Developing online discussion forums as student centred peer e-learning environments

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Computer conferencing, most commonly in the guise of discussion forums, is increasingly available and utilised in the delivery of university level courses. While such advances in the delivery of higher education have permitted greater flexibility for participants with the opportunity of studying almost anywhere at anytime, such modes of delivery can place significant time demands on academics. Traditional and peer-based approaches to learning in the e-learning environment often create an onus upon the instructor to be extensively involved in dialogue on course content through such mediums as discussion forums. This paper introduces a conception of discussion forums as student centred peer e-learning environments. The proffered conception positions the student as expert/facilitator at the centre of the learning event and the instructor, one step removed from the process, as overseer of the dialogue. The model is an innovative approach to discussion forums that draws the student into the online learning process by encouraging them to take a more active and central role in their learning.

Keywords: discussion forums, facilitation, peer learning, e-learning

Background

Computer conferencing is a widely used function of computer-mediated communications (CMC) (Garrison, 1997; Rourke & Anderson, 2002). Unlike in the traditional face-to-face delivery of tertiary education where spontaneous and somewhat unstructured conversations can take place, and are encouraged as crucial to student engagement with the process of learning, discussion through computer conferencing is generally more reflective, asynchronous and structured in nature (Dixson, Kuhlhorst, & Reiff, 2006; Garrison, 1997; Stodel, Thompson, & MacDonald, 2006). Despite the differences with face-to-face communications, computer conferencing is increasingly available and utilised in the delivery of university courses through several mediums, most commonly in the guise of discussion forums. Although computer conferencing is becoming more and more common in the delivery of university level courses, understanding of how to best utilise it remains modest amongst academics (Stodel et al., 2006).

E-learning environments and higher education

Teaching a course online is distinctly different from delivering it in a face-to-face mode (Kelly, Ponton, & Rovai, 2007). E-learning environments establish a framework for regular contact between student and instructor as well as collaborative activities between students, without the requirement of a face-to-face encounter (Garrison, 1997; Kear & Heap, 2007). An online mode of course delivery permits greater flexibility for participants with the opportunity of studying almost anywhere at anytime (Dixson et al., 2006; Leh, 2002). However, in a study conducted by O'Quinn and Corry into instructor perceptions of online courses, one instructor described the teacher's role in such courses as "the preparation and workload are extremely demanding. The teacher is responsible for all aspects of the course plus technical and support areas." (2002, p. 13). Hence, many instructors deem online courses and even online components of courses to be highly time demanding with limited reward or recognition for effort (O'Quinn & Corry, 2002; Rourke & Anderson, 2002; Spector, 2005). Yet, studies have shown that students do not consider the instructor to be as important in the online environment as in the face-to-face classroom (e.g. Kelly et al., 2007).

From the instructor's perspective, the convenience and accessibility of this mode of course delivery generates an onus upon the instructor to be regularly, if not almost continuously, online to field, guide and encourage questions, postings and dialogue on course content. Furthermore, to be absent or off-line for any significant length of time carries the risk of being viewed by course participants as unresponsive and uninterested which, in turn, lead to participants reduced usage or withdrawal from online aspects of a course. This conception of online teaching and learning largely replicates the traditional face-to-face

classroom approach to teaching with the instructor positioned as the provider of knowledge for the students' consumption, except with an increased workload due to convenience and accessibility (Light & Cox, 2001; Margolis, 2000). This is a didactic top-down approach with interactions that constitute the learning process being predominantly between instructor and student. When applied to the medium of online discussion forums, this conception of learning generally manifests in a question and answer format with the instructor posing the question, students required or invited to provide an answer and the instructor positioned to confirm, refute or provide the "right" or model response.
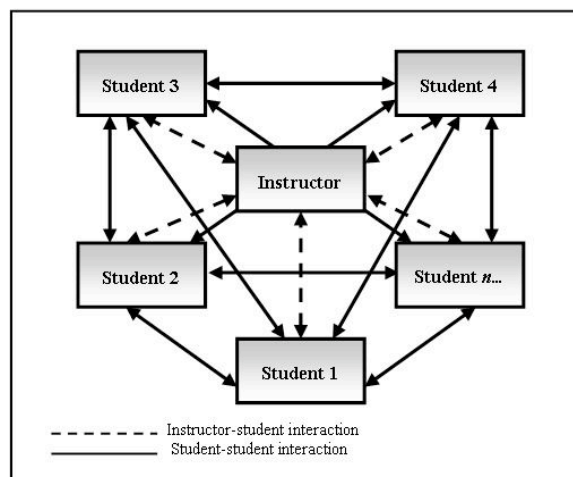

