

Facilitating Discourse in Asynchronous Environments

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An explosion of digital classrooms has hit college campuses worldwide. Academia has placed much focus on offering web technologies either as a replacement for or as a supplement to the traditional classroom. The “majority of institutions agree that online education is critical to their long-term strategy, and there is no evidence that online enrollment has reached a plateau” (Kelly et al. 2007). Statistics offered by the Sloan Consortium's report "Online Nation" (2007) give a clear picture of that substantial growth:

- Almost 3.5 million students were taking at least one online course during the fall 2006 term; a nearly 10 percent increase over the number reported the previous year.
- The 9.7 percent growth rate for online enrollments far exceeds the 1.5 percent growth of the overall higher education student population.
- Nearly twenty percent of all U.S. higher education students were taking at least one online course in the fall of 2006.
- Virtually all (83 percent) institutions with online offerings expect their online enrollments to increase over the coming year.

The asynchronous environment of the online discussion board is an integral part of course management systems, such as Blackboard, that have been implemented at universities across the country. How that environment is structured and the quality of

interactions it provokes can vary greatly. While online learning teams have not been proven to out-perform face-to-face teams (Burn & Liu 2007), the popularity of distance education and the flexibility it offers for students who “by virtue of their location, work schedules or family commitments—cannot attend regular class” (Breslin 2006) means that the online environment has become a given in the academic world. Comparing the relative advantages and disadvantages of the online environment over the traditional classroom can be useful in placing that environment within educational theories, but the more important question becomes how best to facilitate student participation. Factors in the asynchronous environment include overall consideration of “how the mode of delivery impacts the level and quality of student participation and student learning” (Howard 2002), the transactional distance involved or “level of engagement in electronic discussions” and its “direct correlation to information competence” (Jacobs 2007), as well as the content building that is “critical to the success of a virtual community” (Chen 2007). By viewing the online discussion board within this context we hope to offer suggestions to better inspire the level of interaction that distinguishes higher education.

Literature review

Mode of delivery and information competence

Discussion has been identified as "a key aspect of the student learning experience in higher education" (Ellis 2004). Translating this experience to the online environment is essential to its success (Parker 1999). In addressing this not only must the different learning styles of a wide variety of students be considered (Sonnenwald & Li 2003) but also differing educator styles as well. Grasha and Yangerber-Hicks (2000) identify four "clusters" of teaching/learning styles and their ramifications in the online environment:

1. TEACHING STYLES: EXPERT - FORMAL AUTHORITY

LEARNING STYLES: DEPENDENT - PARTICIPANT - COMPETITIVE

The teacher presented as the purveyor of knowledge (via online transmission of lecture content) promotes students as passive receivers of information. Involving students in a two-way dialogue must be a conscious, external effort from class presentations.

2. TEACHING STYLES: PERSONAL MODEL - EXPERT - FORMAL AUTHORITY

LEARNING STYLES: PARTICIPANT - DEPENDENT - COLLABORATIVE

The teacher is seen as a guide, coach, and model through execution of procedures and offers immediate feedback. Students observe dependently but plan and execute independently and collaboratively.

3. TEACHING STYLES: FACILITATOR - PERSONAL MODEL - EXPERT

LEARNING STYLES: COLLABORATIVE - PARTICIPANT - INDEPENDENT

Teachers as mediators who "create activities, facilitate interactions, and direct instructional processes to encourage active learning". Teacher presence is implicit in a two way cooperative learning process, an approach that translates well into the online educational environment.

4. TEACHING STYLES: DELEGATOR - FACILITATOR - EXPERT

LEARNING STYLE: INDEPENDENT - COLLABORATIVE - PARTICIPANT

The teacher as consultant to independent collaborative research, a background presence.

In the overall environment of an online class it is possible to offer all four teaching/learning clusters through the various formats available - online lecture presentation, virtual collaborative environments, group activities and projects and asynchronous online discussion. In this way both student and teacher are given the opportunity to interact in the context of their individual preferences and styles.

