Collaborating Across the Miles: Telecollaboration in a Social Studies Methods Course

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Abstract

This study considers the enrichment of social studies methods through the integration of videoconferencing in a telecollaborative format. The purpose in developing this study was threefold: (a) to describe the perspectives of teacher candidates while participating in a telecollaborative social studies methods course experience, (b) to determine in what manner videoconferencing could enhance a methods course, and (c) to determine if telecollaboration could be successfully and seamlessly integrated within the course. Following a review of the literature, the program is described and teacher candidate perceptions are shared. Findings reveal limitations and challenges for social studies methods instructors. Suggestions for future telecollaborative experiences are provided.

It is common for social studies teachers to encourage cooperation, respect, and clear communicatio n in the classroom. It is not so common for true, substantive collaboration to be a part of classrooms every day, mainly due to inexperience, inconvenience, lack of shared planning time, and minimal administrative/technical support. Consider the following scenarios related to teacher education candidates' experiences planning for instruction with and without a collaborative context:

Social Studies Methods Class 1 (without collaboration): After a teacher-led lecture about the 1960s, Methods Instructor 1 asks the teacher candidates to write about what they feel to be the most significant event of the 1960s and assigns them to find a relevant children's literature book to share in a microlesson for their peers. Teacher candidates are required to write a brief lesson plan to share in class. A rubric is provided for the students to follow. The classroom management and instruction is simple for Instructor 1. She only needs to remind the students to complete the assignment by a certain date and move on to the next lecture topic.

Social Studies Methods Class 2 (with collaboration): A similar assignment is given by another methods instructor. Methods Instructor 2 divides her class into teams of four. Each team has the same task—to determine the most significant event in the 1960s. Teams may use primary sources (i.e., letters written by Jackie Robinson to his wife, newspaper articles about the day Martin Luther King, Jr., died). They may consult their e-pals from Alabama and New York when determining the significance of individual events. After synthesizing and contextualizing the documents and information as a group, the team members are to decide on the most significant event of the 1960s. One written paragraph and a team presentation to the class are required. Teac her candidates in this class must not only deliberate and finally agree on the event, they must also cooperate and make decisions on how to present their information in a mini-lesson for their field placement. Groups must share knowledge, respect differenc es, listen to multiple perspectives, and share resources. Classroom management for this scenario requires training and experience. Methods Instructor 2 is expecting collaboration—a difficult skill.

The first scenario depicts a "traditional" classroom; it is predictable and simple. The students in the first methods classroom did not have to rely on each other, convince one another, or argue a point. Although the term "traditional" is subject to interpretation, it is commonly used to denote a style that favors passive rather than active learning activities and is generally highly teacher centered (Dewey, 1974), not allowing for much collaboration of any kind. Some social studies researchers have raised concerns that far too many social studies methods courses are taught in traditional settings, thus resulting in teacher candidates who are insufficiently prepared for powerful teaching that is challenging, relevant, integrative, and active (Thornton, 2001).

The second scenario depicts a more dynamic classroom. The experience of methods students in the second classroom moves them closer to what the National Council for the Social Studies (NCSS, 1994) described as powerful teaching, in that it is challenging, relevant, integrative, and active. The methods instructor in the second scenario enhanced collaborative opportunities through the use of telecollaboration. This added dimension extended students experience in powerful ways. Unfortunately, most teacher educators lack the requisite skills or experience to utilize and model telecollaborative practice; they may lack access to equipment or may have a fear or anxiety toward technology (Aust, Newberry, O'Brien, & Thomas, 2005). This is particularly problematic when the world is rapidly becoming a technologically linked village (NCSS, 1994) where collaboration (and telecollaboration) can and does occur between diverse groups, anytime, at a low cost, despite geographic separation. This is also problematic given the current globalization trend in social studies and the associated opportunities for student-based collaboration (Parker, 2005).

This research paper chronicles the first year of a telecollaborative experience between two social studies methods courses. A brief description of the program, rationale, and student and teacher perspectives are included. Advice is also offered to those who wish to create a similar experience. Guiding questions for this research project include (a) In what ways can technology enhance elementary education social studies methods courses? and (b) In what ways is it possible for telecollaborative efforts to be successfully and seamlessly integrated within a social studies methods course, while offering sufficient social contact?

As the literature review will show, methods courses receive muc h criticism and have several limitations related to teacher-centered methods and, especially, the lack of technology use and proper integration modeled for teacher candidates; however, methods are still universally regarded as central to the educational enterprise (Thornton, 2001). This study recognizes the potential and importance of methods courses for teacher preparation and considers alternative approaches to educating teacher candidates.

Specifically, this study considers telecollaborative videoconferencing in social studies methods courses. Although there may be instruction in teacher education on how to use basic computer products, little or no time is spent in methods courses on how to apply technology to a learning environment (Diem, 2002). Therefore, the purpose in developing this study was threefold: (a) to determine if the use of videoconferencing for telecollaboration extends learning beyond what can normally be accomplished in a social studies methods course, (b) to determine if videoconferencing for telecollaboration can be successfully integrated within a social studies methods course, and (c) to expand on previous work utilizing videoconference capabilities (telecollaboration) in social studies methods (Karran, Berson, & Mason, 2001).

Literature Review

This review examines literature related to the topics of social studies methods instruction, collaboration, telecollaboration, and the proper infusion of technology into social studies methods courses. The review begins with a look at current practices in social studies methods, including the limitations and possibilities of social studies methods courses. Then, literature related to the five principles of proper integration of technology into social studies classes, which underscored this project, is reviewed.

