

Implications of Role Play and Team Teaching as Strategies for Information Technology Pedagogy

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Abstract

An examination of an online education course that utilizes the strategies of team teaching and role play through an active discussion process is conducted in the context of enhanced student participation and development of deeper levels of understanding is conducted. Based on the successes of these approaches the implications for online courses following the same approaches are examined. A review of the literature dealing with the online use of these techniques is carried out as well as a review of these techniques as utilized in information technology courses. The goal of the research is to provide insights into approaches that will enhance online pedagogy in the contexts of application skills and deeper understanding.

Keywords: team teaching, role play, discussion board, pedagogy, deeper understanding, student centered learning

1. INTRODUCTION

The teaching of online courses presents a unique set of challenges for the instructor. First, the instructor must stimulate discussion between the instructor and the students and among the students even though they are geographically and spatially separated. Second, the instructor must insure that the students attain a deep level of understanding of the concepts of the course without utilizing familiar teaching techniques that are only effective in a traditional setting. Third, the instructor must create, maintain and evaluate the course which requires a major commitment

of time and energy in an already overburdened world.

In an effort to address these challenges, the two authors designed teaching technique for a Principles of Teaching and Learning online course. The basic goal of the course is for students to develop background knowledge related to various theories of learning and philosophies for effective teaching and learning. The application of this knowledge to contemporary educational issues serves as a major course objective. The course was designed utilizing aspects of the discussion board and a team teaching approach. The goal of this technique is to develop in the students a deep level of understanding of

the concepts of the course through discussion and interactivity with instructors and fellow students. To accomplish this goal we reviewed the literature concerning interactivity in online courses. Then we met and planned our approaches to the course. This paper details our efforts to meet these challenges through the use of a discussion board in a unique, interactive manner to develop a deep level of understanding of the concepts of the course.

There are implications for online courses that deal with other content areas. If the goal of the course is to provide an opportunity for students to apply the knowledge and skills they have gained from the course presentations, the use of the discussion board allowing for an exchange of ideas presents an interactive avenue type of learning environment. Since the content area of information technology calls for the skills of effective communication, the strategies suggested here have real application potential. This is an online approach that provides opportunities for enhancement of interactivity and application that calls for students to display levels of deep understanding. Likewise, the issue of team teaching appears as an attractive choice due to the commitments of time and planning required for the successful implementation of such an approach. Learning from the approach in education classes efforts have been made to find other content areas where this approach can be applied. After reviewing these team teaching and active discussion strategies, as carried out in education classes, the implications for its application in online information technology classes is examined.

Interactivity in an online course serves the purpose of maintaining student interest and forming a community of learning involving both the students and instructors. The search for aspects that improve this interactive environment is worthy of exploration in the context of improving the effectiveness of online instruction. In our role as staff members in the education department of a private university, we are responsible for the creation of online courses. Creating and providing instruction for these courses led to concerns related to the levels of interactivity in each course, the amount of time required for course

construction, and the depth of understanding provided through course interactions. Working together we reviewed the literature for methods to enhance the depth of understanding and levels of interactions while sharing the responsibility for the course.

2. REVIEW OF THE LITERATURE

A review of literature related to the impact of the instructor on student's success in obtaining deeper levels of understanding center on various points in which instructor responsibilities are paramount. The instructor must keep the discussion on track while contributing specialized knowledge and insights weaved through discussion threads. At the same time group harmony must be maintained. For discussions to be effective the components of pedagogy, community building, managerial tasks related to course organization, as well as serving as a monitor for technological aspects of the course. All factors must be juggled by the course instructor. Research related to the amount of time it takes to plan, organize, and deliver online courses, support the finding that instructors of online courses spend more time on preparation than colleagues in traditional courses. (Cavanaugh, 2005). Instructors of online courses fall into one of three categories in the context of how they handle their classes online. Some serve as a monitor who rarely participates in discussions. Some serve as facilitators who center on providing feedback for discussions. And some serve as teacher-participants who are visible throughout the entire class using the discussion to push students to the asking of deeper questions and to presenting insights that demonstrate levels of deep understanding. The comfort level of individual instructors place them into a particular category and their perception of what is the most important role for the instructor and the students receives precedence (Morris, Xu, Finnegan, 2005).

Research supports the importance of the instructor's role of mentor, coach, and facilitator. As mentor, the instructor models the construction of knowledge and the defense of beliefs. As a coach, the instructor provides prompts that invoke reflections and feedback that keeps motivation high. And as

a facilitator, the instructor sets agendas that reflect effective planning and allow for an environment that supports expression and an exchange of ideas (Murphy, Mahoney, et al., 2005). Discussion is successful when the instructor sets the scene for the discussion, monitors all participation, emphasizes the importance of critical thinking, and provides summaries that call for expansion of differing perceptions. A major goal of the instructor is to encourage students toward deep levels of inquiry related to insights and observations expressed through discussions (Moore, Stuart, Newton, Oswald & Varonis, 2006).

Another goal of the instructor is to provide opportunities for deeper thinking and understanding. The instructor assumes an effective role that combines motivation and involvement supported by feelings of satisfaction by participants. The discussion board is a valuable tool for providing opportunities in the context of intellectual and reflective learning. Lines of questioning drive ideas and concepts forward through the effective exchange of discussion feedback creating higher levels of reflection. The Socratic approach utilizes questions that evoke clarification and elaboration related to real life situations. Activities that permit clarification and elaboration include case discussions, debating of materials, simulations, and well structured role play. Critical thinking skills are central to these activities (Danchak, 2002, MacKnight 2000, Raleigh, 2000). Students draw individual conclusions, discover and provide explanations for relationships, and share insights gained through discussions. Monitoring student responses in discussions and monitoring questions asked by students serves as an effective way to assess levels of student understanding. Well planned and structured discussions function as an alternative to traditional assessment methods. Student responses and interactions provide an excellent picture of the depth of understanding (Matters, 2005).

