

MANAGING DISCUSSION GROUP DYNAMICS IN E-LEARNING ENVIRONMENTS

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Abstract. This paper examines the challenges involved in understanding group dynamics when utilizing online teaching platforms, such as WebCT. When the student cohort involved is studying professionally oriented technical subjects, people who have prior knowledge of this professional area may exhibit behaviors which overwhelm other students. In traditional face-to-face tutorial and workshop environments, teachers are able to interact with students, ensuring that they have a comfortable environment in which to contribute and learn. This may involve bringing them out of themselves when they appear intimidated and re-directing them when they threaten to dominate. Teachers can interpret body language and use their own body language and facial expressions as well as verbal comment to maintain a student-centered learning environment. It is much more difficult to influence the dynamics of online discussion. Our experience at Curtin has shown that the potential for intimidation of students leading to their non-participation is stronger than in the classroom, especially when prior professional knowledge and experience is involved. This outcome is opposite to expectations of web communication, usually believed to be an environment where people can overcome the constraints of their personality and participate in discussion more easily. Reasons this may occur will be examined together with techniques for ensuring that students are afforded an equitable learning environment.

Introduction

This paper examines the challenges involved in understanding group dynamics when utilizing online teaching platforms. In the traditional face-to-face tutorial and workshop environments, tutors are able to interact with students ensuring they have a comfortable environment in which to contribute and learn. We believe it is much more difficult to influence the dynamics of online discussion. There is even the potential for intimidation of students leading to their non-participation in discussion groups. The relationship of this to the prior or current industry experience of their fellow students will be discussed from our personal experience of teaching the more technical aspects of information studies and we will suggest some strategies to encourage meaningful learning in such subjects.

Teaching Models: Online and Face-to-Face

In general, small group teaching such as tutorials are an important teaching strategy because they aid in the development of a student. This may be achieved through discussion, questioning, group interaction and, most importantly in our view, feedback. These practices lead to the development of analytical skills, the ability to speak and listen to others, cooperative learning and the resolution of differences; all highly important considerations in the information profession.

In a face-to-face tutorial the aspects referred to above usually take place in a non-threatening forum. The tutor and the students have an environment which encourages them to interact within the context of the syllabus material. The emphasis is on social group building which furthers interaction and peer group learning and discourages the "sage on stage" process (Suler, 2004). But the important point is that this occurs under the direction of a tutor. The tutor is in the position of encouraging, discouraging and even confronting students when required. They set the ground rules which ensure there is a positive learning environment. In face-to-face tutorials there is also an opportunity for the tutor to assess a student's progress, either formally through assignments or exercises or informally through observation, attendance and participation.

It's interesting to reflect on the role of the tutorial in light of what the literature reveals about learning theories. Phillips argues "two major and pervasive theories well represented in the literature are Objectivism and Constructivism" (1998). He refers to Marra and Jonassen (1993) who stated that "In objectivist theory ... a nominalistic view of knowledge is held. Knowledge is thus regarded as existing independently of any human experience and the role of the learner is to acquire it. Objectivists place a

strong emphasis on defining learning objectives and implicitly assume that the learner is an empty vessel, to be filled by the instructor (Reeves, 1992)”.

Constructivism, on the other hand, is centered more around the learner. It puts forward the idea that students bring with them an experience which influences their understanding and interpretation of knowledge. In this situation the tutor is the facilitator and the student is responsible for what and how they learn.

From our perspective, we would agree with Phillips (1998) when he argues that rather than objectivism and constructivism being opposing ideas, “in reality there is a continuum between the two.”

If one considers the purpose of a discussion board, one could argue that it is analogous to a tutorial which is held face-to-face. This is a view put forward by Suler (2004) who writes: “In many but not all ways it’s similar to moderating a face-to-face discussion”.

Bradshaw and Hinton in their article titled *Benefits of an online discussion list in a traditional distance education course* (2004) report on the literature on the use of asynchronous discussion boards. They write:

As McLoughlin and Luca (2000) state, the literature abounds with promises suggesting that discussion lists will provide the ultimate learning experience; an interactive environment where learners engage, build knowledge and apply critical thinking. Bunker and Ellis (2001) regard discussion lists as the electronic equivalent to an on-campus tutorial or seminar.

