Participation in Asynchronous Online Discussions for Student Assessment

Dawn Birch
University of Southern Queensland

Abstract

Online discussion boards have created a forum for distance education students in geographically dispersed locations to interact with one another and to develop social learning communities. Indeed, online discussion boards provide an opportunity for instructors to replicate the on-campus tutorial experience for distance learners by facilitating a collaborative and social learning paradigm in which students can share their experiences and perspectives and construct knowledge through shared meanings. In this paper, the findings of a two-stage exploratory study of distance education students' perceptions concerning compulsory participation in asynchronous online discussions for assessment purposes are presented. The pre-semester study revealed that while many of the students had not been involved in asynchronous online discussions in previous courses, most were positively inclined towards participation. A post-semester study indicated that most students had a positive experience with the online discussion board activity, and most indicated that participation for assessment purposes should continue.

Introduction

Online discussion boards are now a common learning strategy for many university courses. Electronic means of communication have removed barriers for participation for distance education students and allowed students across national borders to become members of a virtual learning community by providing a convenient forum for communication that is independent of place and time (Berge and Collins, 1993; Whatley and Bell, 2003; Wu and Hiltz, 2004). Further, online interactions facilitate social and collaborative learning processes that support the shift away from a teacher-oriented, instructivist approach toward a student-centred, constructivist teaching paradigm (Stacey, 2002). The main objective of this two-stage study was to determine distance education students' perceptions toward participation in online discussions as a compulsory part of their summative assessment. Other research objectives included identifying barriers to participation and uncovering factors that encourage participation in online discussions.

Educational Rationale for using Asynchronous Online Discussions

Modern teaching practice emphasises student-centred learning where knowledge is constructed by individuals on the basis of their experiences rather than through a one-way information transfer by teachers (Whatley and Bell, 2003). In this constructivist paradigm, teachers become facilitators of learning by placing greater emphasis on peer interactions for cognitive development (Curtin, 2002). Asynchronous online discussions allow students who are studying at a distance to construct knowledge together by sharing and reflecting upon their experiences and perspectives to arrive at shared meanings and perspectives (Goodyear, 2001; Kolb, 1984; Wilson and Stacey, 2004).

Learning involves both cognitive and social processes, and under a social constructivist paradigm students are encouraged to collaborate and engage in active dialogue to construct knowledge by discovering principles for themselves (Bruner, 1990; Jonassen, 1999). Social interaction influences cognitive development and is important for raising the quality of distance learning programs (Moore, 1989; Vygotsky, 1978; Wilson and Stacey, 2004). Providing students with an opportunity to extend their current knowledge ('scaffolding') by encouraging them to go beyond simply answering questions to actively engage in dialogue with other students and instructors ('reciprocal teaching') supports a social constructivist paradigm (Hausfather, 1996). Asynchronous online discussions allow students to socially construct knowledge through the sharing of diverse perspectives, providing feedback to one another, and clarifying ideas (Wilson and Stacey, 2004).

Studies have revealed that online discussions improve students' perceptions of learning in terms of learning skills and the quality of their learning (Harasim, 1997; Wu and Hiltz, 2004). Indeed, online discussions have been found to result in superior learning because they place students in "an intellectual environment that encourages active, thoughtful, and equal participation from all comers" (Althaus, 1997, p.158). Asynchronous online discussions allow all students an equal opportunity to participate and thus dominant students cannot monopolise the discussion, as can happen in face-to-face discussions. Further, Larkin-Hein (2001) found that online discussion allows student to adopt a more active role in the learning experience and facilitates the acquisition of higher-order thinking skills and deep learning (Gibbs, 1992). Thomas (2002) also found that online discussion forums "promote high levels of cognitive engagement and critical thinking" (Wu and Hiltz, 2004, p.141). Moreover, asynchronous online discussions allow students to interact at their own pace by providing an opportunity to think through their contributions and edit them prior to engaging in the discussion. Thus, online discussions are particularly useful for students from non-English speaking backgrounds (Curtin, 2002). Further, online discussions allow students to "practise the new language of the knowledge community" (Wilson and Stacey, 2004, p.2) and their discipline in a comfortable learning environment. These many benefits may encourage educators to make online discussion a compulsory part of student assessment.

