Discussion, Participation and Feedback in Online Courses

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Abstract

The purpose of this paper is to discuss techniques that have led to success in teaching online Information Systems courses. The material is based upon 7 years of experience teaching online courses such as Information Systems Policy, Data Quality in Information Systems, and Systems Design among others. This paper provides the rationale, supported by literature reviews, for using these techniques. The primary focus is on discussion, participation, and feedback supported by explicit syllabus, grading rubrics, and extensive questions. None of the techniques described are islands but are believed to have considerable interactive benefits. An open source online teaching information system, *Innovative Learning Environment and Resource Network*, which provides facilities to support the techniques, is briefly mentioned. While this paper does not assume that any one technique works equally well for all teachers and for all subjects, it does encourage the use of certain techniques, mainly discussion, participation and feedback.

Keywords: online education, online teaching, discussion, participation, feedback

1. INTRODUCTION

Researchers and professors have identified several techniques that have been found to be effective in online education. Use of questions, discussions, required participation and extensive but quick feedback leads to deeper learning and higher student satisfaction. Interestingly, the students in online classes often report that they delve deeper into subjects than they did in on-the-ground classes.

There are a few general considerations in moving from on-the-ground to online classes. It is important to clarify the professor's role as facilitator in an online discussion (Berge, 1995; Kelly, 2009). A common complaint from online professors is the amount of email questions that they receive from students and the feeling that teachers should be on the system multiple times a day to respond to each of the emails. That is neither necessary nor realistic. A clear definition of the role of professor as facilitator and not as a hand-holder is paramount to success. The student must realize early in the semester that the burden of learning is on the student. Here is an excerpt from the "Course Approach" section from a recent syllabus:

"*It is important to realize that an online course does NOT imply individual tutoring. Do NOT expect a tutorial answer to every question that occurs to you over the next several weeks. Do not expect to be spoon-fed. The student must be a proactive learner. Your independent reading and problem solving are critical for success in this class. Textbook readings, supplemental readings, lesson notes and discussion groups will help to convey the main body of knowledge and to stimulate the desired critical thinking. Several Journal articles will be assigned. The instructor will serve as catalyst, facilitator and evaluator in a collaborative learning experience.*"

The above paragraph squarely puts the burden of learning on the student. In the role of facilitator the professor will organize material, guide the class, make announcements, assign materials, raise questions, make assignments,

assess work on assignments, grade, encourage, motivate and give feedback. Fortunately there are multiple online teaching systems that that support those techniques. We use the *Innovative Learning Environment and Resource Network* (iLearn) system, but is beyond the scope of this paper to provide detail evaluation of the online system. The teacher strives to create an atmosphere that encourages discussions and questions. While the teacher should not feel obligated to be on the system all day and constantly responding to every item raised the teacher can provide a schedule that says alternate days at such and such a time questions will be answered. The key point is to make the teacher's role clear.

Without the use of body language, voice inflections, tone of voice, various movements, physical proximity and pace of speech certain points may be misleading in online discussions that might have been perfectly clear in on-the-ground classes (Uzuner, 2007). Therefore it is important for the teacher to respond to questions especially immediately after creating assignments or discussion forums. The teacher can cultivate a positive learning atmosphere by always assuming that each question is a good one and if there are multiple questions about the same item then the teacher responds to the entire class.

A major ingredient to online learning is the asynchronous Discussion which usually substitutes for an actual classroom discussion but with several advantages over the classroom.

2. DISCUSSIONS

The importance of class discussions cannot be overstated. Fleming states that "interaction and sharing" is the heart and soul of teaching and learning processes; thus questioning and discussions bring significant contribution to the learning process (Fleming, 2008). Many students expressed that they went deeper into the material than they ever did in on-the-ground courses. Collaborative learning encourages understanding via sharing of ideas and building group responses. Learning specialists agree that students are more apt to comprehend difficult subject material if they talk amongst their classmates and explain concepts in their own words.

