

Asynchronous Communication in Online Education: Online Discussion Forums

Education 6620: Module 4 Assignment

Rob Power

MUN ID: 9236571

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Introduction:

The wide variety of communications tools provided through the Internet is of tremendous benefit to the facilitation of distance education (Bannon, 1989; Curtis and Lawson, 2001; Dillenbourg and Schneider, n.d.; Hiltz, 1998). Unlike other communications tools that have been used in distance education settings, Internet-based tools facilitate multi-way communication in ways that are effective for both students and instructors (Hiltz, 1998). Other tools, such as videotapes and textual mailouts, provide only one-way communication. They limit opportunities for meaningful interaction and the expansion of thoughts, ideas and knowledge (Hiltz, 1998). The use of telephone communications also has limits, particularly in areas such as cost, scheduling, and the restriction of two-way communications to limited participants (Hiltz, 1998). Teleconferencing introduces the possibility of multi-way, synchronous communication, but it, too, has limitations such as scheduling and the cost and availability of resources (Hiltz, 1998). The types of asynchronous communication made possible through the Internet increase overall access to educational opportunities (Bannon, 1989; Curtis and Lawson, 2001; Dillenbourg and Schneider, n.d.; Hiltz, 1998), by overcoming the need for limited and more costly communications resources, as well as the barriers of distance and scheduling. One of the most frequently utilized asynchronous communication tools in online distance education courses is the online message board, or discussion forum.

Asynchronous communication tools allow participants to interact free of barriers such as time and distance (Hiltz, 1998). Students and teachers, using tools such as discussion forums, can post messages, respond to other participants, and carry on extended conversations or discussions. Education 6620: Issues and Trends in Educational Computing, an online course offered as part of the Master of Education and Information Technology program through Memorial University of Newfoundland and the University College of Cape Breton, makes use of the benefits of online discussion forums. An examination of Module One of this course, Multiple Contexts, Multiple Issues (fall semester, 2002), reveals how the discussion forum is integrated into the course technically and structurally. It also demonstrates the roles played by the course instructor, acting as the discussion forum moderator, as well as the types of student interactions in an online discussion forum, and the roles that all of these interactions play in achieving the overall purpose of facilitating rich, deeper learning.

Integration of the Discussion Forum:

Education 6620: Issues and Trends in Educational Computing, utilizes WebCT's discussion forum applications. The forum is password protected, and facilitates communication between

the instructor and seventeen graduate students who are pursuing a variety of Master of Education degrees, including the Information Technology specialization. According to the overview provided by WebCT, the discussion forum allows participants to post, read, and reply to messages, and to interact in an online environment with “the flexibility to learn at their own convenience” (p.4).

The discussion forum is moderated by the course instructor, and is broken down into a number of discussion topics including a Water Cooler, and special categories for each of the four course modules, as well as questions and answers about the assignments for each module. Two discussion categories were set up for Module One: Multiple Contexts, Multiple Issues. These include a general discussion for Module One, as well as a discussion area for questions and answers concerning the first course assignment, an overview of issues and trends in educational computing.

The general discussion for Module One contains 60 messages posted by either the instructor or course participants. This number was actually higher, however, a glitch in the discussion forum during the early weeks of the semester caused a number of the postings to be lost. These postings were later compiled by the moderator, and reposted together once the technical difficulties had been rectified. The discussion for questions and answers concerning the Module One assignment contains four postings. The information contained in these postings was examined to determine nature of the interactions between students and the moderator, and to determine the roles played by both the moderator and course participants in the discussion forum.

The Moderator:

According to Anderson and Kanuka (1997), the role of the moderator is to “[guide] the discussion, [stimulate] participants and often [offer] intellectual leadership” to create a “supportive online learning environment.” These functions were fulfilled in the Education 6620 discussion forum by the course instructor. Of the 64 messages posted in the two discussion categories for Module One, a total of 17 of the postings were made by the moderator. These included four (messages 24, 26-28) in which the moderator compiled nine previous postings by course participants, which had been lost due to technical difficulties.