Research supports the discussion board as a key area for interactions and deeper understanding. The effective use of the discussion board can provide more meaningful results than face to face class discussions because students tend to think more about what they are expressing in

written communication than in oral communication. Student reflections are readily evident in online discussions due to time allowed for processing of information (Hanawalt, 2005, Sunil, 2004). Discussions must be a two way street with the student providing insights and observations and the instructor facilitating, providing opportunities in-depth investigation, and providing constructive feedback to students. This successful exchange facilitates the acquisition of higher-order thinking skills for the transferring and applying information to new situations (Wu & Hiltz, 2003). A discussion format expands knowledge and skills and reflects the opportunity for students to utilize discussion to obtain textual knowledge. Students interact with each other, hopefully sparking lively discussions that support higher order thinking skills (Gambrell, 2004, Gaoyin & Tao, 2005). This result is based on the online discussion's student-centered approach, the intensity of student writing, on-demand interactions with other students and the instructor, and more personalized feedback to students (Kassop, 2003).

The discussion board serves as a replacement for face to face oral interaction in the creation of an online learning community and reveals various methodologies and structures that can lead to the creation of this community. The discussion board lessens the feeling of isolation for participants, identifies common goals for course participants, recognizes the participant's contributions, and extends discussions to levels of real inquiry. The instructor assumes the role of facilitator in the electronic dialogue (Waltonen-Moore, Stuart, et al, 2006).

With the responsibility for facilitation of all online discussions at a level calling for deep levels of understanding, the question arises as to the ability of one instructor to effectively meet all these demands. Research expresses the assertion from online instructors that the creation, monitoring, and instruction of online courses require more time than traditional classes (Cavanaugh, 2005). A team teaching approach addresses this issue. The premises of two heads are better than one seems to be supported by research on online courses.

While the concept of team teaching is not a new idea, its application for an online course is not a common practice, but research relates that team teaching can provide positive results for online courses. Team teaching results in a course that presents materials and discusses issues from a multi-perspective approach. The opportunities for individualized support and the modeling of instructor collegiality also aid in creating a community of learning (Vogler, Long, 2003). Research points to the implementation of a team teaching approach to create a learning environment that requires active participation of instructors and students (Salas, 2006). The application of a team approach shifts the focus from educational content to the design of activities that require interactivity since two instructors share the load (Piechura-Couture, et al, 2006). Palloff and Pratt (2004) present the view that collaboration is the "heart and soul" of an online course (p.6). Two instructors modeling collaboration provides an opportunity for this process to be viewed and experienced by students. Palloff and Pratt (2004) recognize that such collaboration provides the deeper level of understanding needed for real learning to take place (p.7). The team can benefit from the division of teaching responsibilities by dividing students, technical and socialization activities, and assessment responsibilities, while opportunities always exist for a cross-over or shifting of responsibilities (Leyland, Phipps, 2006).

Pre-planning time to discuss course objectives, expectations, activities, and resource materials is major priority in designing a successful course. Instructor teams must feel comfortable with the realization that each team member has unique and differing contributions for a course (Kain, 2006). Another issue that needs to be discussed both between instructors and with the administration controlling online courses is the recognition of the time devoted to creating and teaching of the course. A format for the payment for course work and recognition of the work load must be agreed upon before embarking on the endeavor (Leyland, Phipps, 2006). Also an ongoing process to meet and discuss the progress of the course is of paramount importance if the activities and

interactions are to be effective in meeting course objectives (Shibley, 2006).

The pre-planning process proved to be of invaluable importance for our course. We decided to enhance the interactivity and increase depth of knowledge on the discussion board through the use of role playing. Generating dialogue required for an effective discussion board is difficult. Taking this process to another level involving role playing can be quite a large step for students and instructors. Online role playing is not a common activity for courses and instructors must make all participants feel they are active stakeholders in the process (Lebaron, 2005).

While it is convenient for students to log on and review comments in online courses, the responses are random and isolated bringing a feeling of disconnect to the dialogue process. Students also have a tendency to be nice to each other and make conscious efforts to not make comments that appear disagreeable. Instructor questions and comments should encourage students to provide clarity for positions and to challenge the positions of others. All participants build and construct new knowledge utilizing the elements of the discussion as building blocks for the process. One successful approach to obtain this goal is utilizing a role play situation and assigning specific roles for participants. When assuming a role- persona participants are not necessarily taking a personal stance, but rather are stating the position and reaction of a specific role, with the role's unique views and perspectives. This approach can take the discussion to a new level of enthusiasm and insight sparking a more robust discussion reflecting numerous perspectives (Murry, 2000).

Motivation is the major driving force to maintain meaningful and effective online discussions. A productive learning environment requires the selection and use of appropriate instructional techniques and relevant content materials related to the learning modalities of all the participants. Role play builds on participant interaction and can create social bonding for participants leading to maintenance of motivation levels. Reflection also increases

since students do not sit passively allowing the instructor to provide all knowledge. Participants begin to communicate role perspectives and insights and to assume responsibility for their own learning (Bergin, Eckstein, et al., 2001). Role play is a useful technique in online courses because it affords more time for instructors to work individually with students. The instructor is actively involved in the role play and models behaviors for students. Feedback is provided in the context of the discussion topics and depth of understanding is enhanced by probing responses and questions by the instructor (Headly, 2005). Participants have the benefit of being sheltered by the persona of the role they play. Playing a role allows students to challenge and explore their own ideas and beliefs amongst peers without the constraints an authoritarian position of instructors might impose. By exposure to new perspectives students can exhibit depth of learning often not reached in face to face class discussions (Linser, 2004).

Another benefit of role playing is that participants are challenged emotionally to deal with discussion comments in a free-form approach that they review before making logical response. This situation simulates real-life situations, where views and perspectives come quickly and can be emotionally charged. Both cognitive and affective domains are called upon to deal with proposing and defending positions within a social experience of the discussion. Learning takes place in a social context where decisions reflect a particular role where there are no preset rules as to responses. Constructivist learning occurs in an environment where discussion and comments are presented in a state of some disequilibrium for participants. The instructor must assume the role of alleviating this disequilibrium so participants can understand the comments or positions assumed by each of the roles. These mini-debriefings keep the conversation on track. A major debriefing takes place at the end of the discussion process so participants have commonality as to issues discussed and role positions taken (Fannon, 2005). Role playing can be a successful approach when attempting to provide realism in terms of interaction and is suitable in many content areas for use (Nelson, Blenkin, 2007).