The success of online discussions relies upon timely, regular and structured interactions that are based on interesting and relevant topics (Sanders and Wiseman, 1990; Wu and Hiltz, 2004). Motivation and enjoyment from online discussions have been found to positively influence perceptions of learning from online discussions (Wu and Hiltz, 2004). Controversial, provocative and topical subjects that lend themselves to diverse views may stimulate students to engage in online discussions. Further, Thomas (2002) found that both the presence and the role of the facilitator influence student motivation (Wu and Hiltz, 2004). Decreased learning outcomes are associated with increased physical and psychological distance between teachers and students (Gorham and Zakahi, 1990). Further, discussions that are student-dominated rather than instructor-dominated have been found to be more enjoyable

for students (Wu and Hiltz, 2004). Other factors that impact on the success of online discussions include user friendly interfaces, quality software, and better functionality (Wu and Hiltz, 2004).

Case Study – Promotion Management Course

Distance education students in an undergraduate course in promotion management were required to participate on the online discussion board as compulsory part of their assessment (10% of the total mark). The primary objectives of the assessment were to replicate the on-campus students' tutorial experience by stimulating greater interaction between the distance education students, and foster a social and collaborative learning environment in which students could develop meanings by sharing their experiences and perspectives. Other objectives included encouraging students to develop better electronic communication skills and reducing the sense of isolation that many distance education students experience. Students were required to make five postings of 100 - 150 words across 11 topics. Students were encouraged to share their experiences and perspectives on a given topic by posting either an original comment, responding constructively to other student's contributions, or synthesising a number of responses. Students were provided with a rubric for assessment that explained that they would be evaluated on the insightfulness of their comments, their understanding of the underlying theory, and their ability to apply that knowledge.

Research Method

The research methodology involved conducting two electronic surveys pre and post semester. Prior to the commencement of the semester, students were surveyed to determine their experience with online course discussion boards and their perceptions of the usefulness of online discussion boards for achieving key learning outcomes, such as understanding the course content, developing learning networks, and seeking advice on assessment items. Those students who had limited experience with online discussion boards in previous courses were asked to identify reasons for non-participation. At the end of the semester, students were surveyed again to investigate their experience with the online discussions. Students were asked whether this type of assessment should be continued, and whether as a result of their experience they would be more likely to participate in online discussion in other courses in the future, even if they were not required to do so for assessment purposes. Demographic and enrolment profiles of the students were also measured.

Pre-semester Study Findings and Discussion

Of the 126 distance education students enrolled in the course, 79 (63%) responded to the pre-semester survey. The majority of the respondents were females (68%), and over 70 percent of the respondents were aged 21-25 years. The students in the course included both on-shore and off-shore students, and despite being a distance education course, 32 percent of the respondents were full-time students (mostly studying through feeder colleges off-shore).

Fifty-eight percent of the respondents to the pre-semester survey had not previously participated in an online course discussion. The main reasons cited for non-participation included limited time (51%), participation unnecessary (28%), lack of confidence in the

online environment (23%), did not know how to use the discussion forum (19%), not interested (15%), or not useful (13%). A few students indicated technical difficulties, such as time to access and download discussions (9%), no access to a computer (9%), or no access to the Internet (6%). As might be expected, Pearson's Chi-Square testing ($P_{(1)}$ =8.31, $p<0.05$) revealed that part-time students were more likely to report limited time to be the main reason for non-participation. However in keeping with recent studies of online discussions, no differences regarding reasons for non-participation were found on the basis of gender (Wu and Hiltz, 2004).

Of the forty-two percent of students that had accessed the online discussion board in courses prior to this course, 70 percent indicated that they had accessed the online discussion board frequently or regularly, while 30 percent reported that their access was either occasional or rare. Of those who had accessed online discussion boards prior to this course, 57 percent reported that access was useful for achieving key learning outcomes, such as understanding the course content, developing learning networks, and seeking advice on assessment items.

The students were asked how they felt about being required to participate on the discussion forum as part of the assessment for this course. Qualitative analysis revealed that two-thirds (66%) of the students were positively inclined, 18 percent were not sure, while only 15 percent of students were negatively inclined. Comments ranged from students who stated they were excited about the opportunity to share their views and learning experiences with others, as well as reading other's views, through to students who stated that they did not like being 'forced' to participate. Eighteen students indicated that they were interested in hearing other student's perspectives and experiences. Eleven students commented that this type of assessment would give them a chance to meet new people and make friends. Five students commented that this approach to assessment was novel, different, creative and interesting. Seven students, who had not gained much from discussion forums in the past, were not sure how beneficial participation would be for their learning and had adopted a 'wait and see' stance. Five students expressed concern about being required to participate and were concerned about finding the time to access the discussion forum, as well as technical difficulties, such as slow download times and sessions timing out.