Others reflect the view that “...warns against blindly accepting such promises and argues that while advanced technology gives online courses a favorable appearance, many such courses fail to deliver in terms of teaching and learning quality” (Bradshaw and Hinton, 2004).

Using a discussion board as more than an email exchange list requires that we consider the pedagogical needs of students. Primarily we want to foster deep learning rather than shallow learning which a quick and unthinking change can encourage. To promote deep learning in this environment we need to:

- *Foster active and long-term engagement with learning tasks;*
- *Stress the meaning and relevance of the subject to students;*
- *Clearly state academic expectations; and*
- *Give students the opportunity to exercise responsible choice in the method and content of study.*

(Online resources: teaching to improve student learning.

http://lsn.curtin.edu.au/learn_online/teach/online/tech.htm)

There is little literature on the application of discussion boards in the teaching of information studies although there is a paper currently due for publication (Pym, 2006) which reports on a case study of their use. In our experience at Curtin, the special nature of information studies education and the students who choose our courses do present potential problems in making discussion boards a success.

Online and Distance Education in Information Studies at Curtin University

Courses for the education of professional information workers were introduced at the then Western Australian Institute of Technology (since 1987 Curtin University of Technology) in the early 1970s. Initially the courses were exclusively for the education of professional librarians but subsequently courses in records management, corporate information management, knowledge management and archives were introduced. From the beginning these professionally qualifying courses were available at two levels, undergraduate and graduate diploma, with the graduate qualification later expanded into a masters by coursework degree.

The founders of these courses were always interested in the possibilities offered by distance education. Not only was there a growing demand for newly qualified professional librarians in the state of Western Australia, but there was a pent up demand for university-based professional education from those already working in the field. These librarians had been qualified through registration courses and examinations conducted by the Library Association of Australia (as it was then known) and wished to upgrade to the new qualifications. Some of these had considerable experience, were working in full-time jobs and needed to study off-campus. During the 1970s and early 1980s, the courses were progressively written for distance education until by the mid-80s, one could become professionally qualified entirely through the distance education route without a residential component.

As in many other countries, Australia experienced the closure of library schools from the 1980s and there are now only two in Australia offering distance education. Curtin’s student body is now found Australia-wide and, increasingly, in this era of globalization in higher education, in many other countries. As technology and connectivity improved, the courses were changed from hard copy print-

based units to online. All of our students, even if they are enrolled as on-campus students use the online sites and are expected to contribute to discussions. In addition, nearly all of our students study some subjects by distance education during their courses, even if they live in Perth, and two-thirds of all student enrolments are in distance mode. Issues in providing quality online education have therefore become central to our course development processes.

Curtin as a whole uses the online learning platform, *WebCT*. It is not the purpose of this paper to discuss the merits or otherwise of this product. Various tools are available within *WebCT* for effecting communication between members of a learning community, both teachers and students. On the whole, our favoured form of communication has been the asynchronous discussion board. The availability of this tool is standard when a new *WebCT* site is established and it is a method of communication with which most students are familiar. *WebCT* offers the possibility of setting up as many separate forums within the discussion board tool as is necessary and sub-sets of students can be assigned membership of various boards as needed.

Characteristics of Information Studies Students at Curtin

From the very beginning of the courses at Curtin, the student body has been heterogeneous. Although there are a few students who enter undergraduate courses straight from school, the majority are mature age, with a large number looking for a change of career after years in a different profession. Similarly, students at the graduate level consist both of those who have just completed an undergraduate degree and those who have not studied for some years. There is also a mixture of those who are completely new to information studies and those who have workplace experience. This experience varies widely, between those who are unqualified library assistants or clerical records officers, qualified para-professionals wishing to upgrade to a professional qualification after a period of working and some who have extensive experience in senior positions but wish to have a more recent qualification.

