

# IMPLEMENTING COMPUTER CONFERENCING INTO A SEMINAR COURSE TO FACILITATE DISCUSSIONS WITH PRE-SERVICE AND FIRST YEAR TEACHERS

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## **Abstract**

*This paper describes a project supported by funds from the U.S. Department of Education's Preparing Tomorrow's Teachers to Use Technology. The work focused on helping to improve technology integration in a preservice teacher education course and reflects the changing paradigm in education by addressing the increasing demand for technological skills. The author used web-based technology to broaden and expand discussions from students in training to their first year as teachers. Students contributed to weekly discussions on critical issues in education and emerging problems within their student teaching placements. Their cooperating teachers as well as administrators from various public schools in the region visited the website and provided further mentorship during synchronous (virtual chat) and asynchronous discussions. Learning how to collaborate and use peer mentors by means of technology provided students, not only technological skills to use in their own classrooms, but also an innovative way to participate in a dialectical manner. This project utilized new teaching and learning strategies in incorporating technology into classroom teaching. Further, it created and maintained relationships established by the author and the students to support them when they are first year teachers by using the peer coaching model and maintaining interactivity on the Web.*

## **Keywords**

*Instructional technology, student learning, teaching innovations, interactivity, web-based learning, curriculum development, computer mediated communication, teacher education, Blackboard 5 software, peer mentors, coaching, pedagogical change, seminars, technology integration, pre-service teachers, beginning teachers*

## **Introduction**

Technologies will continue to change in ways that are difficult to predict. Nevertheless, institutions of higher learning need to prepare students "in ways that will help them become productive, thoughtful citizens who can succeed in a rapidly changing world" (Halpern, 1994; p.15). Educators lament that there is an urgent need for preparing teachers in information and communication technologies (ICT) and it continues to be one of the fastest growing teacher education programs (Di, Dunn, & Lee, 2000). The impact of ICT theory on teaching and learning has become more familiar in recent years. Past uses of ICT have included making course information, such as lecture notes, available on-line. With the ever-increasing demand for technological skills in today's society, institutions of higher education must provide appropriate project-based learning experiences which allow students to continually access current examples of different and better ways of doing things. Consequently, they will be learning in up-to-date ways that their future work-place will expect (Gibson, O'Reilly, & Hughes, 2002).

Technology competencies are ubiquitous and are vastly reflected in educational policy (Galanouli & Collins, 2000). However, research indicates that students who participate in teacher preparation programs do not make use of ICT during their classroom experiences (Wild, 1995). In fact, a majority of teachers responded that their training in instructional technology was inadequate (SERVE, 1993) and this lack of training reduces the likelihood of the teachers' implementation of technology in their own classrooms. It is simply not enough to equip students with technological skills, but instead, they need to be made aware of the application of technology in their future classrooms.

In order to remediate this problem, the National Council for the Accreditation of Teacher Education (NCATE) outlined the criteria and levels of standards for educational technology in teacher preparation programs in the U.S. In practice, how can these technological skills be provided to teachers when the majority of university faculty lack expertise in using instructional technology and educational colleges are often behind in technology's advanced pace? (Seminoff and Wepner, 1994). A report conducted by the International Society for Technology in Education stated that most college teachers are not trained in the latest technology and consequently, do not use it in their classrooms (Bassinger, 1999). Di et al. (2000) found that an integrated use of instructional technology in educational foundation courses improved students' perception, skills, and learning of the use of technology in teaching. Further, Clift, Mullen, Levin, & Larson (2001; p.47) maintain that coursework in technology "is not nearly as important as embedding technology and telecommunication use throughout the university curriculum---in and out of education courses". Besides the initial reluctance of faculty to "buy into" technology, there exists a much greater need for faculty to develop a place and rationale for using the technology in their courses (Grasha & Yangarber, 2000).

