCT and moodle. As well, online discussions can take one of two forms: they can be asynchronous that is, posted at varying times, or synchronous, as in real-time chat discussions. Furthermore, the participants can know each other and have met face to face or the participants can be completely anonymous, have never and never plan to meet, and use the online discussion as the only tool with which to connect with each other during a course.

My own experience with online discussions has been with both situations: anonymous participants who use online discussions as the only connection between them and also with face to face classes who use online discussions, asynchronous and real-time chat as an enhancement to the face to face classes. The more challenging situation is definitely the anonymous participant class, where the participants have no knowledge of their classmates outside of the online discussion.

I teach three courses several time zones away and have been doing so since the time of correspondence courses in which students actually mailed hard copy papers to me and I mailed the assignments back to them. In those days of paper correspondence courses, the discussions were known as "teleconferences" or phone conferences with everyone one the phone line with many connecting from very remote locations. Today's world of online education seems so much easier and so much more streamlined and instantaneous. Nonetheless, issues of safety, trust, control and choice, so essential to a constructivist theory of education, present special challenges in online courses.

K.Armstrong is with the Faculty of Education at York University, Toronto Canada. (email: karmstrong@edu.yorku.ca)

II. PERILS AND PITFALLS

The challenges or perils are more prominent in an exclusively online course where participants never actually meet each other as the this type of course lacks the balance of an opportunity for any fuller communication. As Armstrong and Manson [13] observe, "In face-to-face classes, for example, discussion is an important feature of communication. Eye contact, intonation, tone, the judicious use of humor, clarifying when it is evident through puzzled expressions that things are not clear are all important features of such communication. In an online environment, such cues are often missing or—in the case of humor—can be misunderstood completely. In an online environment, if one is not speaking or posting or submitting an assignment, there is no evidence of one's presence." Thus a major challenge with online discussions and online communication in general, is the lack of verbal cues in the communication process. The language thus needs to be more formal with only a careful use of humor and it also needs to be more elaborative as the meaning is limited to the written word.

At an even more basic level, as far as the technology itself, even today, the simple act of logging in can be unfamiliar and thus threatening to some students. Indeed, there are many perils and pitfalls associated with electronic technology in itself: a new operating system, a new computer can be almost paralyzing for some students with no one close by to help. Often, for new users and even for people experienced with technology, the sense is that of entering a new dimension in which one can read words but not see or pick up on any of the visual cues such as body language, tone, inflection of the other participants.

And then, there are the basic challenges associated with hardware in general: computer servers can crash unexpectedly as happened to one of my synchronous discussion sessions during which we had gone to the extra time and trouble of obtaining permission for a special guest login for our guest

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speaker for that session. Unfortunately, the moodle server crashed a few moments before the class was to begin so we resorted to email and "reply all". It was quite a slow class, but of course, there are often creative solutions to technological pitfalls. The system was never properly restored until the following day but, thanks to the strong backup plan of switching to email, the class proceeded as scheduled..

As well as the limited form of communication with no visual cues other than the words themselves, there is, in online discussion spaces, the sense of being constantly under surveillance. If Foucault [14] had compared modern society with Jeremy Benthan's [15] "Panoptican" design for prison, then the world of online discussions, in particular, seems an even more concentrated form of Panoptican.

The concept of Benthan's design allows an observer to observe (*-opticon*) all (*pan-*) prisoners without the incarcerated being able to tell whether they are being watched, thereby conveying what one architect, Lang [16], has called the "sentiment of an invisible omniscience". Lang distinguishes between public and private spaces and proposes that one way of ensuring privacy in the more public space of the internet is the use of encryption.[16, p.71]. However, aside from the initial login and verification, students in an online course have few areas of privacy and none from the instructor who is indeed, at least one observer. Students may be able to submit specific assignments to the professor alone, without everyone reading them, but in the area of online discussions, everyone in the course is reading, or at least has the capacity to read, everything posted. Similarly, in the world of online discussions in most platforms but certainly that of moodle and WebCT, there is a complete record of every posting, and of the times and duration that students login. In WebCT there is also detailed information of the level of activity and which pages were accessed by which students, for how long and when.