The experience some students bring to the course significantly affects their attitudes and approach to face-to-face tutorials and it becomes evident quite quickly who has worked in the industry and who has not. Although a period or two of work experience is built into all our courses, this does not necessarily take place early enough to influence how students behave in early classes. Members of staff have tended to view these differences as a positive resource in which experienced students can contribute valuable examples in discussions of general principles. Does this productive difference transfer to the asynchronous discussion board, which in online courses is often the major substitute for face-to-face tutorial participation? It is our experience that often it does not.

Asynchronous Discussion Boards in Curtin Online Courses

The authors of this paper teach in a wide variety of subject areas but most of them might reasonably be described as technical, including such subjects as information retrieval, metadata, cataloguing, indexing languages and information systems software. These subjects are characterized by a combination of a strong theoretical base and the need for students to become familiar with practical technical processes. Lecture notes tend to be lengthy and theoretical in order to provide an expert guide to professional areas which have become more complex and are subject to accelerating change. Each topic in a unit (Curtin terminology for a semester-long curriculum subject) has an associated set of tasks which students are asked to undertake in their own time. They are invited to comment on these tasks on the discussion board. It should be noted, however, that none of these units of study contains a formal, assessable requirement that the discussion board be used.

The analysis of the use of asynchronous discussion boards by students which follows is based on our experience in these subjects. Reflective practice has shown us that the nature of technical units is different from the generality of humanities and social science subjects. Both of us have also taught foundation subjects for first year students within the media degrees at Curtin. Our experience of online teaching in these subjects reinforces this view.

It should first be noted that a great deal of the use of the discussion boards is for queries to teaching staff. This is supported by Pym (2006), who writes that: "For the two IT subjects in particular, between 40 and 60% of all forum activity related to assignments". A discussion board can become almost exclusively a mechanism for dealing with practical queries raised by individual students. This is not something which we should discourage because it is good to answer such queries in a forum where the answers can benefit all students. There are varying opinions, even within our own teaching department, as to whether a *WebCT* discussion board which is used only for such queries reflects a pedagogical

cal problem rather than the reality that many students have pressures on them outside their studies which prevent them from contributing to wider discussion.

However, in most of the units we have taught since going online, use of the discussion board is wider than questions about the practicalities of courses and assessment. True dialog between members of the group does appear, but which members? It is inevitable that some students will tend to dominate boards, since some really enjoy this form of communication and others do not. There are many students new to information studies that are capable of making erudite and helpful comments and responding in a supportive manner to other posters. However, we have found that it is differences in behavior between those with industry experience and those without which offer the greatest challenges to the tutor.

In most semesters in most units, one single welcome message from a student to fellow students triggers a flood of responses. Unlike in class, when an introductory session tends to be quite brief and can be controlled by the tutor, these welcome messages can be long and detailed. Once you have a few messages detailing years of experience, or expressing hope that the course will provide support in dealing with a professional problem of which the other students are, as yet, barely aware, the scene may be set for a damaging split between the students.

We have had cases where students have privately contacted us expressing their concern that they will not be able to “catch up” with other students. They fear that the level expected of them will be one which they are not capable of achieving. In one case, in a unit with small enrolment numbers (owing to it being offered outside its normal semester) there was only one student enrolled who did not have extensive experience. Because this was a first year unit before work experience was undertaken, she was totally without a working perspective on information studies. She did contact the discussion group but only with the single question: “Does everybody work in a library but me?”

Another problem which can arise is with the student tasks which are set for each topic within the unit. We have one unit which was developed a few years ago to change the way we taught information organization and retrieval. This places metadata issues in the context of general concepts of information design. We were pleased with the range of tasks devised and positively invited students to comment on the tasks and collaborate in undertaking them by using the discussion board. The very first week, a small group of clearly highly intelligent and highly experienced students responded with a lively debate. The next week the same thing happened. Even we were surprised at how students who were currently working could find the time to comment at such length, especially when this was not assessable work. The effect of this on some of the other students was devastating. We had students who wished to withdraw on the grounds they were not capable of doing the unit and even one who was affected enough to visit the university counselling service.