As research emerges on how faculty integrate technology into their instruction, we must support programs aimed at faculty training and participation in their implementation of ICT into their courses which will lead to a positive change in teacher education programs. Student teachers need to be afforded more opportunities to implement technology into their preservice training and deserve faculty members and classroom teachers who teach with technology (Bassinger, 1999). In a study investigating Australian preservice teachers' beliefs about computers, Jones (2000) found that although students were confident in basic skills, one in four students did not use computers in his/her classroom. In fact, the cooperating teachers' use of computers in the classroom was a strong determiner of whether the student teacher was likely to do so as well. Furthermore, a study by McCoy (2000) compared the computer skills of cooperating teachers and their student teachers. Results indicated that the student teachers had significantly higher computer skills than their cooperating teachers.

While student teachers' technology skills may be better than their cooperating teachers', their actual skills were inadequate. Kemp (2000) found that beginning teachers learned most of their computer skills from their respective schools, not during their professional training. Disturbingly, most teachers only emerged from college with word processing and keyboarding skills. This demonstrates the need to provide the appropriate technological skills and support for prospective teachers as they enter their own classrooms and become change agents within the school context.

## **Project Description**

This project was supported by funds from the U.S. Department of Education's *Preparing Tomorrow's Teachers to Use Technology (PT3)*. In its Partnership for Excellence with the community, West Chester University (WCU) was one of several universities in the country to receive federal funds to prepare college faculty and public school teachers and administrators to integrate technology into their teaching. One of the goals of the PT3 Program is "to improve Pennsylvania State System of Higher Education teachers education graduates' use of technology in their teaching practices and to integrate technology into their students' learning environment". (Kinslow, Goss, & Newcombe, 2001). With regard to WCU, the project directors were able to provide stipends and technological support for university-wide faculty who infused technology into their course curriculum. The author is one of the recipients of the awards from the PT3 initiative.

At West Chester University, teacher education is a university-wide responsibility. Approximately one in three undergraduates major in programs leading to teacher certification. Of these teacher candidates, the Department of Special Education graduates and certifies about eighty students per academic year. Our

primary mission is to prepare students as educational professionals in order to meet the needs of diverse student populations. Because WCU is an institute of higher learning, it is imperative to provide preservice teachers with appropriate educational environments and tools that promote the use of technological resources in the classroom. The objectives of the project were to improve the author's own technological skills, and also those of the preservice teachers.

As a faculty member in the School of Education, the author integrated technology into the last course which preservice teachers enrol, entitled "Senior Seminar". The Seminar, taken the same semester in which students are doing their student teaching, is a course that focuses on the exploration of emerging concepts, problems, and trends in education. A special emphasis is placed on individual reflection and class-wide and community collaboration. In keeping with their professional growth, students in the course developed habits of inquiry that provided them with a variety of self-assessment and problem-solving strategies for reflecting upon their own practices. The use of technology in the seminar was intended to supplement the already existing classroom dialogue to extend beyond the walls of the college classroom. Embedded within the course was interpersonal communication via the Internet.

### **Participants**

There were 33 students in the course who participated over 15 weeks in a web-based discussion on critical issues in special education and emerging problems in their placements in a dialectical manner. Students who were enrolled in the *Senior Seminar* course were also registered for six hours of student teaching in the field of Special Education during the course of the semester. Student teachers ranged from 21 years to 45 years of age. There were two non-traditional students who enrolled in the teacher certification program. Thirty of the student teachers were female and three were male. Most of the students were Caucasian (N=30), and three were African American.

### **Blackboard 5**

Web-based communications were established using *Blackboard 5* (2001), a comprehensive software platform, which offers instructors wide variety of tools, functions, and features to support teaching. It delivers a course management system and a customizable institution-wide portal and online communities which enables faculty to enhance classroom instruction and offer on-line courses. The course, *Senior Seminar*, was hosted on the West Chester University website. Through the instructor control panel, the author was able to oversee the course through her own Instructor Control Panel, thus tailoring the design to the students' needs during the course. The following text describes only the features used in the current project, though many more tools were available through the platform.