The functions of the discussion moderator can be further broken down into nine distinct roles, as identified by Berge (2000), as follows:

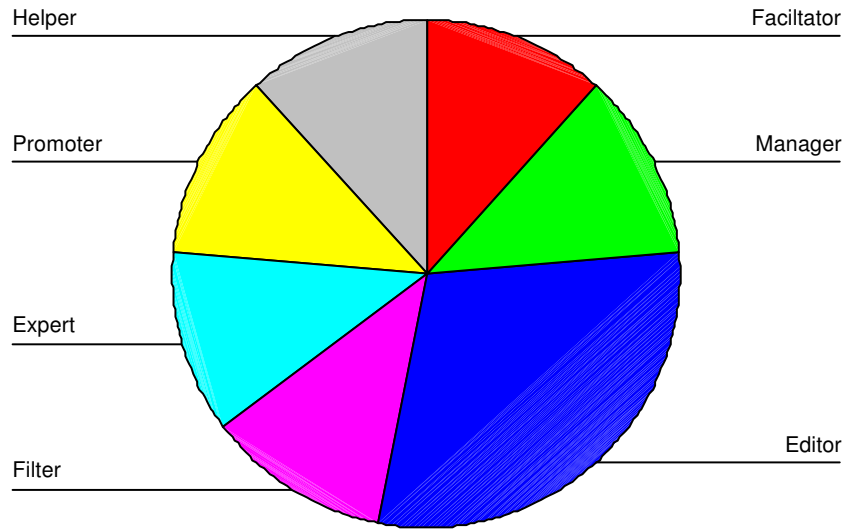
- Facilitator (keeps list “on track”; group leader)
- Manager (administrator, archiving, deleting/adding subscriptions)
- Filter (deciding upon on-topic posts; increasing signal/noise ratio; deletes libelous posts; may delete jokes)
- Expert (answering Frequently Asked Questions; expert in the list’s field, for example a manufacturer’s representative)
- Editor (text editor, digest posts, format posts)
- Promoter (asks questions of the list subscribers to promote discussions)
- Marketer (promotes/explains list to potential subscribers)

- Helper (helps people with needs – more general than expert)
- Fireman (takes “flames” or ad hominem attacks offline)

Of these nine roles, evidence can be seen in the online postings of the moderator of fulfilling such roles as facilitator, manager, filter, expert, editor, promoter and helper. Some of the other roles, such as fireman, and to additional instances as helper, were fulfilled by the moderator either previous to initiation of the Module One discussion (through the establishment of discussion guidelines) or offline, through direct emails between moderator and participants (Berge, 2000).

As a facilitator (Berge, 2000), the moderator participated in the discussion threads, informed participants of course requirements and technical difficulties, and offered suggestions feedback to students. The moderator acted as a promoter in several instances (Berge, 2000). For example, in message 2 she wrote “In the meantime, ... we can now move on to the next phase of activity which asks you to list the [4] trends/ issues which you will be treating in your first assignment.” There were a total of 18 student postings in response to this request. Message 24 is shows evidence of the moderator acting as an administrator (Berge, 2000). In this message, the moderator has archived, compiled, and reposted several student postings that were lost from the forum due to technical difficulties. The moderator acts as an editor (Berge, 2000) in message 25, where she writes “Subject: Your listing of the issues. Which two to choose? There are so many...” She fulfilled the role of filter (Berge, 2000) on several occasions by reminding students to stay on topic, and reminding students of assigned readings, and posting deadlines. In message 131, the moderator acts as an expert (Berge, 2000), responding to a student’s request for her perspective on an issue surrounding equity in the distribution of computers between urban and rural schools. The moderator acts as a helper (Berge, 2000) in message 22, where she offers suggestions on the use of APA formatting in scholarly writing, and provides examples of proper APA use. Figure 1 breaks down the number of instances of the moderator fulfilling the different roles outlined by Berge (2000).