However, differences in teaching style are also indicative of fundamental differences in the conception of how knowledge is acquired - as either substantive expertise to be transmitted or an actively changing perspective to be developed (Trigwell & Prosser 2005). Given the fact that online education is a recognizable force within higher

education professors teaching an online course must address their own conceptions of education within that environment.

It is unwise to assume a level of technological competence on either the part of the professor or the student. Difficulties with navigating the variety of formats required in a fully realized online course are to be expected. Often these frustrations can translate into decreased contribution because "technologies include different degrees of formality and those degrees that demand a high degree of formality can disrupt informal relations" (Hrastinski, 2006) which are imperative for learning. On the other side of the pendulum, instructor burnout has recently been explored as an unfortunate result of asynchronous learning. Instructor burnout is defined, in this context, as the intellectual and physical overloads of workplace stress. Faculty that delivers courses over bits and bytes contribute "higher levels of teaching presence, such as active directed facilitation and effective instructional design practices" (Hogan & McKnight 2007). Examining this issue further, instructors have the same challenges as traditional classrooms i.e. developing syllabi and course content while meeting the demands of their students; however, in addition, the virtual professor has to incorporate delivery method and modes of collaboration. Compelling evidence has hit the academic forefront suggesting

that much of the trials and tribulations that students encounter are shared among teachers; for example, technical difficulties and clear communication. The complexity of instructor burnout will not be examined, however, the reader should be aware that asynchronous delivery creates challenges for everyone involved.

Transactional distance and the asynchronous environment

Transactional distance, the pedagogical distance between instructor and student, is more concerned with course design than geographical space. Moore's theory discusses the limitations that may minimize the richness of communication and impede student learning. "As distance educators, our challenge is to optimize the learning experience by reducing the transactional distance" (Shannon 2002). To maximize the digital round-table course design has to incorporate both types of learners-- the studious and the less mature (Carey et al. 2006). The challenge for instructors is to provide a balance of dialog interaction and course structure that incorporates all students. If an imbalance occurs the result is greater transactional distance. "According to Moore, distance education is easier for people who are self- directed and exercise 'learner autonomy'" (Shannon 2002). More specifically, the distant learner who is not self-

directed may feel compelled to scrutinize assignments as to what the professor wants.

This is a no-win situation because instructors try and over- specify rubrics and “a certain amount of growth does not happen” (Shannon 2002). Moore validates that a student’s learning style and academic motivation is a crucial component that will minimize transactional distance.

The asynchronous environment has been seen as offering flexibility and convenience in time and space of interactions as well as offering opportunity for reflection not found in face-to-face interactions (Hara, Bonk & Angeli 2000). This same aspect can also be seen as one of its challenges. Frustrations for students often arise precisely because threaded discussions offer a delayed response. “This appears to be especially obvious in asynchronous online discussions when students have to wait for others to read and respond back to their bulletin board postings or e-mail messages” (Song 2004).

Sophisticated discussion forums could result in student "lurking" rather than academic contributions. The E-learner may take too much time reflecting on ideas losing the immediacy of collaboration needed for engagement (Rovai 2000). A valuable solution that can be virtually incorporated is a live chat room component. Here students receive

the convenience of E-collaboration, but with an arranged chat room meeting real time discourse offering a solution to postponed feedback.

Also at issue is a perceived impersonality of the online environment, limited by a text-based mode of expression and lack of visual cues (Wang & Woo 2007). Certainly the task-oriented nature of online discussion makes for a more formal and structured process than the face-to-face discussion. Online communities thrive on the number of social interactions that link an individual to others in a network. There must exist the necessary familiarity and informal opportunities associated with a functioning "community of practice" (Brown & Duguid 1991) (Wenger 1998). Alfred Rovai examines the importance of informal relations in his compelling article, *Building and Sustaining Community in Asynchronous Learning Networks*. In the computer learning environment, "where many of the verbal and nonverbal cues needed to support strong interpersonal ties are missing" (Rovai 2001) online instructors have to be prompt in providing feedback to distant learners, "even if the feedback consists of a simple acknowledgment that the work was received" (Rovai 2001). Students look to instructors to develop online communication criteria. Taking this a step further, when instructor response rate is reduced it creates a low perception of community. "Therefore,

educators must re-conceptualize how sense of community can be stimulated in Internet-based virtual classrooms in order to promote social construction of knowledge and understanding" (Rovai 2007).