### **Announcements**

The Announcements area allows the instructor to post important information which is relevant to the students' success in the course and their teaching. During *Senior Seminar*, the announcements varied. At times, there were outstanding students who were recognized on the website who received honors or awards, from the School of Education, West Chester University, or from the public sector when they were offered a permanent teaching position. Other announcements included general business items such as information regarding local job fairs, campus events or sponsored programs, reminders about semester breaks and class changes, and assignments due. This area was helpful because announcements on *Blackboard* are designed to be displayed on the students' main home page, thus being a constant visual reminder each time they logged onto the website. Student teachers often feel overwhelmed and disorganized due to the large amount of work required of them. The Announcements area assisted them in keeping organized by reminding them well in advance of course and student teaching requirements. Another benefit was that the students were informed about and encouraged to continue in campus-wide activities. This was important to the student teachers because they majority of their time off-campus, in their respective placements and they often have feelings of isolation, and feel little support (Kamens, 2000).

### **Course Information**

Course Information is a tool that can be used to display descriptive materials about the course. The instructor posted the syllabus, which is typical for faculty using *Blackboard 5* software. An out-of-class assignment was given during the first class meeting time, which was to obtain and print the syllabus from the Website. Ninety-four percent of the students met this objective. Only two students, who notified the instructor by e-mail prior to the class meeting, did not have the assignment complete because of difficulty

with their e-mail accounts. With the help of the Instructional Support Specialist, this issue was resolved quickly. Included in the syllabus were faculty information, course objectives, the teacher as reflective practitioner model, descriptions of class requirements, assignments and corresponding rubrics, class meetings and topics, teaching methodologies, University-wide policies, and technology team photographs.

Technology learning teams were designed to manage the large number of potential student responses (thirty-three) and also provide them with a cooperative learning experience. Klemm (2001) describes the advantages of team building with computer conferencing. He notes that learning teams bond and allow each student in the group to be held accountable and want to do his/her share, and allows for the acquisition of team spirit. In the *Senior Seminar* course, students were divided into teams of six, grouped randomly according to their birthday months. During the second week of the semester, students were assigned to their "tech groups" and were photographed using a digital camera. The group photographs were then scanned onto the website for the students to view. The students were encouraged to show their photographs at their respective student teaching sites to allow their own students to see their groups, college peers, and classroom.

### **Course Documents**

The Course Documents area may contain supplemental learning materials, aids, or lecture notes. The instructor used this area to post relevant newspaper articles pertaining to education, as well as appropriate websites for teachers. This proved most useful as the student teachers progressed through the semester and assumed more of teaching responsibilities in their placements. Most of the websites were resources on teaching, such as social studies or science units and lessons, bulletin boards, and how to locate necessary materials. It is important to note that the instructor planned to disseminate readings by scanning journal articles and chapters for the class members, but was discouraged to do so due to rigorous copyright laws.

### **Assignments**

The Assignment area of *Blackboard* was utilized to list the date and description of the class work. This area was especially important for the students for several reasons. First, the course only met once per week, so the students didn't have face-to-face interaction with each other or the instructor between class meetings. They were reminded of the assignments by accessing this area. Second, students were allowed to take one "personal day" as an absence. So, if they missed a class, they were able to retrieve weekly assignments from this area, as well as keep up with discussion board topics and conversations (which will be discussed in depth later in the paper).

Perhaps the most important feature of the infusion of technology into *Senior Seminar* was the use of web-based communication. The use of on-line conferencing and electronic collaboration has been well supported in the literature (Galanouli & Collins, 2000; Kamens, 2000; Lindsey-North, 2000; Davis & Resta, 2002). On-line communication was implemented using two features of *Blackboard 5*, email, Discussion Board, and Virtual Chat Room. Email was generally used for "business" or for more personal one-to-one dialogue between student to student, or student to instructor. This feature was useful when students had private issues (e.g. health, stress management, difficulties with supervisors or cooperating teachers, family or relationship problems) which were inappropriate to share with the entire class.