Figure 1
Roles Performed by Discussion Moderator



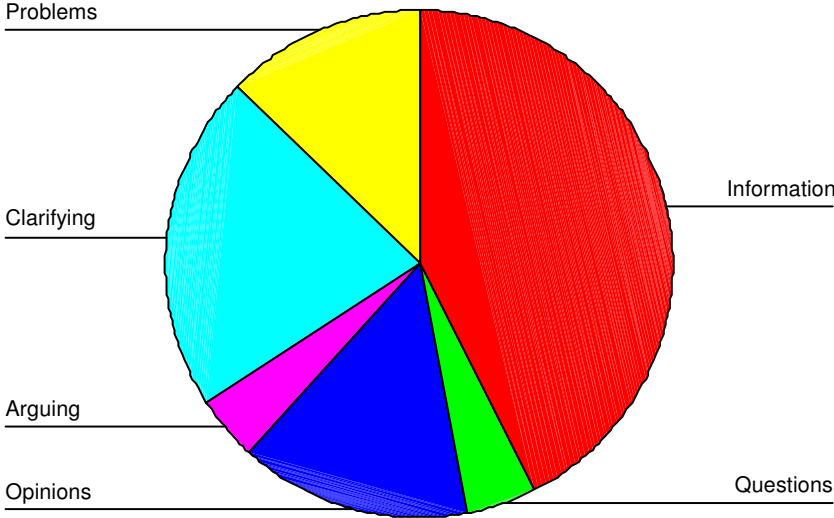
The Participants:

Coding schemes can easily be developed for determining the types of postings and interactions between students in an online discussion forum. In a thesis on Computer-Mediated Cooperative Learning: Synchronous and Asynchronous Communication Between Students Learning Nursing Diagnosis, Higgins (1991) developed an extensive set of codes for student interactions. Curtis and Lawson developed another coding scheme in “Exploring Collaborative Online Learning” (2001). In Education 6620 (Murphy, 2002), a rubric is used to aid in determining the types of, and evaluating student online participation. In another course in the Master of Education: Information Technology program, Dr. Bruce Mann (personal correspondence, 2002) uses a less extensive scheme for codifying and evaluating student postings. A set of six general categories (Forgeron, 2002) was used to examine student postings for Module One of this course, and to codify postings according to the type of interaction. These categories include offering information, posing questions, offering opinions, arguing opinions, clarifying opinions or information, and noting technology related problems. A category for postings contributing to camaraderie can also be useful when assessing student postings, however, such postings in Education 6620 are restricted to the Water Cooler discussion group, and do not appear within the course modules.

Offering information includes postings where students offer information about course readings, useful links to related web sites, or information about events or issues related to course material (Forgeron, 2002). Posing questions includes postings that direct questions to the moderator or other students, or questions that are rhetorical in nature (Forgeron, 2002). Offering opinions includes postings that offer personal opinions about course materials, related issues, or personal beliefs (Forgeron, 2002). Arguing opinions includes rebuttals, if any, to the opinions offered by other students (Forgeron, 2002). Clarifying includes postings that clarify personal opinions or beliefs, or that are made for the purpose of clarifying information from course readings or related materials or issues (Forgeron, 2002). And noting problems includes postings that discuss technology-related problems faced by students in their own environments, or problems arising in the discussion forum itself (such as the early technical difficulties which temporarily prevented posting, and caused a number of previous postings to disappear from the forum) (Forgeron, 2002). The 47 student postings for the two Module One discussion groups were analyzed, and each was coded into one of the six categories. It should be noted that some messages could fall into more than one category, creating a potential source of error in summative statistics of online participation. Examples of student postings, and how they were coded, are provided in the rubric in Table 1 below. Figure 2, which follows, shows the frequency of postings for each category.