Post-semester Study Findings and Discussion

Fifty-one students (40%) completed the post-semester. The majority of the respondents for this second study were also female (61%) and almost two-thirds (63%) of the respondents were aged 21-25 years. Almost half of the respondents were full-time students (47%), and many students were in full-time employment (41%).

Students were asked to discuss their experiences and feelings about posting comments to the online discussions. Most students made primarily positive comments (65%), while a smaller number reported negative feelings (16%). The diversity of opinions was interesting and ranged from '…this is the part of the course I enjoyed the most' to '…a very painful assessment piece'. Students reported that online discussions had been helpful in terms of gaining an understanding of course concepts and clarifying issues (22%) and that the activity had encouraged them to keep up to date with their reading and to think more concretely about issues (8%). This supports the findings of previous research that revealed that students do perceive benefits from online discussions including improved learning skills and the quality of their learning (Harasim, 1997; Wu and Hiltz, 2004). Some respondents reported that they

valued learning about others' experiences and opinions (12%). Students also noted that the online discussions were a useful way for distance education students to communicate and interact with others (12%), with two students commenting that the activity had provided an avenue for social contact. Encapsulating the positive comments of many, one student stated:

> 'Posting to the discussion board has been worthwhile. It has been useful to listen to other student's thoughts and ideas and to be able to participate when the need arose. As an external student, it helped with a sense of belonging to a student community, even though far removed from campus.'

Most of the negative comments about the online assessment related to the time it took to access the discussion board, read others' contributions, and then post a contribution (28%). Interestingly, Pearson's Chi-Square testing revealed no significant differences with respect to negative or positive comments on the basis of employment or enrolment status. Some students complained that this assessment hindered flexibility with their study as it had 'forced' them to stay up to date with their reading in order to meet the posting deadline for each topic (6%). Two students commented that they did not like the mandatory requirement of posting. Males expressed more positive feelings about the online discussions than their female counterparts ($P_{(2)}$ =9.85, p<0.05). In contrast to the pre-semester survey, this gender difference contradicts the findings of recent studies of online student discussions (Wu and Hiltz, 2004). An analysis of the negative comments by the female students indicated that lack of time and the need to meet posting deadlines were the main areas of concern.

The majority of students (63%) indicated that this type of assessment should be continued, with some of the students commenting on the benefits of learning to use the technology and communicating effectively via electronic means. Students were also asked whether they would participate in online discussions in other courses even if participation was not compulsory. The majority (57%) indicated that they would participate due to benefits to learning and opportunities for interaction and gaining feedback. Despite female students making more negative comments than their male counterparts, they indicated that they would be more likely to participate in online discussions in the future ($P_{(2)}$ =6.87, p<0.05). A small number of students (22%) stated that they would not participate in online discussions unless it was mandatory due to lack of time or because they did not feel that online discussions were useful. This is in line with findings from previous research that revealed that about one-third of students seldom participate and tend to be apathetic about online learning activities unless they are assessed (Sherry, 2000; McDonald and Reushle, 2002).

Limitations, Further Research and Implications

This study was exploratory and primarily qualitative in nature. The next important stage in this line of inquiry will be to develop scales for measuring students' perceptions of the cognitive, affective and behavioural outcomes of participation in online discussions, and to measure actual outcomes. For example, Wu and Hiltz (2004) recently developed indexes that measured perceptions of learning from online discussion, as well as motivation and enjoyment from online discussions. This study was restricted to one course and thus further research should address other courses. Further, the forty percent response rate in the post-semester survey may be attributed to student apathy but may also represent some non-response bias in that dissatisfied students may have elected not to respond.

Major implications for online educators are that students perceive there are valuable benefits to be gained from participation in asynchronous online discussions, and in particular the value

the cognitive and social benefits that can be derived from interacting with other students and teachers. The online discussion forum can assist with overcoming the sense of isolation that is experienced by many distance education students. However, educators should consider the time that it takes for distance students to access and contribute to discussion forums, and this may mean limiting the number of contributions required or making the activity optional so that 'time-poor' students do not feel that they are being forced to participate. Deadlines for posting on a topic could also be extended to allow students greater flexibility. Further, a summary of contributions could be posted to provide feedback to students on what was required to perform well on each topic. Finally, educators should realise that some students will not participate in online discussions on a regular basis unless they are being formally assessed.