### **Electronic Collaboration**

The use of technology provides opportunities for thoughtful conversations to occur by connecting a community of learners outside the boundaries of classroom walls. By using a website discussion platform, students were able to benefit from the advantages outlined by Lindsey-North (2000; p. 3) including "a) using self-determined wait time before responding, b) the opportunity to continue their thoughts without interruption, c) opportunities to read peer contributions and reflect upon them before responding, and d) unlimited opportunities to dialogue directly with fellow students in an asynchronous format, and e) opportunities to dialogue with others regarding class topics and educational trends". Unique to the current project was the opportunity to participate and contribute to virtual chat (synchronous) discussion with cooperating teachers and administrators from the public schools. It is important to note, based on research by Graham & Thornley (2000) that the instructor only provided scaffolds to support the student teachers' learning conversations among their peer group. This way the

students were learning from one another, not addressing comments and questions to the instructor. While serving as a facilitator, the instructor was afforded the opportunity to gain insight into the students' thoughts and dilemmas as they related to teaching.

### **Discussion Board**

The Discussion Board feature is another way to enhance a course website. This feature allowed students to read and post messages, which enabled them to interact and learn from each other using threaded, asynchronous discussions. Asynchronous discussions are similar to chat, but the users do not simultaneously converse. Instead, conversations occur over a period of time in an organized threaded fashion. The instructor organized several discussion forums prior to the start of the course, and continued to add forums as issues developed in class and student teaching. Participation in the discussion was graded on two levels; both quality and quantity of the response as recommended by Klemm (2001) as a way of not only engaging students, but also making quality work an incentive as they strived to improve their own professionalism.

As discussed earlier, the students were divided into six technology teams. As part of in-class exercises, the teams discussed not only chapters from an assigned novel, but also various readings, and problems and issues which arose during their student teaching. To further the discussion, each team was assigned a different leader each week to post a summary of the group's most relevant ideas and thoughts. Interestingly, each week yielded 100 percent participation from the students and opened up more discussions from students, which were not required as part of the course.

Halfway through the semester, the students were asked to fill out an anonymous survey about the course to help the instructor make the appropriate modifications for improvement. When asked what they most liked about the seminar, the majority of the students mentioned the *Blackboard 5* discussion board. For instance one student wrote... "I would like to keep the discussion format because of the interactions it provides among different groups". Another student wrote... "I like having the technology groups. It is comforting to talk with people who are going through the same thing I am".

As part of their participation grade, students were also required to individually contribute (outside of their assigned technology groups) to the web-based discussions. One of the advantages of computer conferencing is that it allows for more equal participation than face to face interactions where there may be more dominant and vocal individuals who take over the discussion (Cahn, 1999). To enable the students to have guideposts to help them think of questions to ask or ideas to share, the instructor gave the students choices of discussion threads to contribute to. Discussion topics came directly from concerns and issues that were raised during class meeting times and appealed to their own concerns and interests that arose during student teaching. Students were directed to give creative thought and possible solutions to their peers' expressed question or problem. This prevented the students from using the discussion as a forum for complaints and gripes and turned it into a more constructive exercise of professional dialogue. Interestingly, when graded according to quality and quantity of their discussion, all of the students (N=33) received the maximum amount of participation points allotted toward their final grade.

Different threads that emerged over the course of the semester were: 1) concerns regarding behavior management of the class or an individual student, 2) assistance with instructional delivery 3) general concerns regarding student teaching, and 4) personal concerns, e.g.) family, problems with a supervisor or cooperating teacher, etc. It should be noted that one of the tools available on *Blackboard* is to allow anonymous posts. This allowed the students to share concerns, but didn't want to be recognized as the person who brought up the issue. There were several anonymous posts, all of which were regarded as being professionally stated and beneficial to the entire group.

Examples of dialogue from several threads are seen below:

#### **Forum: Managing Behavior**

*Student 1:* My concern deals with the area of discipline. How far is too far? What do you do when a child absolutely refuses to do anything you ask? I have tried positive and negative reinforcements, but nothing works. The child's behavior is causing the other children to test their limits.

*Student 2:* Behavior is a huge issue. Today was the toughest day I have experienced. I was working in a larger group setting and the one child that all of the kids love to copy was acting up. I gave him three warnings and then moved his chair. While at his chair, he made faces, said he didn't have to listen to me and was causing more trouble once I moved him. I ignored him for a while, and then I called him out into the hall. Our school policy is in for recess with a teacher conference, and then calling the parents. I was very firm and said that I was owed an apology. I said that I was learning to teach and I needed him to help (to get him on my side). I said I was upset with his behavior and if it happened again, I would have to call home. That scared him and for the remainder of the period, he was perfect. But I learned from reading the article assigned that I need to become friends and be honest with the students and they will respect me. My advice is to use the school policy and ask your co-op how he/she would handle certain situations.