Are courses in information studies particularly vulnerable to this problem? We believe that the risk of students feeling marginalized and rejected by a discussion group in our units is high. We have already discussed the preponderance of mature age students in these courses. At undergraduate level, in particular, the courses seem to attract mature age students who may have never had the opportunity for tertiary study before. Not only do they have no relevant experience, it may be some years since they have studied at all. They may be uncomfortable with the technology and have little idea of how “discussion” using a keyboard rather than voice works. This problem should not be exaggerated - mature age does not imply lack of technological understanding. Nevertheless, we find that there is still a significant sub-set of students who do feel intimidated by their lack of technical knowledge and experience of online communication.

This discussion may imply that the experienced students are using the discussion groups in the manner intended and that our only problem is to ensure that all students benefit, not just a few. However the problem is deeper than that. We have real concerns about the attitudes some working students bring to their studies. These concerns go to the heart of the rhetoric of online collaborative education; that students derive general insights and problem-solving skills by building their individual experience of the world into a shared theoretical perspective. With many experienced students the process seems to work completely in reverse. They expect to be provided in the course with a theoretical context which will validate what they do now, or give them answers to immediate professional problems. They are not particularly interested in the professional concerns of others, nor do they necessarily want to spend time trying to understand how underlying theoretical principles are applicable in other areas of the profession.

On the discussion boards this can develop as increasingly detailed, lengthy and impenetrable discussions between two or three students on matters of interest only to them. This is most often manifested when a small group of students use the same software products in their information services. These threads can move away, very quickly, from discussion of general functionality into a considera-

tion of implementation in very specific contexts. Such discussions usually contain technical language which is not familiar to the other students, including an alphabet soup of abbreviations.

It is perhaps unfair to single out a specific group of students at this point, but the staff at Curtin have been particularly concerned about the attitude of students who come from a records management background. The core units in information studies courses are taken by students in all streams; librarianship, archives and records. We are concerned to elucidate general principles of information organization for mixed groups of students. All of them will go out into a world in which the barriers between the way we handle and disseminate different forms of information are breaking down. It is vitally necessary to understand topics such as metadata at the highest theoretical level. However, the regulatory and compliance framework demanded by the records management industry requires its practitioners to concentrate on procedural issues, and develop procedures and methods which conform to standards which tend to change very slowly. There is also a terminology problem, in that records managers have tended to define concepts such as classification and indexing in terms specific to themselves without reference to bodies of professional literature built up over decades. Instead of using the discussion boards to communicate between professions and obtain new insights from each other, they tend to fall into their habitual habits of mind and entrench these further by talking only to their own kind.

The irony is that those without experience on the boards tend to believe that students who enter into very specialized and technical discussions are, by definition, better students. In fact, the contrary may well be true. Those without work experience who have disinterestedly examined professional concepts and industry practices against a theoretical framework may well have a better learning outcome than those with work experience who are unable to generalize from it.

Potential Solutions to Discussion Group Problems

Do you force participation?

We clearly would like all students to participate in the discussion boards. How might we do this? One solution often proposed is that incentives could be used, normally a positive incentive such as extra participation marks or a negative incentive by making participation a compulsory element of assessment. One example of this is given by Suler but it shows that such incentives only last as long as the reward exists. There does not seem to be long-term behavioral change.

You may need to offer concrete incentives to motivate your students. Participation may determine part of the student's grade. You might offer extra credit. Of course, the bonus point system you use will depend on your grading structure. In those classes in which I adopt this strategy, I usually award half a point per post, with a cap on the number of bonus points possible. To qualify for extra credit, a post must consist of at least three sentences and must pertain, in some way, to the course content. It's a lenient rule.

Although we instructors would rather not have to use such a system to reinforce discussions, it does work quite well. Sometimes enthusiastic students will continue posting beyond the point of attaining the maximum number of bonus points. Usually, though, once they hit the cap, they stop posting.