Several researchers have studied this phenomenon and have shown that online discussion forums: "have significant positive effect on student participation and interaction…," "reflective thinking encourages participation" and learning, "foster deeper understanding towards the subject under study" (Balaji & Chakrabarti, 2010); "provide better opportunities for reflective thinking because reflection before posting creates a certain mindfulness" that does not always occur in face-face communication (Uzuner, 2007); enhance students' comfort with specialized language and methods of the topic, improves critical thinking and develop problem-solving skills (McGonigal, 2005); information learned through active discussion is retained better than material learned through lecture (Ewens, 1989); result in greater cognitive and exploratory learning, increased student-to-student collaboration, improved critical thinking skills, greater student empowerment (Laliberte, 2006); and individualize the student learning experience facilitating deeper learning, promote a sense of community between the learners and instructors which "contributes to productive relationships and collaborative exploration of the subject matter" (Anderson, 2004).

The recorded qualities of online forums and its demands for exactness, organization of thought, clear and authentic expression have powerful influences on learning (Uzuner, 2007). Everyone has heard the expression, "think before you speak." There is an audit trail for all to see and the teacher to grade so the students learn to "think before they write."

It may be exceedingly difficult to coordinate ideal "Chat rooms" for class discussions as many students take online courses due to their awkward work, school or home life schedules as compared to class mates. The *Innovative Learning Environment and Resource Network (iLearn)* system provides comprehensive support for assigning groups, building and tracking both discussion FORUMS and Chat rooms.

To say that discussion and questioning are critical would be an understatement but that does not imply that all discussion and questioning will be effective. Therefore it is useful to consider factors that enhance potential for successful discussions. "Carefully planned discussions elicit higher levels of critical thinking, reflective thinking, creative problem solving, synthesis, application and evaluation" (Fleming, 2008).

Factors contributing to success of discussion groups

Factors contributing to success of the online discussion group include *time allotted* for discussion, *quality and depth of the questions*, *size of groups*, *variable membership*, *coaching feedback, activities to enhance participation*,

clear expectations and assessment criteria, and *faithful follow up.* None of these are islands but are believed to have positive interactive effects.

Time: Online discussions might be more effective than discussions in the on-the-ground classroom because there is more time available for student research that can be incorporated into the discussions. Keeping the forum open for a week or more allows more research and thought to be put into the responses leading to deeper understanding. The week long asynchronous discussion forum allows students to use a variety of references to answer teacher's questions, to challenge peers, and defend their points. The online chat may be very useful for team meetings if the synchronization may be resolved.

Questions: If the teacher asks only a few questions without timely follow-up or if the questions are simple recall questions that do not require critical integrative thinking then the potential value is lost (Weimer, 1989). Simple questions in which the students are not held accountable for reasoning about the material contribute to boredom and lack of motivation for the material. Some researchers contend that "effective discussion activities require much more preparation than effective lecture based activities" for both student and teacher (Fleming, 2008).

"Using Complex, higher order questions will not only force the student to flex intellectual muscles when responding, but will also lead the student to more understanding and less recitation" (Lord & Baviskar, 2007). The professor should strive for open-ended questions, play devil's advocate, ask probing questions, insert novel situations, provide feedback, show that the teacher is involved without taking over, encourage student-to-student learning (Laliberte, 2006) and present conflicting opinions drawing attention to opposing perspectives (Berge, 1995; Fisher, 2000).

Research has shown that students trained in meta-cognitive techniques outperform those not trained in these techniques (Akin & Neal, 2007). Thus reflective questions that encourage students to think about their learning process, content and why they answered questions in certain ways lead to improved learning. Teachers who ask follow up questions requiring students to view the situation from different perspectives find that students become enthusiastic about the learning and are often surprised at how others view an issue or problem so differently (Fisher, 2000).

Questions should allow people to contribute their prior knowledge to the discussion. As such, peer generated questions help satisfy the need to use prior knowledge while practicing critical thinking and generating new knowledge (Akin & Neal, 2007). The successful professor requires students to question points made by their peers. This encourages participation, builds self esteem, stretches imagination, engages the student, practices critical thinking, improves commitment and leads to deeper understanding. In addition, it is important to consider the basis for the content of the questions.