While noting that polarized opinions exist on whether a virtual environment actually constitutes a community at all, Henri & Pudelko (2003) observe three interrelated components that identify that social context

- Emergence of intention (goal of the community)
- Methods of initial group creation
- Temporal evolution of both the goals and the methods of group creation

They postulate that a learning community, such as an online course, does not constitute a true community of practice as it's context of emergence, activity, and identity all center around the "the institutional context of belonging". However, as Pilkington notes (2004) "careful attention must be given to the developing group dynamic if the tutor is to both facilitate without dominating and encourage inclusive, 'safe' and constructive participation." Student learning communities, then, represent an "overarching community of practice" in which identity is developed "through first developing a sense of identity in the community by exploring sources of similarity and difference between

their experiences". (Guldberg & Pilkington 2006). Looking into Facebook, as an adjunct medium to the discussion board, may produce added interaction for students.

Facebook has the reputation as the "ubiquitous online social network for higher education" (Mathews, 2006). Using Facebook as a tool for student interaction connects them to a social community that broadens communication. The approach puts a face with content, therefore improving interaction.

Content building

Meaningful discussions are inherent to the learning environment of electronic discussion boards. However, when the student is not confident with the material, critical questions and scholarly discourse are absent from discussion threads. To overcome this pitfall of asynchronous design, implementation of peer-rated scaffolding that aims at generating question clarification has to be initiated. Constructing small groups that are encouraged to use probing responses to threads can help achieve these productive forums. The benefits of smaller groups will give the student a sense of community that will then develop into a working relationship. Once the initial barriers are down students will feel

more comfortable to ask scaffold questions; for example, "Could you explain your response" or, "Please elaborate" which, in return, will content build (Lai & Law 2006).

There is also the question as to whether the inherently pro-social attitudes of such an information sharing community (Constant, Kiesler & Sproul 1994) are conducive to the critical thinking skills essential to higher education. The desire to remain socially acceptable within the group leads to a tendency to simple agreement or disagreement, which does not foster the "constructive conflict" necessary to develop such skills (Burnett 1993). Walker (2004) and Yang, Newby & Bill (2005) suggest the use of instructor instigated Socratic questioning techniques designed to probe and challenge student thinking rather than just inform. Structured debate to provoke students to "explicitly confront others' opinions" has also proven effective (Kanuka, Rourke & Laflamme 2007). Even the use of a "devils advocate" approach, in which students are encouraged to argue and justify opposing viewpoints simply as an exercise in critical thinking, can help to promote students as active participants in the learning process rather than passive consumers of information. Given the volume of material to digest for this class, for example, it would probably not be practical to expect such discourse on the discussion board as a rule. However, by introducing a constructed debate thread

the possibility exists that such lines of thinking would be followed through in later threads.

Human population

Online educational formats are of particular interest to the burgeoning field of Library and Information Science. “Online programs are particularly attractive to LIS students because many already have jobs or can’t otherwise relocate; also, the profession’s technical bent works well on the web” (Oder 2001). This “new technology is starting to transform the profession, not only in terms of how information services are delivered but in the way future practitioners are being trained” (Sierpe 2001). Wayne State's MLIS program is counted among the fastest growing graduate programs offered at the University, and its students provide a cross-section of cultural, educational, and motivational backgrounds. With an influx of students and the preferred trend of distance education, both qualitative and quantitative investigation of asynchronous delivery is pertinent.

Methodology

Much of the research we encountered has aligned itself with a socio-constructivist perspective of education - the view that for the online learning environment to be successful it must create a level of interaction that promotes critical discussion. We have made suggestions based on creating a sense of community and inspiring that interaction, such as the blending of asynchronous with synchronous tools like Live Chat, instructor feedback, additional social and personal interaction via Facebook, the teaching and encouragement of scaffolding techniques, and the addition of a constructed debate thread. To determine whether such tools actually can contribute to the online educational experience we propose a study of the discussion board element with both qualitative and quantitative components. Without any real background in how to conduct such research we offer the following guidelines:

1. The study should be comparative, using two sections of an introductory level web-centric LIS class (such as 6010), with one section used as the "control group". It is preferable that the same professor teaches both sections.