3. PRE-PLANNING

Since the authors had collaborated throughout the formation of the online courses, it came as a surprise that teaming based on friendship can be filled with dangers. The social aspects of teaming must take a backseat to dealing with problems in the process of course improvement. Friendship should not outweigh the importance of open and frank discussions of conflicting perspectives. Instructors must engage in open, frank discussions of perceptions as to materials and activities to be utilized in the online course. Likewise, shared course expectations must be maintained to develop a sense of consistency. Mixed-signals from instructors result in confusion for the participants. After a series of frank, open discussions the team members agreed on course objectives, a division of labor, methods of assessments, and other vital factors related to the course. But they were not satisfied with the level of interactivity and the depth of understanding generated by their course. After reviewing their research they decided to include a role play situation as a major technique to increase interactivity and to deepen attainment of knowledge.

The pre-planning continued with the creation of a scenario of a banquet where students would interact with instructors who assumed roles of educators from the past. The goal of the scenario for the instructors was an assessment of the students' ability to apply insights they had gained through the course in the context of educational views from the past.

The instructors settled on the format of a banquet based on the concept created by Steven Allen in what many critics refer to as the ultimate talk show. The series was presented on the PBS network under the title of "Meeting of the Minds" in a typical chat-show format. The common element of each show was the interaction and discussion between the featured characters to create a deeper level of understanding of the characters, their actions, their historical circumstances, and their impact on history and society. Allen's creation of the Meeting of the Minds series provided an active and entertaining forum that resulted in a deeper

understanding of historical and contemporary problems and beliefs. The team discussed the possibility of utilizing the Meeting of the Minds format to deepen understandings of aspects of American education in the context of historical figures reactions to contemporary aspects of education. To keep the interaction between characters fresh and active, the instructors decided that more than one voice in the discussion process would offer different perspectives on topics. Characters from different periods of history interacted together in the Meeting of the Minds, so the instructors decided to utilize educators from different eras in their role play. The instructors would assume the roles of various characters and interact with students in the persona of that role with anonymous postings.

Discussions between the two instructors led to a consensus that characters-role selection must detail insights of not only the character's life period and experience but also interactions with contemporary observations related to education. The instructors centered on the selection of a historical figure who would provide insight of the movement for equality in American education into the modern era and a historical figure who maintained classical beliefs in relation to education. The instructors selected John Dewey and Aristotle as historical figures who personified these philosophies. Dewey's selection reflected the early twentieth century movement toward the value of the individual and a belief in the education of the whole child. Aristotle's selection reflected the classical belief that only a few members of society would benefit from classical education. The role play could simulate discussions between these two individuals related to the goals and motives of education to support the existing culture or to challenge and question aspects of cultural beliefs in face of changing times.

Further discussions between the instructors suggested the addition of a character reflecting the social and political aspects of education. The concepts of evolution, revolution, and political and social development needed examination. The selection of Mao illustrated the beauty of the discussion process, as students became

aware of the fact that Mao's education included training as a classroom teacher. This feeling of relevance creates a discussion component that provides real learning opportunities and assessment of participant knowledge and application skills.

4. THE ACTIVITY

The students are introduced to the Banquet assignment through an invitation to the Banquet. They are acquainted with the expectations of the assignment. The following is a reproduction of the online assignment for each student:

The Banquet Assignment: **Session I:**

Cocktail Hour Conversation – (This will run for period of two days)

On the discussion board each Guest introduces himself - When I was young, I had ____ experience in education (or school) and that made me from my opinion on education that

The honored guests you will be holding discussions with are:

Aristotle

John Dewey

Mao Tse-Tung

You will want to review some background about each to aid you in your conversations with them

The guests will ask for you to respond with early experiences with schooling that you have that led you to your present position on the teaching-learning process. Please respond to each guest but also respond to two of your classmates. This will continue over a three day period. You should check throughout the day in relation to responses to your comments from the guests and other students.

Observations Related to Section One:

Session one, Cocktails, is utilized as a transition activity to introduce characters and makes participants feel comfortable in taking part in this activity. Some students find exchanges with these characters

difficult at first. There seems to be a feeling that one might say the wrong thing or express a thought that might be ridiculed by authority figures. It also takes participants time to suspend feelings of reality when conversing with characters. Small talk of a general nature is helpful during this session so participants can feel comfortable talking with others. When this feeling of comfort is achieved, the conversation will flow and exchanges allow participants to share their individual beliefs. To increase the comfort level of the students the instructors must click the anonymous selection for posting and type in the name of the character they are portraying in the address section before they post a comment or observation. Student participants are presented with a rubric that will be utilized to assess students' participation in the discussion board process. The rubric will aid in keeping the discussions centered on topics that will call for students' to display their knowledge of the various philosophies of teaching and learning in the context of contemporary educational issues. [Rubric and explanation for its application is presented for viewing in Appendix.](#)

Observations Related to Session Two:

By session two the students have become comfortable with the scenario and the exchange of comments with the Banquet's Guests. The discussion exchanges here are more open and students feel more at ease in the control of the topics to be discussed. Student participants will begin to assume more of a leadership role in the direction of discussion topics and challenging of comments and positions of the instructor role-play persona. The learning environment changes with students assuming more active learning approaches and in many cases providing teaching of their own through the organization of thoughts, communication to others, and defense of their positions. Real pressure is put on the instructors, since they are expected to maintain their specific persona, calling in many cases for comments and positions that do not coincide with their own beliefs. A review of the postings that was more evident in Session One has now given way to a more questioning type of environment with contemporary examples of educational

issues viewed in the context of learning approaches and theories that have grown from past experiences. Assessment of students' levels of knowledge and the ability to apply this knowledge to real life situations in the context of learning and teaching will be based on instructor observation. The rubric will be utilized throughout the discussion in sessions one and two. The instructors hold higher expectations for student participation in session two.