The teacher may use the textbook, literature or both to generate their discussion questions. Research shows that neither text based or research literature based questions are better or worse than the other (Akin & Neal, 2007). The textbook question provides a good starting point and engages students with common terminology. Some teachers may use and extend chapter discussion questions found in the text. However, there is some concern that these types of questions can be answered easily and not leave a lot of room for new discourse (Berge, 1995; Shelton & Saltsman, 2004).

Literature-based discussion questions require the students to find existing, discipline-specific literature to prove or disprove, agree or disagree, and expand upon the concept under discussion (Akin & Neal, 2007). This promotes lively discussion and is especially useful for asking the students to find the latest, most up-to-date articles so that everyone is current (Akin & Neal, 2007). However, students may go on tangents, read low quality web pages, skim various encyclopedic databases and not go as deep as appearances seem to show. It is extremely time consuming for teachers to discern the quality of the contributions; however it is very important so that the teacher will be in a position to give very accurate assessment and related feedback of the student's contributions. In iLearn, message facilities support providing feedback and iLearn provides grading functions.

A technique found to be successful is a combination of the text-based and literature-based technique. Assignments are given to read and study specific chapters in textbook(s) and to read one or two up-to-date journal article(s). The teacher asks "devil's advocate" questions forcing the student to engage both the book

and the journal article in order to answer the questions. In an Information Systems Policy class, a question might be something like: *"If you were the CIO what course of action would you develop based upon your readings [of some problem]?"* Or the question might ask *what is the degree of importance of 'trust' in outsourcing relationships?* This is a higher level question since the students were assigned to read a journal article that says the degree of trust required is variable based upon the type of contract while the text said the degree of trust is critical.

Much can be applied from the Socratic Method here (Coffey, 2010; Lammendola, 2009; Network, 2010; Stroup, 2007). The Socratic method is a series of questions formulated as tests of logic and fact intended to help people discover their beliefs about an opinion, event, hypothesis and their reasoning process (Lammendola, 2009). It is a student centered approach that helps learners to develop their critical thinking skills and engage in analytical discussion (Coffey, 2010). The Socratic Method provides "a well formulated question that requires personal responses from students. These responses require further questions and so on. It is often referred to as "teaching by questioning" (Network, 2010). The advantages of this method are that it "stimulates critical thinking, goes beyond the obvious, considers broader implications, provides feedback, fosters an interactive and interesting learning environment, and forces higher level of class preparation (Lammendola, 2009). Students appreciate being told if the teacher is using a particular pedagogical technique. Many techniques used throughout this paper are very instructive for information systems analysts. For example in gathering information from end-users it is extremely important to be able to ask questions, listen well, ask good follow-up questions and provide feedback (Fisher, 1992, 2000; Hoopes & Fisher, 2000).

Size: Discussion group size should be between 3 and 7 students (Laliberte, 2006; Shelton & Saltsman, 2004). Laliberte says that "too few students limits the perspectives while too many makes the discussion difficult to follow" (Laliberte, 2006). Very large groups force students to contribute non relevant points in order to get credit by 'at least contributing something.' If there are too many students there may be repetitious points made. In the smaller group, no one 'hides' and there is no room for excuses about topics already being covered. The successful professor will require students (in the smaller size groups) to read and respond to their peers. And if a student is challenged by a peer the student should reply with logic that either defends the original point or acknowledges the successful challenge. The ability to manage groups through the iLearn site editor makes it easy to assign any size group to any discussion forum.