*Student 3:* I have a few students like this in my high school. What I have done is ask my co-op how she has dealt with these students in the past. I have started a dialogue journal with her and it is really helping both of us. This gives us a chance to speak to each other at any point. We are much more comfortable with each other, and I know a lot more about my kids and her classroom than I did three weeks ago.

*Student 4:* My past experience with behavioral problems has led to the conclusion that confrontation is rarely the answer. I do know that you should try to find out the antecedent to the behavior. For instance, I noticed that this young man became hostile when challenged by a particular student. This seemed to feed into his own feelings of inadequacy. At times, I would try to find something that would put the student in a positive light with the other kids. Try having him deliver an important message to another faculty member. Sometimes switching gears can be helpful. Hope things work out.

### **Virtual Chat**

The mid-semester survey (as mentioned previously) inquired about whether the students would be interested in participating in a virtual chat discussion with their cooperating teachers and fellow administrators. The Virtual Classroom enables the instructor, students, and cooperating faculty to participate in real time discussions and also allows the view archives of previous sessions. According to the survey, eighty-seven percent either agreed or strongly agreed with having a virtual chat during class time. Some of the comments made from students who agreed were... "I feel my cooperating teacher could bring a lot to our group". "It would be very beneficial to us and to our cooperating teachers". "I feel it would be a HUGE help as teachers to have other's opinions outside of our own schools". Four students disagreed with having a virtual chat and their explanations were... "I want to remain separate from my cooperating teacher. I would not want to bother her". "I like chat in person, plus I don't have a computer." "I really don't like talking in chat rooms".

Although there was some disagreement, the majority of the class was eager to participate, so the instructor set up a virtual chat time and place. At first the number of responses from the public sector was somewhat disappointing. Only a few cooperating teachers and one administrator replied that they would join the virtual chat (it can be speculated that many faculty failed to join due to Spring Break at their respective schools). This actually turned out to be positive due to the large number of students who were participating. Due to the synchronous nature of virtual chat, multiple persons participate at the same time, which can pose many problems. Guest accounts were obtained from the Instructional Support Specialist for the cooperating teachers and administrators to log on to the course website.

As suggested by a technology specialist, the author set up class time where students in their technology groups devised and prioritized questions that they could ask the cooperating teachers and administrators during the virtual chat. In this manner, the number of participants asking questions was limited to their prioritized questions from their six technology groups. The class was able to take turns asking questions during the guest speakers' Q & A format, which made the session much more manageable. All of the students were able to view the discussion on their computers as the chat progressed. Excerpts from the dialogue during the virtual chat is shown below:

*Group 2:* What are some strategies for handling unhappy parents?

*Administrator:* It is very important to handle unhappy parents in a professional manner. Try to remember that you are dealing with precious cargo, their children. It is important to keep open communication and to document what you are doing. You should be the first person involved with the parent, but if things become worse, involve administration. Also, try to listen to what their concerns are and work together to rectify the situation.

*Group 3:* What is the best advice that you can give a first year teacher?

*Administrator:* Be prepared to spend long hours at school. Just kidding. Become familiar with the district's philosophy, curriculum, and mission statement. Pull from fellow colleagues. Get as much training and inservice as possible and be enthusiastic. Enjoy it and remember that you are a learner just as much as your students. It is very important to stay organized and keep a running list of things to do so you are aware of things coming up on your calendar.

## Conclusion

The results from this study indicated that the opportunity to collaborate with peers during the student teaching experience and *Senior Seminar* was very beneficial for the prospective teachers involved. It not only provided an environment of support during their stressful months of student teaching, but also served as a way of providing resources regarding behavior management, instruction, and concerns while at their placements. Through sharing of information and solving problems on the course website, the students were able to experience a truly extended learning community. This project extended outside of the traditional classroom and gave the student teachers an experience with technological skills that will help them in their own prospective teaching settings. It serves as a model of how technology can be woven into the college curriculum for teacher preparation programs.