Session II

***The Banquet* - (This will run for a period of four days)**

You should check throughout these days a number of times throughout each day to see what questions or responses the guests have directed toward you. This is your chance to get your beliefs and positions across to others at the luncheon.

The Guests will address questions to specific class members. Please check the Discussion Board for questions addressed to you or responses given to your comments. Do not forget to support your classmates and our guests with comments and arguments to defend their position.

The issues to be covered during the discussion – center on the following:

The role of education in the context of culture and cultural change approach and expressed highly positive support for the process. The responses from both groups provided the following observations:

1. Instructors express a belief that the selection of specific characters in the pre-planning process allowed for more effective organization of materials. Knowing the characteristics and beliefs of the characters that would center the discussions provides an actual guide for the content needed to be covered throughout the course. Instructors also express recognition of richer more insightful comments and responses from students through the role play

process. The instructors feel the student discussion postings serve as instruction to both themselves and others.

2. Students express views that the experience with the role play through discussion served as an excellent culminating activity. Exchanges with the role-play persona of the instructors are viewed as one of the most engaging and self-reflective activities they have taken part in online. Students suggest that the utilization of this approach should only be continued but expanded.

5. Implications for Instruction in Areas of Information Technology

Individuals that work with information systems have the primary functions of developing and maintaining such systems. Knowing the system, problems related to its maintenance, and the correction of problems with the system do not take into account one of the major functions confronting information systems specialists. The system must interface with a population that will require support to utilize the system with little knowledge or understanding of the system itself. Information support personnel have to deal with the human factor and cannot ignore the social-cultural aspects of such interactions. One might be called upon to communicate requirements for a system from business personnel to developers or deal with implications of making clear to users the intricacies of a specific system. It is impossible to ignore the discussions that will arise between developers and users taking into account the most effective way to communicate these issues. The utilization of cases studies has had a great deal of success in dealing with these issues rather than a reliance on lecture methods that may communicate the content but not the interactive communication skills that will be called for (Avison, Cole, Fitzgerald, 2006).

Hallgeir and Purao (2005) in a review of the various approaches to instruction in the area of information technology stretches across a continuum from objectivist approaches, through the constructivist approach,

extending to the social-cultural approach. The objectivist approach calls for the students to assume a passive role in the receiving of knowledge from instructor as the dispenser of knowledge. The utilization of the lecture method is the most common knowledge presentation teaching process. The constructivist approach calls for the student to be more active and for the instructor to serve more as a facilitator than as the major dispenser of knowledge. Learning through the constructivist approach is conducted through conversations and exchange of information and depends on effective levels of feedback both from the students and the instructor during the teaching and learning processes. The social-cultural approach is linked to the belief that for learning to be effective and impact the individual it must be situated in the context of the specific goals and skills the instructor is presenting. The student must be placed in an environment in which there is a clear opportunity for the application of these goals and skills in the context of what is being provided for the student through instruction. Depending on the real objectives of learning specific skills and content, a high level of conflict can arise in a decision as to which pedagogical approach is most effective to reach these objectives. With "digital natives" taking their places in the training process for information systems, it is time to begin reviewing pedagogical approaches. Students who learn best in an active and interactive setting are requiring an environment in which they can analyze and discuss content and materials and must be provided opportunities to communicate skills and knowledge to each other and to others (Gaston, 2006).

The utilization of role-play as an active strategy for use in introductory information system courses demonstrates levels of success in aiding students through system analysis courses. Students assume the roles of system user, systems analysts, and chief information officer. Problems related to investigation, feasibility, cost benefits, management, and user requirements are dealt with by the students from the perspective of their particular roles. This provides opportunities for students to interact with one another in the solving of

problems, communication of information, and formation of policy. All such actions are carried out taking into account the perspectives of the roles assigned to students. Students are carrying out their roles while at the same time taking into account the differing perspectives of others. The role of the instructor becomes more like that of a facilitator, not providing answers, but providing guidance with students making their own decisions and carrying out their own planning. Each student is provided with information and questions related to their own role which will have major impact on planning and decision making. Students will be required to communicate this information to other students in differing roles and be willing to compromise in many areas due to the needs of differing student role-players.

Variables such as class size, student willingness to view the process as content centered, and time all made some of the administering of the project difficult. But such barriers to success also provided new approaches to deal with these barriers. The concept of utilizing more than one instructor, in a team-teaching approach proved to be useful both in terms of time and class size problems. Placing more grading emphasis on this project also motivated more students to view the project at the same value level as the presentation of pure content information. It appears with these efforts and adaptations of pedagogy have made the process more effective in providing a more real life environment for students to apply the content and skills gained through the more traditional teaching approaches. To the majority of the students and instructors the process was worth the additional effort, time, and planning (Mitri, Cole, 2007).

A real world, Project-based approach calling for elements of role- playing is presented through the Systems Development Life Cycle as a systems development approach. Research as to the continued effectiveness of this approach provides data that use of a comprehensive systems development project for a real-world client met with substantial approval from past students. The questioning of this specific approach is based on the rapid changing elements of

technology and in particular the increasing inclusion of web-based activities in the development and implementation processes. Also in question is the assignment of time needed to carry out such an approach. Results of the a review of this approach in the context of former students who presently work in the system development field displays a recognition that the skills developed and applied through the process receive good marks. There is some indication that the real appreciation for such course work is not demonstrated until students have actual employment in the information system field. The ability to communicate in an effective manner and to recognize perspectives of others in the development process is seen as a major area that students benefit from after graduation and employment (Vliet, Pietron, 2006). Getting real gains from role-play activities calls for the development of specific elements for each role allowing each student an opportunity to understand their own perspectives and responsibilities. However, at the same time it needs to be made clear that if an individual is part of a role-group their presentations are for the entire group eliminating the feeling that students are called upon to present points of views and perspectives in isolation from others. Likewise, role-play is of little value unless a great deal of emphasis is placed on the debriefing process. The students need to recognize the dynamics of the interactions that have taken place through the role-playing process allowing for a reflection on the skills and knowledge gained through the process. This takes a commitment to extensive planning and organization for the entire process to achieve levels of success (Anonymous,2005).