In truth, in an online discussion environment, every thought shared is recorded and archived. This is also the case for the instructor as well as the student. Indeed, in most areas of the course, there is no "delete" or "unsend" once a post has been sent. The record stands as originally sent and, unlike words delivered in person, for better or worse, these words can be re-read and reviewed. If, as happened to me once, the comments on an assignment are sent to an incorrect student, the professor must write and apologize and explain and re-send to the correct student. Similarly, an email sent in haste to a professor cannot be unsent as with certain email systems, but can only be explained after the fact in another email. Thus, it makes sense to give greater deliberation than we normally do with oral exchanges, to words shared so permanently in online discussions.

Bentham [15, p. 1] who invented the idea of the Panopticon, described it as "a new mode of obtaining power of mind over mind, in a quantity hitherto without example."

Today's omnipresent security cameras and the pervasive use of video recorders in cell phones in which incidents are instantly recorded and almost as instantly often posted on social networking forums for the world to see, are often offered as evidence in court decisions. Thus it is easy to see the veracity of Foucault's [14] arguments in his *Discipline and punishment: the birth of the prison*--that modern society is itself a panotpicon. This is even more true today than when he wrote these words forty years ago. It is through this transparency that modern society exercises its controlling systems of power and knowledge. Foucault [14] suggests that a "carceral continuum" runs through modern society, from the maximum security prison, through secure accommodation, probation, social workers, police, and teachers. This visibility and consequent vulnerability for students must be taken into consideration by instructors as they attempt to ensure feelings of safety and trust which are essential to a constructivist learning environment.

Another difficulty researchers have identified with online discussions relates to student participation and presence. This of course is the same challenge as is faced by professors in face to face classes, however, again, one is hampered by the lack of visual cues and body language as far as reading engagement levels of each student. Taylor [17] examined students' participation patterns in accessing and contributing to online discussions and noted three categories of participants: (1) "workers" or proactive participants; (2) "lurkers" or peripheral participants; and (3) "shirkers" or parsimonious participants. Taylor describes "workers" as being those who participated actively in the discussion and visited the course website regularly. He describes "lurkers" as those who participated occasionally but mostly in "read-only mode". Finally, "shirkers" performed the minimum required with fewer postings and visits to the course website.

As with face to face classes, the instructor must monitor both presence and quality of input in an online discussion. However, there are benefits of this aspect of the panopticon in that transcripts of the dialogue and postings are being created as people discuss and the instructor can thus re-read and re-evaluate contributions after the class is over. And even with synchronous discussions, students who must be absent, can simply pull up the transcript and at least view what took place rather than asking a classmate to take notes or have the instructor review with them the key points of the class discussion.

Thus, in summary, the perils inherent in the hardware of technology, the learner's skill with respect to navigation of the screens, the potential for the occasional system crash for which alternative arrangements must be made; as well as the sense for both instructor and student, of being in a panopticon. Participants in online discussions, whether they be asynchronous or synchronous, are watched and monitored constantly.

III. VARIETIES AND POSSIBILITIES

Despite the challenges, online discussions used in teacher education courses offer a wealth of possibilities for enhanced learning. The first decisions to be made are whether to make discussion part of the grading scheme (in which case it is no

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longer really optional for each student) and whether to structure the actual content of the discussion through offering guidelines and specific requirements. Further decisions need to be made about whether to have small group discussion or an online discussion involving the full class.

If the online discussion contributions are not made part of the marking scheme, they seem to be given scant attention by students and have limited value. As Archer [18 , p. 69] observes, "Rather than putting the effort required for achieving these higher levels of thinking into their meagerly rewarded contributions to online discussions, students reserve their best thoughts for the term papers and other course assignments for which they receive a larger portion of their course grade". So [19] also confirms the limited benefits of voluntary participation in online discussions. And Cheung and Hew [20] note that in online courses in which there is no mandatory discussion, "if no contributions are made, there will be no postings or notes in the discussion for students to read." Thus there is merit to recognizing discussion contributions in the marking scheme.

Indeed, in the asynchronous discussions amongst participants who never meet face to face, it seems that without being graded, the postings are often more social in nature or else discrete postings of opinions with little relation to one another. This off-task talk in either synchronous or asynchronous discussions nonetheless does serve a purpose in reducing tensions, or breaking the ice, so to speak and allowing participants to focus on the discussion tasks at hand, as is also suggested by the research of Barkaoui , So, M., and Suzuki, W. [21] and Chen and Wang [22]. But of course, it is essential in education courses that the discussion not be limited to social matters.