Figure 1: Peer learning in higher education

In contrast to the traditional face-to-face classroom approach to learning described above, peer learning is based upon the understanding that student to student interaction promotes students' engagement with course content and thereby deepens learning (Boud & Lee, 2005; Kear, 2004). It has been established that encouraging or requiring students to interact with and school each other on course content deepens cognitive understanding (Biggs, 1999) and improves interpersonal and social skills (Light & Cox, 2001). Furthermore, peers may experience peer interaction as more appealing and interesting than simply listening to or downloading a lecture (Biggs, 1999). Within the e-learning environment, computer conferencing including discussion forums provides a framework for peer or student to student interaction and learning (Garrison, 1997; Kear & Heap, 2007). Figure 2 presents a model of the peer learning approach to learning in higher education and, in particular, highlights the emphasis on peer or student to student interaction. This understanding of the learning process is aligned with a more constructivist view of learning where knowledge is not seen as transferred from one person to another but rather the learner is actively taking part in the learning process (Biggs, 1999; Richardson, 1997).

The proffered conception of peer learning in higher education positions the instructor at the centre of the learning process. When applied within the medium of online discussion forums, peer learning progresses the learning experience beyond a didactic question and answer format with the instructor positioned as expert and facilitator of debate and dialogue most often on a preset topic or problem. However, in common with the traditional model of learning, there remains an onus upon the instructor to be extensively involved in the dialogue on course content. Hence, while embedding peer learning in the online learning experience may be pedagogically more defensible and more rewarding for both student and instructor, as an approach it can be highly time demanding for the instructor.

Discussion forums as student-centred peer e-learning environments

There is an unequivocal upward trend in the usage of computer conferencing in the delivery of higher education, most significantly discussion forums. Hence, there is a need to develop and disseminate innovative approaches to the medium of discussion forum that are pedagogically sound, engaging for participants and more time effective for instructors. Given the widely acknowledged value of student to student interaction in promoting engagement with content and deepening learning, initiatives that draw students into online learning processes and encourage them to take a more central role in their learning are required (Boud & Lee, 2005; Kear, 2004).

Figure 2 presents a model of the online discussion forum as a student centred peer e-learning environment. In this model a student takes on the dual roles of content expert and facilitator of the forum

with other students invited to participate and interact with the facilitator and other students on predetermined content of interest. A nominated student or students achieve the role of content expert by preparing and posting a short essay or discussion primer on a set topic or problem of interest to seed dialogue. In this way, the student has advanced knowledge of the forum topic that provides a basis to facilitate the discussion. In contrast to the earlier model of peer learning, presented as figure 1, this model positions the student expert/facilitator at the centre of the learning event and the instructor, one step removed from the process, as overseer of the dialogue.
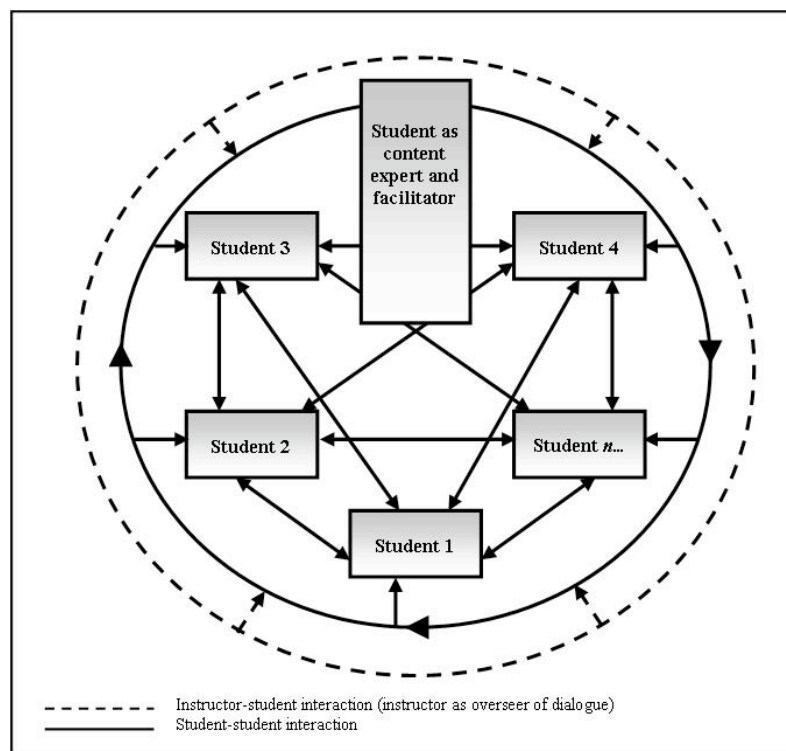

