TRANSFERRING LEARNING RESPONSIBILITIES TO STUDENTS AND COMPUTER MEDIATED DISCUSSION FORUMS

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ABSTRACT

In a system that is changing from an instructional to a learning model, a Computer Mediated Discussion (CMD) forum can be used to transfer the responsibility of learning to students. This paper discusses how CMD was used to stimulate student self-directed learning in place of traditional tutorials during a National University of Singapore (NUS) American Studies-History module in 2001 and student responses to using this CMD. Issues covered include structuring modules using CMD to maximise self-direction in learning, CMD as an adjunct to vs. replacement for tutorials, the advantages/disadvantages of non-face-to-face and non-synchronous discussions, facilitation, student response to CMD as a learning experience, student perceptions of strengths/weaknesses of CMD, student and lecturer satisfaction with CMD as a learning tool, and pedagogical shifts needed to utilise CMD for student learning.

KEYWORDS

Computer mediated discussions, self-directed learning, tutorials

INTRODUCTION

In May 2001, Ian Gordon decided to use CMDs in place of tutorials for his NUS module, *American Business: From the Industrial Revolution to the Web*, because he had experienced difficulty in stimulating student discussion and learning in his tutorials for an earlier incarnation of the module that had been available solely as an American Studies elective offered by the Faculty of Arts and Social Sciences. This was a major concern to Gordon because student discussions and interaction are critical in the construction of students’ understanding and knowledge of the subject (Vygotsky 1962, 1978).
The lack of discussion was due to: (a) the fact that the module was an elective made it a low priority for many students, and (b) the module attracted a diverse group of students across four different enrolment cohorts and included significant numbers (up to 50%) from the Business school, resulting in students bringing vastly different knowledge and interests to the module. In 2001, two additional factors concerned Gordon. First, Gordon shifted to the History Department and the module was to be offered as both a History (major) and an American Studies (elective) subject. Second, NUS as part of its restructuring process has opted for larger tutorial class sizes. As the teacher would not be able to play an effective central role in determining student learning within larger tutorial groups (Ramsden 1992), Gordon decided that the new module should allow students to determine what it is they ought to learn and to direct their study accordingly to meet their interests and needs (Knowles 1975).

STRUCTURING FOR LEARNING

In 2000, Gordon had used CMD forums as an adjunct to the formal discussion of tutorials. He observed that these forums were effective in stimulating broader and more sustained conversations between students than tutorial discussions, particularly when students were able to discuss matters related to the module that they were personally interested in. Research on the uses of CMD supports Gordon’s impression that when students are allowed to use this medium to explore their ideas and thinking, it not only stimulates student discussions, but also facilitates deeper understanding of the relevant content (Johanyak 1997, Olaniran 1996, Minch 1995, Gil & Quinones 1999). However, the challenge is to organise the use of CMDs such that students would engage and explore the subject themselves as well as sufficiently focus the discussions so that they address the relevant course concepts and material.

Having decided to use CMD, Gordon reviewed the module’s aims, objectives and structure. He revised the objectives to clearly state expectations from students: “In this module students shape their own essay topic (within the scope of the module) so as to strengthen their skills in critically assessing information and thereby creating knowledge. At the completion of the module students should be able to initiate, conduct, and present findings on an aspect of American business relevant to the module. In general students should demonstrate the ability to critically evaluate specific and general issues in American business.” To enable students to develop their own critical thinking, the module would have to engage student interest in specific knowledge content and coax them to think critically about the broad subject matter. Hence, it was vital that the discussion be grounded in students’ prior knowledge and understanding as well as personal interest in the subject matter (Briner 1999, Svinicki 1999). As a key feature of the module, the CMD would be used to encourage students to explicitly draw upon and use their varied interests and prior knowledge to connect and construct their own understanding of the information received through lectures and readings.

Gordon decided that a series of CMD groups would replace the traditional tutorial groups, thereby necessitating the setting up of appropriate structures for CMD to facilitate students’ usage. 56 students enrolled in Gordon’s module, who traditionally would have been divided into 2 or 3 tutorial groups. Instead, Gordon devised a series of topics that made use of his pre-existing discussion questions and created a number of discussion groups each with a limit of 12 people so that discussions would be focussed and not too unruly to follow. [Johnson and Johnson’s research (1991) shows that cooperative learning groups tend to work more
effectively if the group size is relatively small, thus encouraging greater individual participation and responsibility.] The separate CMD groups were only accessible to respective group members for the duration of the semester. At the semester’s conclusion, the CMD groups were open to all students to assist in exam preparation. To ensure participation in the discussion, Gordon assigned 15% of the final grade to the CMD.

Research suggests that students, when faced with technical problems, suffered ‘cognitive overload’, distracting them from the aim of using CMD for learning (Lee 2000, English 1997). Hence, Gordon held introductory face-to-face tutorials in a computer laboratory to explain the technical processes of signing up to lead a tutorial and on using NUS’s CMD technology, the Integrated Virtual Learning Environment (IVLE) Discussion Forums. These sessions included a hands-on section for students to introduce themselves online to their classmates.

The CMD was set up so that students took turns at leading and facilitating a discussion on the various topics. This reciprocal teacher/facilitation role (Rourke & Anderson 2002, Palincsar 1987, Riggo et al. 1991) enabled students to assume greater responsibility for the discussion and become more aware of the processes that underpin a good discussion. To help students assume this facilitative/leadership role, Gordon met with the assigned students in a face-to-face meeting prior to the discussion of each topic to sketch out the functions of the discussion leader/facilitator: i.e. to facilitate discourse by drawing participants into the discussion; to identify areas of agreement and disagreement; and to establish a supportive climate for discussion (Rourke & Anderson 2002, O’Grady 2001).