Once the decision has been made to incorporate online discussions as a valid tool for critical thinking, there seem to be stages through which the participants move. Salmon [23] proposes a five-stage conceptual framework describing the development of participants'online discussions. Stages one and two involve participants becoming familiar with the technology and making connections with other participants. During stages three and four, participants begin to exchange information and construct personal knowledge. At stage five, participants are ready to integrate new content and deepen their understandings. Throughout, the role of the instructor throughout can vary from being merely an observer to commenting and encouraging participants in their discussions and posing questions to deepen understanding.

As was mentioned above, if postings are needed in order to make a discussion, they are not in themselves sufficient and do not automatically promote critical thinking [24, 25]. As Whipp [25] suggests, teacher educators need to take special steps to scaffold critical reflection in online discussion. Kim and Bateman [26] note that: "to encourage students to use higher thinking skills, instructors need to create more engaging discussion questions such as those that inquire about the application of course concepts. The goals and objectives of the discussion should be presented to the students prior to beginning the discussion. As with any pedagogical undertaking, students need to know why they are completing the activity and why they need to read and respond to other student posts. In addition, students should be primed for the discussion adequately." Scaffolding the discussion environment is thus important. Guidance on how often they should log in, what they should be looking for in other students' posts, and how to develop responses will lead to better participation and a deeper learning of course content. Furthermore, as Sutherland, Howard, and Markauskaite [27 ,p. 456] point out:

"While reflection is a critical process in the development of a professional identity, systematic reflection is difficult for many pre-service teachers [28, 29]. To some extent, these difficulties arise from the complexity of reflection, as reflection is not a series of steps or procedures, but rather a holistic way of meeting and responding to problems [30]. It involves an effortful cyclical process of monitoring, evaluating and revising ideas and actions in the light of new evidence and new insights [29]. It also involves intuition, emotion and passion [30]. The quality of practitioners' reflections depends on their knowledge and understanding of the relevant concepts in a particular domain [29, 31] as well as a level of expertise, which enables the practitioner to recognize discrepancies or opportunities for reflection [33]. While there is an affective component [30], reflection is primarily a cognitive process [31, 34]".

In setting up an online discussion, first the instructor needs to design a task for students or devise a topic of discussion. Having students write reflections on course readings is one that I have used with good results. Others examples are: case study, debate, or personal research on globalization--all important aspects of teacher education.

Second, after a task has been devised, providing course participants with a structure through which to explore their insights is an important action. This structure can shapes participants reflections and provide both order and depth to discussions. Interestingly, however, the research of Richardson and Ice [35, p. 57] suggested that "the majority of students preferred open-ended discussions (47%), followed by debate (36%), and then case-based (17%)", that is, the format that is the least demanding and least instructive with regard to higher level thinking skills is the most favoured by students.

Various frameworks for discussion thinking skills have been proposed: the community of inquiry framework by Archer [18]; probing, questioning, resolving and summarizing (PQRS) facilitation technique to facilitate thread growth by Chan, Hew and Cheung [36]; Bloom's taxomony by Valcke, De Wever, Zhu, and Deed [37]; the practical inquiry model and Com by Richardson and Ice[1]; exploration, elaboration and reflection-application as well as identifying, analyzing, critical evaluation and problem-solving by Sutherland, Howard and Markauskaite [27] are only a few which seem promising. It is worth investigating each of these in light of the particular course content and goals in order for an instructor to determine what might serve his/her purposes best.

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IV. CONCLUSION

In this paper, we have explored some of the perils and pitfalls of online discussions in teacher education courses. These include the challenges presented by the technology itself, the feelings of discomfort as student and teacher explore what is possibly a new domain of instruction, and the reliance on a server which may be unpredictable. As well, communication barriers include the lack of visual cues such as body language and the feelings of constraint and lack of spontaneity due to the panopticon world of online discussions in which everything posting is archived and every thought seems visible. Possibilities of online discussions include the importance of incorporating discussion contributions into the marking scheme, the importance of devising a specific task such as the sharing of journal reflections, case studies or collaborative work on a specific problem. Following the identification of a specific purpose for the online discussion, the instructor needs to decide how to move beyond the sharing of personal unsubstantiated opinions in online class discussions and instead, structure the discussion through the construction of criteria, guidelines and questions so as to facilitate deep learning and higher level thinking skills. These issues are of course essential in face to face classes however, online discussion is more fully dependent on such scaffolding. Although still in its infancy, this is a complex yet timely tool with potential to enhance learning in all teacher education courses.

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