References

Althaus, S., 1997. Computer-mediated Communication in the University Classroom; An Experiment with On-line Discussions. Communication Education. 46, 158-74.

Berge, Z., and Collins, M., 1993. Computer Conferencing and Online Education. The Arachnet Electronic Journal of Virtual Culture. 1(3).

Bruner, J., 1990. Constructivist Theory; Explorations in Learning and Instruction. The Theory Into Practice (TIP) database. Available from http://tip.psychology.org/bruner.html, accessed 9 June 2004.

Curtin, J., 2002. WebCT and Online Tutorials: New Possibilities for Student Interaction. Australian Journal of Educational Technology. 18(1), 110-26.

Gibbs, G., 1992. Active Learning in Structured Lectures. In Gibbs, G., and Jenkins, A., (Eds.). Teaching Large Classes in Higher Education. London: Kogan Page.

Goodyear, P., 2001. Effective Networked Learning in Higher Education: Notes and Guidelines. Centre for Studies in Advanced Learning Technology. Lancaster: Lancaster University.

Gorham, J., and Zakahi, W. R., 1990. A Comparison of Teacher and Student Perceptions of Immediacy and Learning: Monitoring Process and Product. Communication and Education. 39, 354-68.

Harasim, L. M., 1997. Teaching and Learning On-line: Issues in Computer-Mediated Graduate Courses. Canadian Journal of Educational Communication. 16(2), 117-35.

Hausfather, S. J., 1996. Vygotsky and Schooling: Creating a Social Contest for Learning. Action in Teacher Education. 18, 1-10.

Jonassen, D., 1999. Designing Constructivist Learning Environments. In Reigeluth, C. M., (Ed.). Instructional Design Theories and Models. New Jersey: Lawrence Erlbaum Associates.

Kolb, D. A., 1984. Experiential Learning: Experience as the Source of Learning and Development. Englewood Cliffs, NJ: Prentice Hall.

Larkin-Hein, T., 2001. On-line Discussions: A Key to Enhancing Student Motivation and Understanding? Proceedings of the 31st ASEE/IEEE Frontiers in Education Conference, Reno, NV, F2G6-12.

McDonald, J., and Reuschle, S., 2002. Charting the Role of the Online Teacher in Higher Education: Winds of Change. Proceedings of ASCILITE conference. Auckland. Available from http://www.ascilite.org.au/conferences/auckland02/proceedings/programme.html, accessed 21 June 2004.

Moore, M. G., 1989. Three Types of Interaction. American Journal of Distance Education. 3(2), 1-6.

Myers, J., 1992. Cooperative Learning: A Personal Journey. Journal of Education. 174(2), 118.

Sanders, J. A., and Wiseman, R. L., 1990. The Effects of Verbal and Non-verbal Teacher Immediacy on Perceived Cognitive, Affective and Behavioural Learning in the Multicultural Classroom. Communication Education. 39, 341-53.

Sherry, L., 2000. The Nature and Purpose of Online Conversations: A Brief Synthesis of Current Research. International Journal of Educational Telecommunications. 6(1), 19-52.

Stacey, E., 2002. Learning Links Online: Establishing Constructivist and Collaborative Learning Environments. In McNamara, S., and Stacey, E. (Eds.). Untangling the Web: Establishing Learning Links. Proceedings of ASET 2002. Available from http://www.aset.org.au/confs/2002/stacey.html, accessed 9 June 2004.

Thomas, M. J. W., 2002. Learning with Incoherent Structures: The Space of Online Discussion Forums. Journal of Computer Assisted Learning. 18(3), 351-66.

Vygotsky, L. S., 1978. Mind and Society: The Development of Higher Mental Processes. Cambridge, MA: Harvard University Press.

Whatley, J., and Bell, F., 2003. Discussion Across Borders: Benefits for Collaborative Learning. Education Media International, 139-52.

Wilson, G., and Stacey, E., 2004. Online Interaction Impacts on Learning; Teaching the Teachers to Teach Online. Australasian Journal of Educational Technology. 20(1), 33-48.

Wu, D., and Hiltz, S. R., 2004. Predicting Learning From Asynchronous Online Discussions. Journal of Asynchronous Learning. 8(2), 139-52.