Variable Membership: The instructor should assign the people to the discussion groups with an eye to varying the membership of the groups regularly to encourage sharing of ideas with more people who may have different perspectives and insights (Shelton & Saltsman, 2004). An additional value of varying membership in discussion groups is to mitigate potential situations of personality conflicts, domineering personalities, groupthink effects and imbalance of expertise. The successful professor diligently mixes the teams on each assignment and discussion group to increase the variety of opinions and styles presented to each student. The variety also minimizes the possibility of one student dominating a team or group for any period of time.   Similar to online group decision support systems that minimize impacts of dominating people, online discussion forums minimize domination by outspoken students (Balaji & Chakrabarti, 2010). While some may argue that online discourse is hindered because it lacks social cues and body language (Sher, 2009), Balaji and Chakrabarti found that these 'omissions' "unbind the social hierarchy resulting in more democratic and equal participation from the members" (Balaji & Chakrabarti, 2010).

Variable membership is especially important for courses with multiple team projects where peer evaluations are involved. Suppose for some reason a student had either a bad start or a serious conflict with another student. If that student was on the same team for the entire year and received bad peer evaluations then he/she could hardly recover. He/she could claim the peer evaluation was not fair. However if students are assigned to 3 or 4 different teams throughout the semester then the student has time to recover and perform better on subsequent teams. If all the teams rated the person low then there is little defense.

Participation: "Participation" is an important variable for online classes. Students often remember their own words, while answering a question or making a point, better than they remember the words of a professor. This is because the spoken communication process is an active process where students must formu-

late a thought, translate that thought into meaningful sentences, write it in front of everyone, receive feedback, reflect upon it, and then plan the next venture into the online discussion. In information systems the systems analyst is taught to interview, listen and participate with end users, programmers and management (Fisher, 1992).

There are several ways to improve the participation in a classroom (Akin & Neal, 2007; Balaji & Chakrabarti, 2010; Berge, 1995; Tou, 2003). Tou noted that simple actions can improve participation. A technique is to pose questions to pairs of students. This dyadic discussion meets the interaction requirement as long as the question is significant enough to require the students to think and reason (Tou, 2003). It is recommended that the question relate different parts of the material to either the whole picture or at least to other parts of the class.

Confusion, anxiety, apprehension about writing and phrasing and concern about discussion grading have contributed to negative participation (Balaji & Chakrabarti, 2010). Thus the teacher should provide detail syllabi, explicit instructions concerning expectations of requirements, assessment criteria, purpose of techniques and content, extensive coaching feedback, teaching with explanations and examples of learning methods such as critical thinking, and provide high emphasis on the teams, groups and forums. iLearn provides facilities for syllabus, announcements, lessons, resources, drop boxes to hand-in assignments and assessment.

Style can be varied a lot throughout the semester to keep the material interesting and to accommodate a wide variety of learning styles among the class. Techniques to vary the style include changing the members and sizes of groups week to week; using dyadic pairs (Berge, 1995), using debates (Berge, 1995), and require peer evaluations (Akin & Neal, 2007). Any creative variation to help make the session new and more exciting improves participation.

3. ASSESSMENT AND FEEDBACK

Assessment

Although online education has exploded in the last 5 years there has been relatively little written about the criteria to both guide students in participation in online discussions and to assist the teacher in discussion evaluation. Without the guidance, students tend to make comments that "contain unrelated anecdotes, brief agree/disagree statements, or are completely off topic" (Uzuner, 2007). Balaji found that "assessment in online environment significantly influenced the student's interactions" (Balaji & Chakrabarti, 2010). Evaluation rubrics positively influence meaningful discourse (Gilbert & Dabbagh, 2005). A good place to start is to identify low-medium-high categories of contributions.

Mercer identified 3 mutually exclusive categories of comments made by students in discussions. In the first category, the student simply challenges another student but the challenge is devoid of justification with no new information. In the second category students add to the discussion by continuing the previous speaker's utterance but without explicit commentary about the prior contribution. The third and highest category is where hypotheses are proposed, objections raised with justification and new relevant information is offered (Mercer, 1995).

Students should be required to contribute substantively a certain number of times (Berge, 1995). It is important to inform students as to the participation requirements and indicate how the discussion is graded. It has been known that specific and difficult goals improve performance more than vague and easy goals (Locke, Shaw, Saari, & Latham, 1981).