Gordon also decided to run the CMD in asynchronous time rather than at a specific scheduled time during the week. This would allow students to determine when they joined the discussion, to extend the discussion beyond a limited time of one hour, and to take more time to think about the subject and what they wished to say. Asynchronous CMD promotes student responsibility for learning and encourages life-long learning by breaking the nexus between education and the classroom and the associated dependency of students upon teachers, as well as the nexus between education and imposed time structures.

The structure of the traditional face-to-face tutorial would require 2 or 3 hours of Gordon’s time a week for 8 to 10 weeks. In the first week of conducting CMD online tutorials, Gordon spent 15 hours facilitating CMD by setting up discussion groups, reviewing student posts, and meeting with students to discuss leading and facilitating the online discussions. By the second week, Gordon’s involvement had dropped to approximately 7 hours and thereafter settled to between 2 and 3 hours a week. CMD does not necessarily translate to less teaching time (Tolley 2000), but rather shifts the focus of teaching.

EVALUATION

Since the use of CMD represented a departure from the regular approach to teaching, students were invited to give feedback about their experience in using CMDs for their learning. Of the 56 students taking the module, 50 voluntarily responded to an online evaluative survey, which was conducted at the end of the semester before the final examination. This response rate is itself indicative of students taking an interest in their learning. Students also provided almost 2 single-spaced A4 pages of comments as well as responses to quantitative questions.
Overall, students responded enthusiastically to using CMD. 82% of respondents thought it helped them learn; 78% said it made learning more enjoyable, and 80% found it a good experience that they would recommend to others. Significantly, 90% noted that it made them take greater responsibility for their own learning. 42% said they were more likely to participate in discussions than face-to-face classes (28% said “about the same”) and 94% said they were more likely to put more thought into their comments because the module used CMD.

In the survey, students raised critical questions about some aspects of CMD and the module. A frequent theme was the difficulty students had in determining the relevance of their discussions to the module or the focus of discussion. To Gordon, these comments demonstrated that CMD and the module achieved the purpose of creating critical thought among students since students worried about the relevance and focus of the discussion. Such worries indicated that students made critical judgements about the shape and nature of the module’s knowledge content and ways of thinking about the subject.

60% of respondents identified some aspects of CMD that they found less than satisfying. These included annoyance at sorting through posts to find useful comments (which did not concern Gordon greatly as the module encouraged students to make critical choices), and more importantly, the difficulty in relating to other classmates. This latter observation is the most serious limitation of CMD since student interaction is vital to several aspects of learning (e.g. making critical evaluations). Although students interacted through CMD, such exchanges were clearly not an altogether fulfilling replacement for face-to-face contact. Informal exchanges between students outside of the classroom are an important aspect of learning for the formation of discursive communities encourages life-long learning. To address this lack of face-to-face interaction when using CMD breakout sessions can be conducted during regular lectures where the “tutorial” groups gather together to work on a problem, or face-to-face components can be introduced to the module in addition to CMD (Althaus 1997).

CMD was overall a positive experience for students, raising the quality of student discussion and learning. Gordon found the quality of the discussion so uniformly higher than face-to-face tutorials that he had trouble gauging the range of student input so as to achieve an appropriate grading curve. Students demonstrated an ability to comprehend a range of concepts and pose questions to each other that critically assessed the material being discussed. Another great advantage of CMD for Gordon was that at the end of the semester he could review a student’s contributions to the discussion over the semester rather than rely on memory and notes made during face-to-face tutorials; he was also able to review students’ postings either by individual student or in the context of a discussion, allowing him to evaluate both student knowledge and modes of inquiry. In addition, CMD engendered better writing skills, probably because writing became a regular event for many students. For instance in one CMD forum, 13 students posted 293 messages in an 11-week period. Gordon and O’Grady did not set out to measure this latter aspect of CMD and so the evidence here is anecdotal but supported by other research (Scovell 1991, Beauvios 1998, Marttunen 1999).

CONCLUSION

Beyond the structural elements, the success of CMD depends upon the teacher’s particular pedagogical approach. In this instance, Gordon believed that the teacher’s role was to provide
opportunities for students to take greater responsibility for their own learning. But in order to do so, students had to have greater control over exploring aspects of the curriculum they were interested in. While it was anticipated this might manifest and encourage students into pursuing very different paths through the module, Gordon realised that it would be primarily in these instances where students would build upon their prior knowledge in constructing deeper understanding of the module’s key concepts and ideas.

Gordon also believed that cooperative learning using CMD for discussion and negotiation afforded students some benefits that are not as easily replicable in traditional tutorial settings, namely: some privacy/safety to test and develop their understanding, more time outside of class to consider their ideas in relation to what others say, a chance to facilitate and lead their own and others’ learning, a mechanism for deeper and more meaningful collaboration, a device for recording discussions so students had artefacts of their learning which they could review. Ultimately the commitment to using CMD was predicated on Gordon’s desire that student learning be driven by critical reasoning and thinking abilities. Notwithstanding the shortcomings of CMD (i.e. the diminished sense of personal relations between students), the benefits of using CMD seem to contribute to the development and utilisation of these abilities.

This approach to teaching and the beliefs that underpin it might not suit all subjects or all teachers and students for a variety of reasons. However, when teachers feel comfortable organising subjects so that critical inquiry drives knowledge acquisition, then CMD as a flexible tool coupled with careful structuring of the discussion and facilitation process will probably enhance learning by helping to transfer greater responsibility to students.

References