<p align="center">Table 1 Rubric for Codifying Student Postings (with statement examples)</p>						
	Information	Questions	Opinions	Arguing	Clarifying	Problems
Sample Comments	<p>“...I have found another very good site on APA...: (msg 48)</p>	<p>“Elizabeth, you have done some research on computer tech in rural Newfoundland, haven't you? What have you seen with respect to the equity issue?” (msg 122)</p>	<p>“That seems fair enough to me...” (msg 18)</p>	<p>“...This would seem an easy solution initially to use but with further investigation I feel that this solution leads to other dilemmas...” (msg 92)</p>	<p>“Arlene you certainly made some good points on being prepared with a back up plan. I visited with a school on Friday to inservice...” (msg 46)</p>	<p>“It just proves that when technology works it is wonderful yet so very frustrating when it is down...” (msg 8)</p>

Figure 2
Frequency of Posting Types, by Category



Achievement of Purpose:

As noted, the purpose of using asynchronous online communication tools such as WebCT's discussion forum features is to offer students the opportunity to interact with the instructor/moderator, and with each other, in an environment that promotes the flexibility for students to "learn at their own convenience" (WebCT, p.4). This flexibility is facilitated through the promotion of constructivist learning, and collaborative learning encounters. Rossman (1999) notes that adult learners "have experiences and insights that are valuable." This is certainly true in the case of graduate students participating in Education 6620, many of whom are professional educators with personal experiences and insights related to the issues under examination in the course. In addition, the participants in the course bring together a wealth of experience and skills that enrich collaborative learning efforts (Bannon, 1989). The online discussion forum allows students to make and respond to a variety of postings, and to negotiate and construct meaning out of the course material together (Bannon, 1989; Curtis and Lawson, 2001). Meaning negotiation and construction, according to Funaro and Montell (1999), is promoted through the type of peer interaction made possible through discussion forums.

The aim of Module One of this course was for students to identify and explore as many issues and trends surrounding educational computing as possible. The seventeen students each listed four issues/trends, with some overlap between the topics listed by students. The end result was a listing and exploration of a large number of topics, which participants were encouraged by the moderator (message 75) to review and reflect upon. Through this exercise, students were able to encounter and learn about a much greater variety of topics than would be possible individually. They were also able to reflect upon their findings, refine their understandings, and expand the collective, collaboratively achieved knowledge base.

Conclusion:

The postings for Module One of the Fall 2002 section of Education 6620: Issues and Trends in Educational Computing, are more than just discussions. They are interactions, carefully guided by a moderator, that help to facilitate social-interaction, constructivist learning, and collaborative learning encounters (Bannon, 1989; Curtis and Lawson, 2001; Funaro and Montell, 1999; Rossman, 1999). The moderator participates in the discussion forum to facilitate, manage, and promote the discussion, as well as to filter and edit discussion content, and offer assistance and expert advice to course participants (Berge, 2000). The graduate students enrolled in the course participate in the discussion forum in a number of ways, including offering information to each other, offering and arguing opinions, posing questions, clarifying opinions and information, and noting problems that arise (Bannon, 1989; Curtis and Lawson, 2001; Forgeron, 2002; Higgins, 1991). Together, the moderator and participants engage each other in an ongoing asynchronous discussion that is easily accessible, and that provides a rich, meaningful learning environment (Bannon, 1989; Curtis and Lawson, 2001; Funaro and Montell, 1999, Rossman, 1999; WebCT, n.d.). Participants learn from each other, and from the moderator, to construct a list of issues and trends surrounding educational computing today, and collaborate to build a greater collective understanding of those issues and trends (Bannon, 1989; Curtis and Lawson, 2001; Funaro and Montell, 1999, Rossman, 1999; WebCT, n.d.). It is an example of a learning situation that is difficult, if not impossible to achieve in other distance education situations (Hiltz, 1998).

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