The grading rubric "motivates students to participate and provides for equity in grading of group work" (Shelton & Saltsman, 2004). Without the specific rubric students may feel that they are contributing much to the conversation but perhaps they are not meeting the professor's expectations. This leads to confusion and questions about the grading after the fact. Teachers may fall into the trap of rewarding 'A' while hoping for 'B' if they are not specific prior to the discussion (Kerr, 1975).

The Appendix contains an excerpt of a syllabus that covers a grading scale.

Feedback

Feedback should always be a significant part of the learning process (Akin & Neal, 2007; Anderson, 2004; Schweizer, Whipp, & Hayslett, 2002; Taylor, Fisher, & Ilgen, 1984; Tou, 2003). Anderson (2004) found that feedback is an important part of the learning process and influences the approach to learning. Some types of feedback work much better than other types of feedback. Factors that lead to posi-

tive use of feedback is that it is specific, time-ly, coaching in nature, and from a trusted source (Taylor et al., 1984). For example avoid generalities or platitudes such as "that's right." Instead, pose questions that stretch the imagination and thought processes of the students on that subject. Try to avoid letting the student go for several days without feedback as they are forming opinions and judgments that effect their work and learning all the time. The nature of coaching is that it provides help and guidance regularly rather than simply administering a grade or "right or wrong" answer. Coaching and feedback that demonstrates teacher involvement with the work performed by the student significantly enhance trust. In online courses, students expect and need more feedback (Shelton & Saltsman, 2004); but may get less. In online classes, increased communication is required (Shelton & Saltsman, 2004; White, 2000). Of all the factors mentioned in this paper, the comprehensive and personalized feedback given to the students realized the most positive comments back to me. Students said things like, "Wow, I never thought of that," "You, [me] give more feedback than all my other teachers put together, thank you," "we went deeper in this course than any other college course I ever had," and others.

4. LIMITATIONS AND FUTURE RE-SEARCH

This paper aimed to stress the importance of specific techniques for online teaching. Those techniques have been successfully used in practice for the past seven years. This paper shows that research literature supports the use of those techniques but there is no attempt to prove their value. Combinations of positive student evaluations, student comments and separate notes have been received attesting to positive views of the students. While this paper would be enhanced by a discussion of those points it was held back due to space limitations. There is a lot of room for study of the efficacy of the techniques. One possibility is to solicit volunteer teachers who may have had poor results or difficulties with online classes and coach them on the techniques; Then prepare a summary report of the previous class evaluations compared to new evaluations would be interesting.

Since there are several online teaching software packages available it would be very helpful to perform an in-depth analysis of several systems and report the results in a table.

A key limitation of this paper is that it does not cover programming courses. A next attempt at a paper should be to walk through these techniques while conducting a programming course. The "feeling" is that programming courses may need more directive one-way communication than a design or data quality course. However students may always be asked to express why they chose a certain technique or when presented multiple techniques to give verbal evaluations. Perhaps I will be able to teach a programming course soon or hopefully one of my readers will do so and close this open question.

5. SUMMARY

Significant effort is required in teaching in order to ensure that the students are stretched technically and imaginatively. Course outlines are modified to keep up to date with current literature. The developing of imaginative devil's advocate questions that entice the students to integrate journal articles with textbook concepts is paramount in importance. The discussion questions that are posted for the students to answer require them to read, study and integrate material from multiple sources in order to answer the questions. The students are asked to respond to the professor's questions and to respond multiple times to their peers' answers. The announced grading rubrics support keeping the students on track leading to fruitful discussions. Once the questions are debated and answered it is critical to provide extensive, significant, timely and personal "value-add" feedback. This is time consuming as it is necessary that the feedback clearly communicates the strengths and weaknesses of the students' contributions to the discussion(s), projects or other assignments. The average amount of feedback provided per student per week is approximately 1 to 2 pages singled spaced. Even students who have earned the highest marks receive at least a page of feedback per week. Students have responded positively to this type of feedback.