Many of the same observations as expressed by the two researchers also will prove to be true for those that made the decision to examine the effectiveness of the team teaching approach. The planning and time commitments called for to implement such an active online approach makes clear the benefits of instructors sharing. For those faculty members who are pressured to carry out significant levels of research this offers a means by which the sharing of responsibilities can provide needed time. Sharing responsibilities can allow instructors

to center on the areas of their major expertise. This responsibility for technical aspects of the course and the responsibility for the pedagogical aspects can be divided. Sharing responsibility for the course eliminated a feeling of isolation in both planning and execution of the course. Instructors will have the ability to divide the load making the review of so many student comments manageable and allowed more time for instructors to reflect on student responses and comments. Students remarked it was engaging to feel that the instructors acted as part of the learning experience through the sharing of comments and responses and two instructors made it possible for the amount of responses to increase and enhance the discussion (Neumann, 2006).

The issues of educational equity
The teaching-learning process
Engagement of students
Development of a learning community
Promotion of success for all students
through differentiation of instruction.

Postings from session one are collected for review. A comparison of the length and the level of insights expressed by students through these postings demonstrate efforts to find areas of common ground. Student postings display an effort to become accustomed to a new type of discussion. The discussion is being led by the instructors. As the comfort level increases through the introduction of different instructor role-play personas, the willingness of students to question and disagree with posted comments and responses increases. This sampling of posting is provided to demonstrate the transitional process taking place through the discussion process.

Selections discussion board comments for session one:

Forum: Session one / Mixing and Cocktails

Author: John Dewey / Subject:

Introduction to group: Hello, I'm John Dewey from Columbia University in New York, although you may be familiar with my work in Chicago where I founded the Lab School for children 6 through 16. When I developed the concept for the Lab School

my hope was to establish an embryonic community for collaborative learning. I knew that I wanted to be involved in teaching and learning for the rest of my life. I also wanted to find my philosophical 'base', if you will - so that my views on education in theory and in practice would have cohesiveness. And I want education in this country to be 'American' - to represent in some way our individualism and our originality and out innovation. Enough about me... tell me about your 'philosophical base'? What early experiences or your experience-formed opinions influence your current practice?

Author: Student reply / Subject: Reply to Dewey: *(regarding my teachers at the time), i used to think- "Ok, what made him/her like this? Why do they choose to teach in this way? Why do they interact with us in the way that they do?" I kind of used to "psychoanalyze" my teachers without even knowing it, and try to find out why they were the way they were. Now, as a teacher myself, it's very interesting to analyze why i am the way that i am. When i teach now, i try to put myself in the place of my students and imagine how i would like to be taught or to be treated. How would i like this information presented to be easily understood? How would i liked to be talked to? Keeping in mind that all children learn differently, i do understand that "my" way, isn't the best/only way. But i do feel like it is a good base in determining where i will start. In the same right, i also look back into my elementary/high school days and remember all of the things that i DIDN'T like, the techniques that didn't work for me, and the ways that certain teachers would treat his/her class that did NOT seem to go over well, generally speaking.*

Examples of Exchanges Between Aristotle and Students: Session One

Author: Aristotle / Subject:

Introduction: Greetings. My name is Aristotle and I'm pleased to have an opportunity to exchange ideas with related to aspects of education. I feel I have some knowledge in this area since in Greece I established the Lyceum. The concept or idea of hands-on learning is an important part of this learning process to make possible for men to progress from that which they can

sense to applications at the level of abstractions. In practice, I think you do some of these things in your schools today when you allow students in math to handle manipulative objects to understand numbers before you progress to the abstractions of higher levels of math. Some truths must be viewed as absolute. Only the truly educated men should be provided with the opportunity in higher education to carry out the research based on theory and achieve the highest level of learning. Higher education is not for the masses but more for the intellectually elite men in a society. Enough about me... tell me about your 'philosophical base'? What early experiences or your experience-formed opinions influence your current practice? What questions or comments to you have for my educational philosophical base?

Author: Student / Subject: Reply to

Aristotle: You mentioned that your Lyceum dealt with in essence, training students to live and work in the "real world." We are still doing that but living in our "real world" is completely different. While I believe all children can learn and can be taught to function in life, that doesn't mean we have to train them all to become doctors and lawyers. In today's society we have come to realize that children learn in different ways and sometimes we have adapt the work for the students. Did you do this or were all students treated equally and by equally, I mean in the same exact way? I have a question about the last comment you made about only most educated men being able to continue on in higher education. How did you measure the intelligence of a person? Nowadays, teachers are starting to see the importance of assessing students in different ways. Some "more intelligent" students fail tests because they have poor test taking skills. While I agree that not all students are capable of higher research, more because they lack the self motivation to do so, I still wonder how you measure who is worthy enough of a higher education.

Examples of Exchanges Between Mao and Students: Session One

Author: Mao / Subject: Introduction:

I am Mao Tse-Tung, and yes, my early education was in the art of teaching, although my beliefs soon differed from what the educational elite felt should be taught in

schools. I grew up as a peasant and quickly formed the conclusion that this elite must be destroyed. This educational class became too separated from the common people and the information and knowledge of the peasant class appeared to offer as much if not more than elite that only existed to maintain their own powerbase. The school's goal should be to bring about social, economic, political change within the accepted truths of the Chinese State. Basic skills need to be taught. Schools should exist as institutions that call for change and not maintain outmoded traditions. All people, men and women, alike must be provided with a basic education that will allow for success in the modern world. Enough about me tell me about your 'philosophical base'? What early experiences or your experience-formed opinions influence your current practice? What questions do you have about my beliefs and views on education?