2. Both sections will begin the semester with a brief survey to determine -

- Level of technological competence and attitudes
- Motivation - why they are pursuing the degree, current involvement in the field, what future plan of work they imagine
- Social network - familiarity with other students, familiarity/participation in social networking sites (such as Facebook, Twitter, etc.)
- Assessment of learning style

3. Both sections will contain the same course material, requirements, and include mandatory (graded) participation in the discussion board, however-

- Section A will consist of web based lecture content with weekly discussion threads
- Section B will implement the following additions
 - a) Posting of the survey results (anonymously)
 - b) Initial assignment of mandatory posting of a Facebook page and postings on other students pages
 - c) Weekly scheduled small group participation in a Live Chat format
 - d) Regular instructor presence on discussion board
 - e) Introduction of scaffolding questions
 - f) A constructed debate thread introduced by the third week to determine whether such lines of thinking are evolved in later threads

4. Both sections will conclude with a brief survey regarding student experience of the discussion board.

Data can be initially collected using a quantitative approach - determining number of posts and frequency of posting delineated by class member and topic. These can be further grouped by message chain, or determining which posts refer to previous posts (Henri 1991). Elements of technological competence and attitudes, previous and developing social interaction, as well as comparison by indicated learning style (as determined by the initial survey) can also be introduced on a quantitative level, as well as the qualitative element of student perceptions from the concluding survey. Analyzing these results further in a qualitative manner, that is, for quality and type of content is more complex. Yang, Newby, and Bill (2005) suggest first "parsing" the discussion

threads into units of analysis, or "a phrase, sentence, paragraph, or message that illustrates any one of the indicators" determined by a combination of the Interaction Analysis Model of Gunawardena, Lowe, and Anderson (1997) and the Content Analysis Method of Newman, Webb, and Cochrane (1995). Guildberg and Pilkington (2006) approach content analysis via Pilkington's DISCOUNT coding scheme (1999). Kanuka, Rourke, and Laflamme (2007) use the four phases of cognitive presence indicated by Garrison, Anderson and Archer's (2001) Theoretical Model of Practical Inquiry as a framework. Determining a structure from which to assess quality involves much more research and consideration than is indicated here.

Conclusion

The teaching of any course involves the interplay of a variety of learning and educational styles. Both face-to-face and online classes can be experienced as passive, interactive, or a combination thereof depending on the approach of both the teacher and the student. Unfortunately, the online environment in particular has a reputation as sterile and impersonal and many times this attitude can inform its success. The variety of platforms offered by the electronic environment make it uniquely qualified

to address its perceived shortcomings. When special care is taken to engage the student, on as many levels of interaction as possible, all manner of individual approaches can be embraced. The jury is still deliberating the effects of digital academia on the student body. Distance education is still in its infancy, and many changes and challenges lie ahead. Online mediums bring convenience to a larger student body; however, sometimes this educational luxury comes with sacrifices—instructor immediacy and sense of community. The asynchronous environment of the online discussion board, supplemented by an evolved sense of community and enhanced by techniques of structured inquiry, has the potential to be a forum for the critical thought and discourse that is the hallmark of higher education.

Author Statement

The authors worked in concert to achieve a scholarly paper. Utilizing Google Docs as a synchronous medium we were able to construct ideas and theories in real time. As we began our journey, mining through published journal articles and compiling our findings, we realized that our diligence resulted in a plethora of primary resources. Once our research was underway, we began to peruse the writings, dissect the content and piece

together a working thesis - with the flexibility of being able to contribute to the document asynchronously as well. The Google Doc collaborative environment enabled us to discuss various aspects of the paper as we worked, suggesting resources or making comments as we wrote. The final product was truly a harmonious work-in-progress. Utilizing both synchronous and asynchronous technology, Google Docs would be an excellent blended component to online classrooms.

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