The successful professor distributes comprehensive course syllabi on the first day of classes. Also, the syllabus and most of the course materials are available via the iLearn web page. The role of student and teacher are clearly stated. The most effective learning results from student involvement in critical thinking and discussion as well as through weekly homework assignments. Careful and timely reading and study as well as completion of all written assignments by the expected dates are critical to success in this course.

Finally, 'compensatory grading' grading is used -- the students are given many avenues to score points. No one test and no one homework can bring them down. There is room to recover and bring their grades up. There is always hope.

6. CONCLUSION

Certain instructional techniques enhance the opportunity for successful learning (Berge, 1995). Many of these same techniques are very instructive for information systems analysts. For example in gathering information from end-users it is extremely important to be able to ask questions, listen well, ask good follow-up questions and provide feedback (Fisher, 1992, 2000; Hoopes & Fisher, 2000). Application of the Socratic Method can boost the information analysts' ability to reach understanding of user requirements especially when the user isn't certain of them either. The Socratic Method will actually help the user recognize his/her own requirements. Through explanations of policies for setting and establishing groups the professor can draw significant analogies between online learning and group decision support systems. The teacher may find that a comparison between online classes and telecommuting make both concepts much clearer. The pros and cons of each become more real. Finally an experience of using an online information system such as iLearn can help alert the student to the importance of human factors in systems that are provided to users.

7. REFERENCES

Akin, L., & Neal, D. (2007). CREST+ Model: Writing Effective Online Discussion Questions. *Journal of Online Learning and Teaching, 3*(2), 1-12.

Anderson, T. (Ed.). (2004). *Towards a theory of online learning*: Athabasca university Press.

Balaji, M. S., & Chakrabarti, D. (2010). Student Interactions in Online Discussion Forum: Empirical Research from "Media Richness Theory" Perspective. *Journal of Interactive Online Learning, 9*(1), 1-22.

Berge, Z. L. (1995). Facilitating Computer Conferencing: Recommendations From the Field. *Educational Technology 35*(1), 22-30.

Coffey, H. (2010). Socratic Method. Retrieved June 8, 2010, from www.learnnc.org/lp/pages/4994?style=print

Ewens, W. (Ed.). (1989). *Teaching using discussion*. Madison, WI: Magna Publications Inc.

Fisher, C. W. (1992). *An Empirically-Based Model for Enhancing the Development and Retention of Listening Skills in Information Systems College Students.* Paper presented at the International Association of Information Management (IAIM), Dallas, TX.

Fisher, C. W. (2000). *An Empirically Based Technique for Improving Communication Skills of Systems Analysts.* Paper presented at the Information Systems Educators Conference (ISECON), , Philadelphia, PA.

Fleming, D. L. (2008). Using Best Practices In Online Discussion And Assessment to Enhance Collaborative Learning. *College Teaching Methods & Styles Journal, 4*(10), 21 - 40.

Gilbert, P. K., & Dabbagh, N. (2005). How to structure online discussions for meaningful discourse: A case study. *British Journal of Educational Technology, 36*(5).

Hoopes, J. E., & Fisher, C. W. (2000). *Assessment of a Systems Analysis Methods Course in a Small Liberal Arts College.* Paper presented at the Information Systems Educators Conference (ISECON), Philadelphia, PA.

Kelly, R. (2009, March 3). Four Ways to Improve Online Discussion Forums. *Asynchronous Learning and Trends, Online Education* Retrieved June 9, 2010, from http://www.faculty.focus.com/articles/asynchronoous-learning-and-trends/four-ways-to-improve-online-discussion-forums

Kerr, S. (1975). On the folly of rewarding A while hoping for B. *Academy of Management journal, 18*(4), 769 - 783.

Laliberte, M. D. (2006). Improving the Use of Discussion Boards. Retrieved June 6, 2010, from http://www.wpi.edu/Academics/ATC/Collaboratory/Idea/boards.html

Lammendola, J. M. (2009). Teaching by Asking Directed Questions Instead of by Lecturing. Temple university.

Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal Setting and Task Performance. *Psychological Bulletin, 90*, 125-152.

Lord, T., & Baviskar, S. (2007). Moving students from information recitation to information understanding. *Journal of College Science Teaching, 36*(5), 40- 44.

McGonigal, K. (2005). Using Class Discussion to Meet Your Teaching Goals. *Speaking of Teaching, Center for Teaching and Learning, Stanford university, 15*(1).

Mercer, N. (1995). *The guided construction of knowledge: Talk amongst teachers and learners*. Tonawanda, NY: Multilingual matters Ltd.

Network, I. O. (2010). Socratic Dialogue. Retrieved June 8, 2010, from http://www.ion.uillinois.edu/resources/otai/Socratic.asp

Schweizer, H., Whipp, J., & Hayslett, C. (2002). Quality Control in Online courses: Using a Social Constructivist Framework. *Computers in the Schools, 19*(3), 143-158.

Shelton, K., & Saltsman, G. (2004). Tips and Tricks for Teaching Online: How to Teach like a Pro! *International Journal of Instructional Technology & Distance Learning, 1*(10).

Sher, A. (2009). Assessing the relationship of student-instructor and student-student interaction to student learning and satisfaction in Web-based Online Learning Environment. *Journal of Interactive Online Learning, 8*(2), 102-120.

Stroup, J. (2007). The Socratic method as a tool both for teaching and learning.

Taylor, M. S., Fisher, C. D., & Ilgen, D. R. (1984). Individual's Reactions to Performance Feedback in Organizations: A Control Theory Perspective. *Research in Personnel and Human Resources Management, 2*.

Tou, N. H. (2003). Increasing Student Participation: A Classroom Experiment. *CDTL Briefs, 6*(10), 1-3.

Uzuner, S. (2007). Educationally Valuable Talk: A New Concept for Determining the Quality of Online conversations. *Journal of Online Learning and Teaching, 3*(4), 1-11.

Weimer, M. (Ed.). (1989). *Research summary: Professors part of the Problem?* Madison, WI: Magna Publications, Inc.

White, K. (Ed.). (2000). *Face to face in the online classroom*. Needham Heights, MA: Allyn and Bacon.

Appendix

Assessment rubric for discussion participation grading

This is an excerpt from the syllabus of one of my online courses:

"The purpose of discussion groups will be to explore answers to questions and practice critical thinking applied to the heart of the topic(s) being reviewed. Participation includes ability to synthesize ideas and concepts related to issues being discussed and to clearly articulate those ideas in discussion with classmates. This is where you demonstrate your ability to develop an argument and support it based on your readings. The successful student strives to support arguments with specific readings. Domination of conversation is not good participation. If you flood the group with an excessive number of comments then you will lose points.

20 - Asks good questions and makes valuable observations on an ongoing basis. A leader of discussion especially when in murky waters; able to synthesize ideas and bring discussion into focus. "Listens" (electronically) well to others and includes their ideas in follow up. The student uses references, text and journal articles to support points. Evidence of constructive dialogue between students contributes to 20; Synthesizes material leads to 20; Supports arguments with references leads to 20.

15 - A frequent participant, but questions, answers, or observations are not always as effective as they could be. For example a little lighter on references or the comments do not /address points others have made; MEETS Minimum number of posts with half coming prior to the last 2 days before the due date.

10 - Less frequent and somewhat lower quality of content. Some but not many references. Waits to the last minute to post thus making it difficult, if even possible, for others to read all the posts and respond.

8 - Speculative opinions with minimal support.

5 - Only participates infrequently, or questions/answers do not reflect adequate preparation. Lacks references.

0 - Very rare participation, or questions/answers reflect little or no preparation or "floods" the system. Questions, answers and observations that reflect inadequate preparation leads to 0. Sarcasm or any type of rudeness leads to 0."