Author: Student / Subject: Reply to

Mao: Great point. I agree that just by looking at the results of recent standardized tests, scores have increased in many areas. It is wise of the government to see that our students can do better but I agree with you that they put too much emphasis on higher scores in a certain amount of time and perhaps their time frame was a little unreasonable. I think it is great to encourage districts to increase scores but if they do not reach a designated score within a year, why should they be punished?

Selections discussion board comments for session Two:

A review of the postings for session two displays a willingness of student participants to assume a role of questioner and challenger in response to comments made by the instructors. The students also display an application of content knowledge to new situations as they are presented by the instructors.

Author: John Dewey / Subject: Impact

of teacher background: I must admit that I would remiss if I did not tell you that many have said that the progressive education movement was dominated by white, middle-class Protestants of Northern European ethnicity - particularly English. Some say

we were actually agents of social control - that I, especially, wanted to use education to create a middle class by consensus. That I wanted everyone to share my experience - one of growing up white in middle-class, small town America. Many feel that I would not have supported a culturally, ethnically and racially pluralistic society. Do you think that the background that a teacher brings to bear imposes to some degree that teacher's social, religious, ethnic cultural background on his/her students????

Author: Student / Subject: Reply to Dewey: *I know that my student's lives are very difficult. I also know that it is my job to get them ready for real life jobs with real life expectations. So up front, I give clear definitions of conduct expected and homework is one of those expectations. I ask for homework usually at the start of class and giving it to me later in class still counts as late. Students who were absent the previous day must turn in homework before the first class of the following day. There are some special circumstances, I must admit, but then those are mediated by supervisory or social service individuals. To be successful in the workplace, students must be able to operate within usual workplace guidelines and our job is to train the students in all aspects of their job, not just knowledge, but for good performance too. We incorporate team building, dress for success, communication skills written and oral and problems solving into the curricula. We build the trust of the student and we work with them when they work with us.*

Author: Student / Subject: Reply to Dewey: *I think that holding all students to one standard does promote a feeling of equality, but I don't think it necessarily increases or decreases competition. I think that people are naturally competitive. I agree with you about schools promoting competitiveness between students. Instead of focusing on working together and supporting each other, it seems that sometimes schools put students in situations where they have to compete with one another.*

Examples of Exchanges between Aristotle and Students:

Author: Aristotle / Question for students: *I so glad to be seated with all of you. I need to ask a question as to what you view as the major problem facing your schools today?*

Author: Student / Reply to Aristotle: *I would say one of the major problems in our schools is the inequality of the distribution of funds. In my county, there are several districts that can all be labeled in a certain way; the districts with a lot of money, the districts with some money, and the districts with very little money. In the "rich schools," every student has access to a computer. In the schools with lesser money, a student can only use a computer that is in the computer lab, which is usually occupied by a class each period so the students are unable to go in. The "richer" schools also have access to many different materials for a lesson. Equality of funds and materials is essential for all schools to achieve the designated passing score for No Child Left Behind but sadly it is not happening.*

Examples of Exchanges Between Mao and Students

Author: Mao / Subject Question to Students: *My pleasure to be seated with you. I know I spoke to you before but just as an opening question what do you like or dislike about the views I expressed about education?*

Author: Student / Reply to Mao: *I don't think our school are as good as they could be at preparing our young people for life. I think they lean on their support network more than ever before and stand on their own to a lesser degree. I'm not even sure they can think for themselves, or take the time to think versus react. Our educational system is good at guiding the gifted and supporting the challenged, but the large mass in the middle are passing through the system without either support or guidance. The bigger the school system, the bigger the problem. I don't think we're adequately equipping our young people for life on their own. I don't completely blame the schools for the failing. Social interactions are failing on all levels. Responsibility and citizenship are not*

promoted as values. The lack of societal unity on these issues leads to the lack of reinforcing these values w/in the school systems. We teach facts is safer and less controversial. Education of children is not to make waves w/in the parental, financial base of the school. Stick to the facts. Stick to the curriculum. That's what we're supposed to do as educators.

6. CONCLUSIONS FOR EDUCATION COURSE

The conclusions are based on the observations made by the instructors based on interactions between instructors and review of the ability of discussion comments and responses to reach the objectives expressed by the rubric.

Student discussion board responses and comment reviews:

1. The amount of comments and responses increased from session one to session two. Session one included eighty four comments by students over a two day period, with an average amount of comments of forty two per day. The amount of student comments for session two increased to three hundred and fifty two with an average of eighty eight per day. When students were questioned about this increase in the debriefing process, they stated that they felt more comfortable with the process and also felt they had an adequate content background to challenge positions taken by instructors.
2. The amount of instructor comments decreased from session one to session two over a four day period. Session one included sixty six instructor comments with an average of thirty three comments per day. Session two included ninety four comments over a four day period with a twenty seven comment average per day. When instructors debriefed, both expressed the view that students began addressing more comments to each other and that comments displayed more insight so that it was better to allow students to converse on topics then to interrupt with instructor comments.
3. The length of student comments increased from the first to the second session, while instructor comments lessened in length. Both instructors commented the student comments contained more referrals to evidence and content materials to support their positions and were much richer in content. Instructors also noted that they only need to post a short specific question to re-energize the ongoing student discussions.
4. Both instructors were impressed with the level of responses as students progressed through the discussion. The responses and comments displayed reflection on the part of the students and they placed more emphasis on recognizing the connections between various aspects of materials and content covered in the course.
5. Both instructors noted the increase of the willingness of students to challenge the positions of the instructor-personas. Instructors also noted that there appeared to a tendency for students to feed on each others' challenging comments. Students assumed the major aspects of the discussion process only following instructor comments as a guide for further discussion.

Collective Instruction / Team teaching experience:

The instructors met throughout the course to discuss problems, provide suggestions, and to direct the course. Students also offered their opinions of the team teaching approach.

1. Both instructors remarked on the importance of having a colleague to interact with when exploring a new approach to presentation of materials. Instructors also noted that the ability to divide the load made the review of so many student comments manageable and allowed

more time for instructors to reflect on student their responses. This division included responsibility for technical aspects of the course and responsibility for the pedagogical aspects. Sharing responsibility for the course eliminated a feeling of isolation in both planning and execution of the course.