(Suler, 2004)

Pym (2006) believes that that "online assessment pieces requiring the posting of a commentary to the forum were not seen as useful by the majority of staff". He believes that concerns about compulsory posting need to be researched.

One of media units we have taught had a requirement to contribute a certain number of posts per semester, but the quality of these was often poor and gave the impression that the students were merely going through the motions of composing their obligatory 300 words.

There is a more practical objection to using some of the marks for a unit to assess compulsory contributions to discussion groups. Those marks may be needed to assess students' individual competencies in professional technical tasks.

Encouraging participation

It may be better to encourage participation by arousing the interest of students in the process of collaboration. Bradshaw and Hinton describe a successful discussion board based on McLoughlin and Luca's (2000) concept of authentic contexts. The board was characterised by "the use of topics that were con-

temporary, relevant to the student's chosen profession and were directly aligned with the content of the course." Phillips (1998) refers to the Situated Cognition Theory of Brown, Collins and Duguid (1989) which "seeks to reflect the way the knowledge will be used in real-life by providing authentic context which: has authentic activities; [...] promotes reflection; enables tacit knowledge to be made explicit; [and] provides for integrated assessment of learning within the tasks."

The largely positive reaction to the student tasks in the unit on information design described above, shows that this approach can provide very good results. However, even providing such interesting and relevant opportunities for discussion will not be wholly successful unless all students feel able to contribute. Clearly some moderation is needed.

Influencing behavior and the process of moderation

O'Leary (2005) discusses techniques which can be used to influence the conduct of discussion boards. Among the techniques she advocates are the provision of IT support, agreeing rules and roles and encouraging the use of a common language and tone. One interesting suggestion (McConnell et al 2004, as quoted by O'Leary) is that, instead of assessing actual contribution, you assess personal reflections on the collaborative process.

The list of techniques provided by Berge (1995) implies that the instructor should frequently post in order to guide the discussion towards the learning outcomes and find unifying threads. We believe that in most cases the process of deriving general theoretical insights from individual experiences will probably not take place unless initiated by the instructor. The downside of taking this approach is the time that it takes to audit the messages and direct the discussion in the most fruitful direction. We believe that this demands greater teaching skills than merely answering direct student questions. Many teachers see little cost-benefit in online education because such directed learning is much more time consuming than being in a face-to-face class. Berge believes that instructors need to be prepared to contribute "between one quarter to one half of the material on the discussion board."

Despite this burden on the instructor, we believe that it is vitally necessary that discussion boards are moderated so that the alienation problems discussed above are minimized.

Preventing alienation

Berge (1995) recommends that you "praise and model the discussant behavior you seek" and that you "do not ignore bad discussant behavior". This refers to "flaming" and, of course, we do not imply that the alienating messages we have described above constitute such bad behavior but they need managing in just the same way. Berge also believes that you should be "accepting of lurkers". "Some people learn by listening to others so do not assume learning is not taking place."

O'Leary (2005) is a strong supporter of the idea of having separate discussion boards for different groups of students. Under some circumstances, small groups may be most productive. We recommend that, if a topic develops which is detailed; technical or off-topic and only involves a few students, it should be moved to a separate area where the discussion can continue without marginalizing the main group.

WebCT and similar systems have facilities for private messages to individual students. This may be the best way of dealing with a posting which expresses frustration, anger; or a belief that that the posting will be regarded as naïve and foolish. The private message can be more personally supportive than a response to the main list.

Conclusion

The most important lesson learned by those who develop online courses is that each subject is different, each student cohort is different and that there are no easy routes to success. The literature of online education rarely offers recipes for good educational outcomes in all situations, only general principles which should be followed. However, it is clear that one of the essentials for success is support from the instructor, whether this consists of quiet, background intervention or active moderation. The instructor must not only commit time to this task but also educational skills and empathy.

Universities like ours wish to expand online education into all courses because it is perceived as an answer to accepting growing student numbers without extensive capital works and the risk of campus overcrowding. They ignore the costs of such education at their peril. We are committed to distance education but have no illusions that great care is needed if we are to build online communities which offer the same benefits to students as the traditional face-to-face mode.

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