Figure 2: Online discussion forum as a student centred peer e-learning environment

Research on students as online discussion facilitators has suggested this approach is beneficial for both student involvement and learning outcomes (e.g. Rourke & Anderson, 2002). It also has the potential to reduce the instructor's forum related workload, though a prudent instructor would remain abreast of the dialogue to offer timely support and guidance if required (Wozniak & Silveira, 2004). However, there remain some concerns as to the appropriateness of the student as facilitator related to level of content expertise/knowledge and standing amongst peers (e.g. Harrington & Hathaway, 1994; Rourke & Anderson, 2002). In the model presented, these issues are largely resolved through the student's preparation of the discussion primer which promotes depth and breadth of knowledge on the topic and, in turn, recognition by peers of effort and content expertise.

The presented model of the online discussion forum as a student centred peer e-learning environment has been developed over the past four years as a central component of two postgraduate courses. These courses, delivered in both blended and online modes, have a student cohort of between 15 and 30 students. During semester, the forums run weekly with set topics corresponding to weekly course content. All students are randomly assigned to lead a forum comprising preparation of a discussion primer on the set topic and facilitation of forum discussion. Overall, feedback from students has been very supportive of the approach and comments sourced from course evaluations have included:

> The use of the discussion board as an assessment was great as a tool to keep the students interacting and learning throughout the semester;

> The discussion board was a good means of trying to work out if you were on track;
> Forums are great for peer learning and grasping content further; and

> As an external student, the discussion board was a great opportunity to get involved.

These comments indicate students have appreciated the forums and viewed their involvement as a positive experience and central to their learning processes and outcomes.

Next steps for development of the model

The next step in the development of the model presented in this paper requires empirical analysis of the approach to ensure it is grounded in the students' experience of the model. The aim of such research would be to examine this model of online discussion forums as a context that supports student centred peer e-learning. Such analysis to include:

- Student perceptions of the approach in terms of their learning and learning experience;
- Forum behaviour including number of postings, length, frequency and quality;
- Comparison of the model with accepted models and theories of online teaching and learning.

Data for the project will be gathered using semi-structured interviews (incorporating survey style questions and open ended questions), focus group and content analysis of forum postings for 2-3 selected forums. Analysis of interview data to include descriptive statistics and thematic analysis structured around the topics of role and effectiveness, participation and interactions, learning opportunity and facilitation. Content analysis of actual forum dialogue and postings will be undertaken through categorisation of postings by type of posting, timing and order, level of critical thinking and depth of analysis. The focus group will be used to investigate identified issues with the model including potential strategies for improvement. Ethics approval for the research has been granted by Griffith University Human Research Ethics Committee (Protocol No. PBH/21/07/HREC).

It is planned to conduct this research over the next six months supported by an e-learning fellowship from Griffith University. The analysis will enable the refinement and documentation of the model. This undertaking could be particularly significant in light of the need to progress innovative approaches to computer conferencing, most significantly the medium of discussion forum, in higher education.

Acknowledgements

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