2. Student reactions to the team teaching approach were very positive. Students remarked it was engaging to feel that the instructors acted as part of the learning experience through the sharing of comments and responses and two instructors made it possible for the amount of responses to increase and enhance the discussion. Students remarked in a positive manner about a much quicker response time from instructors and these responses reflected insights that pushed the discussions to a higher level. Students also found the anonymous postings by instructors, in the role-personas, a great means by which to bring about higher levels of willingness to respond through the expression of their own unique insights.

Impact of Role Play Approach:

Instructors met through debriefing throughout and at the end of the course and expressed positive insights as to the role play approach. Students were also ask for responses related to the utilization of this of this approach and expressed highly positive support for the process. The responses from both groups provided the following observations.

Instructors express a belief that the selection of specific characters in the pre-planning process allowed for more effective organization of materials. Knowing the characteristics and beliefs of the characters that would center the discussions provides an actual guide for the content needed to be covered throughout the course. Instructors also express recognition of richer more insightful comments and responses from

students through the role play process. The instructors feel the student discussion postings serve as instruction to both themselves and others.

Students express views that the experience with the role play through discussion:

- served as an excellent culminating activity.
- exchanges with the role-play person of the instructors are viewed as one of the most engaging and self-reflective activities they have taken part in online.
- Students suggest that the utilization of this approach should only be continued but expanded.

REFERENCES

- Anonymous. (2006, Oct.). "Ten Ways to Use Role Play". Training Journal. 47.
- Avison, David, Melissa Cole, Guy Fitzgerald. (2006, Fall). "Reflections on Teaching Information System Analysis and Design: From Then to Now". Journal of Information Systems Education. Vol 17, Iss. 3. 253-257.
- Bergin, J., Jutta Eckstein, Mary Manns and Eugene Wallingford. (2001). "Patterns for Gaining Different Perspectives". A Part of the Pedagogical Patterns Project Pattern Language Version 0.6. Retrieved May 2, 2007, from http://jerry.cs.uiuc.edu/~plop/plop2001/accepted_submissions/PLoP2001/ewallingford0/PLoP2001_ewallingford0_1.pdf
- Cavanaugh, J. (2005, Spring) "Teaching Online – A Time Comparison". Online Journal of Distance Learning Administration. Retrieved April 25, 2007, from <http://www.westga.edu/~distance/ojdl/spring81/cavanaugh81.htm>

- Danchak, M. (2002, Sept. / Oct.) "Bringing Affective Behavior to e-Learning". The Technology Source. Retrieved April 25, 2007, from http://technologysource.org/article/bringing_affective_behavior_to_elearning/
- Fannon, K. (2005, July). "A Role-Play Simulation: Transformative Learning in Complex Dynamic Social Systems". Retrieved May 4, 2007, from http://www.roleplaysim.org/papers/NeedleStick_web.pdf
- Gambrell, Linda. (2004, Oct). "Shifts in Conversations: Teacher-led, Peer-Led, and Computer-Mediated Discussions". The Reading Teacher. Vol. 58: Iss. 2, 212-216.
- Gaoyin, Q and Liqina Tao. (2005, Nov. / Dec.). "In-service Teachers and Computer Mediated Discussions". Reading Horizons. Vol. 46: Iss. 2, 115-133.
- Hanawalt, A. (2005). "The Empress of Online: Reflections of an Experienced Online Instructor". International Alliance of Women in Music Journal, Spring 2005, Retrieved May 3, 2007, from http://www.iawm.org/articles_html/hanawalt_online_teaching.html
- Gaston, James. (2006, April). "Reaching and teaching Digital Natives". Library Hi Tech News., Vol. 23, Iss. 3. 12-14.
- Headley, S. (2005, Oct./Nov.). "Five Roles I Play in Online Courses". Journal of Online Education. Vol. 2: Iss.1. Retrieved May 15, 2007, from <http://www.innovateonline.info/index.php?view=article&id=78>
- Kain, D. (2006, Sept.). "Choose Colleagues Before Friends for Teaching Teams". The Education Digest, 53-57.
- Kassop, M. (2003). "Ten Ways Online Education Matches or Surpasses, Face - to - Face Learning". The Technology Source, May-June. Retrieved May 1, 2007, from http://technologysource.org/article/ten_ways_online_education_matches_or_surpasses_facetoface_learning/
- Lebaron, J and Diane Miller. (2005, August). "The Potential of Jigsaw Role Playing to Promote the Social Construction of Knowledge in an Online Graduate Education Course". Teachers College Record, 1652-1675.
- Leyland, M and Laurie Phipps. (2006). "Two Heads are Better than One: Co-Facilitating Online Learning". Presentation Paper. Retrieved April 10, 2007, from <http://www.bus.camosun.bc.ca/~phippis/MyInformation/TwoheadsMay12.pdf>
- Linser, R. (2004, March). "Suppose You were Someone Else... The learning Environment of a Web-Based Role-Play Simulation". Retrieved April 4, 2007, from <http://www.simplay.net/papers/suppose.html>
- MacKnight, Carol. (2000). "Teaching Critical Thinking through Online Discussions". Educause Quarterly. Number 4. 38- 41.
- Matters, G. (2005). "Beyond the core - Richer Assessment.: Designing Assessment Tasks for Deep Thinking". National Curriculum Services. Paper presented at the Twelfth Annual Conference of the Curriculum Corporation. Retrieved May 5, 2007, from http://cmslive.curriculum.edu.au/verve/_resources/Matters_edited.pdf
- Mitri, Michel and Carey Cole. (2007, summer). "A Systems Analysis Role Play Case: We Sell Stuff, Inc". Journal of Information Systems Education, Vol. 18, Iss. 2. 163-69.
- Morris, L., Haixia Xu, and Catherine Finnegan. (2005, March). "Roles of Faculty in Teaching Asynchronous Undergraduate Courses". Journal of *Asynchronous Learning*. Vol. 9: Iss. 1.
- Murphy, K., Sue E Mahoney, Chun-Ying Chen, Noemi V Mendoza-Diaz, Xiaobing Yang. A. (2005, Nov). "Constructive Model of Mentoring, Coaching, and Facilitating Online Discussions". Distance Education. Vol 26: Iss. 3, 341-367.