*Senior Seminar* is a course which students have traditionally viewed as being unfavorable, mostly because they feel overwhelmed in taking a course at the same time they are student teaching. However, in looking at the course statistics available through *Blackboard*, it was surprising to find that students accessed the course site five times per week, on average. This may show that students, although overwhelmed, still found time and enjoyed visiting the site by reading and contributing to the emerging discussions. Further, most students, sixty-two percent, spent most of their login time in the Communication Area (Discussion and Virtual Chat) over Content and Group Areas.

After the implementation of the current project, the students enrolled were administered a course evaluation form, which is a university-wide procedure. Overall, the current program was rated by the participating student teachers by means of their evaluation summary for the WCU Quality of Instruction and Course (QUIC) Rating Form. The students rated the assignments, grading procedures, student/teacher interactions, rapport, or climate of the course at 100% approval. For organization and communication during the course, the students responded with a 98-99% approval rating. This standard far exceeds not only the department mean percentages, but also that from the School of Education and University, thus demonstrating that technology, when properly integrated, increases student collaboration and understanding of material.

Other feedback regarding the project came in the form of a survey questionnaire. This spring semester, students in *Senior Seminar* were asked to write a response to the following question, "Would you like to continue *Blackboard* discussions with your peers and the instructor during your first year of teaching in the schools?" An overwhelming majority, 90% answered favorably. Some specific responses were:

"Yes, I would definitely like to keep in touch with the group to continue our discussions. I enjoy them very much and believe them to be helpful and a stress reliever".

"Yes, I would like to continue. I really haven't had any concerns during student teaching, but I know that I will during my first year and it would make me feel really comfortable if I knew people to talk to".

In taking into account the feedback from the students, the instructor is planning to further facilitate the discussions in the fall 2002 semester when the students are beginning their first years in teaching. This builds on the already existing dynamic project and enthusiasm demonstrated by our students. By using

peer coaching an faculty mentoring when the students are beyond the classroom walls in their own respective classrooms, it is believed that the students will feel supported, when traditionally, they would have a tendency to experience feelings of isolation. With the mentoring provided, students will become resources to one another, in their development of curriculum, instruction, behavior management, and evaluation methods. Looking toward the future, these first year teachers may then become mentors and experts in the field to beginning teachers; thus establishing a growing network of collaborative professionals.

Another goal of the project was not only to increase the technological skills of the students, but also those of the participating faculty member. Since the onset of the project, the instructor has infused several technologies into other courses, including Excel in an Assessment course, and is undergoing training on videoconferencing to assist in Instructional Methods courses. The continuation of *Blackboard 5* software has the potential to be utilized in many of the Department's practicum courses, to keep dialogue ongoing. To enhance the discussion from the current project, the instructor is continuing the threaded discussions and virtual chats with the cohort group established as they commence their first years of teaching. This will promote the opportunity for them to continue to share knowledge and expertise as well as developing effective technological skills as they become lifelong learners.

With the ever-increasing demand for technological skills in today's society, and the need to prevent teacher attrition in their first years of teaching, we must provide appropriate learning experiences and supports for our future graduates. This project serves as a model by which future college faculty can integrate technology into their students' learning environment.

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## Acknowledgments

The author would like to thank Drs. John Kinslow, Marlene Goss, and Ellen Newcombe, West Chester University Project Directors of Preparing Tomorrow's Teachers to Use Technology (PT3) for the opportunity to participate in an innovative and thought-provoking project. Additional thanks to Kelly McVeigh, Instructional Support Specialist for her technical support and patience throughout the project. The project could not be conducted without the willingness, thoughtfulness, professionalism, and excitement of all of the students in Senior Seminar, for this I am grateful. I would like to extend thanks to Dr. Judith Finkel and Marge Holman for their support in continuing this project to include the graduating seniors during their first year of teaching. Thank you to the cooperating teachers and administrators from the public schools in giving their advice and expertise during the virtual chat. Susan Peck deserves thanks for her help with research on technology in teaching. Last, Brendan McCarthy who has always provided support, encouragement, and inspiration.

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