- Murray, B. (2000, April). "Reinventing Class Discussion Online". *Monitor on Psychology*, Vol. 31: No. 4, Retrieved April 30, 2007, from <http://www.apa.org/monitor/apr00/reinventing.html>
- Nelson, D. and Carol Blenkin. (2007). "The Power of Online Role-Play Simulations: Technology in Nursing Education". *International Journal of Nursing Education Scholarship*. Vol. 4: Iss. 1. Retrieved May 22, 2007, from <http://www.bepress.com/ijnes/vol4/iss1/art1>
- Neumann, Melody. (2006). "Team Teaching: A Survey of Fifty Courses in the Faculty of Arts and Science at the University of Toronto with More Than One Instructor" Conference on Knowledge and Its Communities – Society for teaching and Learning in Higher Education. Retrieved Sept. 10, 2007 from <http://www.upscale.utoronto.ca/GeneralInterest/FLC/TeamTeachingReport.pdf>
- Nilsen, Hallgeir and Sandeep Puroo 2005, Fall). "Balancing Objectivist and Constructivist Pedagogies for Teaching Emerging Technologies: Evidence from a Scandinavian Case Study", *Journal of Information Systems Education*, Vol 16, Iss. 3. 281-293
- Palloff, Rena, & Keith Pratt. (2004). *Collaborating Online: Learning Together in Community*. New York: Jossey-Bass.
- Piechura-Couture, K., Mercedes Tichenor, et al., (2006, May). "Co-Teaching: A Model for Education Reform". *Principal Leadership*, 25-32.
- Raleigh, D. (2000). "Keys to Facilitating Successful Online Discussions". *Teaching with Technology Today*, 7 (4). Retrieved April 30, 2007, from <http://www.uwsa.edu/ttt/raleigh.htm>
- Salas, A. (May, 2006). "The Rosy Future of Distance Ed". *The Hispanic Outlook in Higher Education*, 33-38.
- Shibley, I. (2006, Summer). "Interdisciplinary Team Teaching: Negotiating Pedagogical Differences". *College Teaching*. Vol. 54: Iss. 3. 271-275.
- Vliet, Paul and Leah Pietron (2006, Fall). "Information Systems Development Education in the Real World – A Project Methodology and Assessment". *Journal of Information Systems Education*. Vol 17, Iss 3. 285-294.
- Vogler, K. and Emily Long. (2003, Fall). "Team Teaching Two Sections of the Same Undergraduate Course: a Case Study". *College Teaching*. Vol. 51: Iss. 4. 122-127.
- Evangeline Newton, Ruth Oswald, Evangeline Varonis. (2006). "From Virtual Strangers to a Cohesive Online Learning Community: The Evolution of Online Group Development in a Professional Development Course". *Journal of Technology and Teacher Education*. Vol.14: Iss. 2, 287-312.
- Wu, D. , Hiltz, S. (2003, Sept). "Online Discussions and Perceived Learning". Paper presented at Ninth Americas Conference on Information Systems. Retrieved May 5, 2007, from [http://www.alnresearch.org/Data_Files/articles/full_text/wu_Hiltz\(2003\).pdf](http://www.alnresearch.org/Data_Files/articles/full_text/wu_Hiltz(2003).pdf)

Appendix - Rubric and application:**Rubric for assessment of student participation in discussion**

	3	2	1
Level of Participation	Takes highly active role in discussion process	Displays adequate level of participation	Could increase level of participation
Content knowledge application	Displays excellent application of content knowledge in context of discussions	Displays adequate application of content knowledge in context of discussions	Displays inadequate application of content knowledge in context of discussions
Connection insights for content	Numerous excellent connections made between content areas to contemporary issues	Adequate but unclear connections made between content areas to contemporary issues	Limited connections made between content areas to contemporary issues
Responses and comments on topic	Student is consistent in keeping responses and comments on topic	In most cases students is able to keep responses and comments on topic	Student is inconsistent in keeping responses and comments on topic
Willingness to express individual views	Questioning of instructor-persona views and expression of individual views evident throughout discussions	In some cases questioning of instructor-persona views and expression of individual views are displayed	Limited cases questioning of instructor-persona views and expression of individual views are displayed
Views expressed in organized manner	Responses and comments display high levels of reflection and are	Most responses and comments display levels of reflection and are	Limited amount of responses and comments display levels of reflection

	presented in organized manner	presented in organized manner	and are presented in organized manner
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Each of the areas listed in the rubric along with the descriptors are linked to the objectives of the course. An examination of each area displays the relationship with the objectives.

The area, **Levels of participation**, assesses the level of postings made by student participants throughout the entire activity. Efforts are made to compare the levels of postings in sessions one and session two to measure the possible increase in postings as the comfort level of the discussion process increases. For an assessment of participants',

Content knowledge application, posting are observed and reviewed to evaluate the ability of participants to apply content knowledge gained throughout the course to specific discussion postings. The goal is to assess the ability of participant s to apply knowledge to differing situations and scenarios.

The **Connection of content insights** area will assess the students ability to recognize and suggest connections between sections of content and materials covered in the course. Assessment will be based on a review and observation of the participants' comments and responses.

Willingness to express individual views is an assessment of the participants' demonstration of asking for justification or evidence for the postings of other participants' comments and postings. The goal is the review and observation of an increase of the participant posting discussion comments and responses that display their own insights, observations and feelings in the context of postings by others, all in the context of materials and content covered in the course. With communication of individual views comes the importance that must be placed on presentations that are clear, concise, and organized. The rubric area of

Views expressed in an organized manner assesses this particular skill on the part of participants. Reviews of materials and postings require a guide for assessment in the context of what participants are posting and this rubric area provides a format for assessment.