Technology-Related Current Practices in Social Studies Methods Courses

Although many colleges of education require preliminary courses in basic computer literacy, too few education programs have faculty members who are modeling instructional methods that integrate computer technology. Even in programs where technology is encouraged, courses in teacher education are not focused on the purposeful integration of technology in the content area of social studies (Beisser, 1999). In spite of this, professional social studies educators are engaging in dynamic technology-oriented projects. Analysis of current practices reveal methods course assignments including electronic communication, electronic presentations, Web site development, Web site analysis, and multimedia digital projects, but few include videoconference activities.

One example of these current practices includes Lee's (2000) work with Web-based digital historical resources that are now part of preservice social studies students' experiences in learning history and learning how to teach. Other examples include the University of Houston's hypergroups, which are Web-based discussion tools established for any professor wanting to facilitate online discussion outside of class. White (2000) explained how the university has meaningful technology as a primary goal and how the hypergroup discussions were related to social studies education. After participating in these discussions, students indicated they felt a part of a community of learners in their social studies methods course.

Other innovative projects include Knight, Pedersen, and Peters' (2004) use of compressed video to observe field experiences in a methods course. The students ranked this experience not as valuable as anticipated because of technology limitations, but would recommend this type of observation early in the teacher preparation program. Riley and Stern (2001) reported a collaborative Web-supported experience between James Madison University and Auburn University at Montgomery, in which two social studies methods classes completed shared projects, and the instructors concluded that possibilities for this form of instruction in social studies methods was infinite.

Another recent development in tele-education services involves the development of Internet2. The concept of Internet2 developed out of necessity for availability of services and applications on the Internet in higher education. Internet2 has a broadband and fiber-optic infrastructure that can provide quality tele-education services superior to what had traditionally been available. Prior to Internet2, tele-education was found to be cumbersome, time-consuming, and expensive (Karran, Berson, & Mason, 2001). The first preservice teacher education course using Internet2 was conducted between the University of South Florida and the University of Virginia. Instructors jointly taught a social studies methods course, synchronously via videoconferencing systems and electronic whiteboards for 45 minutes each week over the span of 14 weeks. The students also collaborated on a Web-based multimedia teaching case that connected the two classrooms (Mason & Berson, 2000).

Although many instructors of social studies methods courses are using technology to create active and collaborative c lassrooms for their preservice teacher education candidates, this is not happening on a wide scale (Bolick, Berson, Coutts, & Heinecke, 2003). Limitations in technology use in social studies methods classes still exist.

Despite the potential for technology integration in social studies methods courses, the limitations are significant (Diem, 2002; Diem, Fields, & Hernandez, 2003; Owens, 1997). Diem (2002), has suggested seven specific technology integration limitations for social studies methods courses: (a) technology use in the public school may be further along than the university, (b) technology integration is often limited to Internet related tools, (c) little to no time is spent on how to actually apply technology to a learning environment, (d) instruc tional use of technology has been included through student demand rather than through institutional pressures, (e) teacher candidates may know more and have a higher comfort level than the teacher educators in the area of technology, (f) many social studies teachers do not go beyond a cursory use of technology in theirs classrooms, and (g) limited opportunities are provided to learn how to construct and apply technology within lesson frameworks. Considering these limitations, the challenges for social studies teacher education are significant, but potential and possibility does exist.

The limitations reviewed in the literature do not have to discourage technology usage in these courses. Thornton (2001) has found that priority should be given to securing depth and competence in method and that prospective teachers should be familiarized with technology in conjunction with specific subject matter, rather than being required to take a disconnected course such as "technology for teachers." Computer technology can facilitate content learning from carefully designed course goals and objectives that are developed using appropriate technology-based activities and practices (Todd, 1993).

Additionally, preservice teacher candidates can learn to teach the curriculum byusing technologies they have observed being modeled in their college classroom. Without influential role models in the methods courses, preservice teacher candidates are deprived of opportunities to extend their technology -related learning and instruction. One possibility for modeling effective instruction includes the use of technology to support collaboration.

Collaboration Defined

There are four general characteristics of collaborative classrooms: (a) shared knowledge among teachers and students, (b) shared authority among teachers and students, (c) teachers as mediators, and (d) heterogeneous groupings of students (Tinzmann et al., 1990). Tinzmann et al. found that effective communication and collaboration are

essential to becoming a successful learner. It is primarily through dialogue and examining different perspectives that students become knowledgeable, strategic, self-determined, and empathetic. Moreover, involving students in real-world tasks and linking new information to prior knowledge requires effective communication and collaboration among teachers, students, and others.

For the purposes of this research, the researchers define collaboration as effective communication, shared decision-making, and dialogue among all participants, teachers, and students alike (Good, O'Connor, & Luce, 2004). There is risk in any collaborative effort. In the beginning, the collaboration experience can be more about the teachers learning to collaborate than about the students. True and substantive collaboration is difficult. Egos come into play; territorial disputes may occur. Collaborating widens the area of responsibility and opens the experience to the outside world. Collaboration can be scary, similar to taking a risk, and many collaborators have second thoughts, thinking that it would be easier to stay in the same place and experience the world in the same way in which they are accustomed.

There are several projects within social studies methods courses requiring true and substantive collaboration to be modeled for teacher candidates (Dawson & Mason, 2000; Killian & Willhite, 2003; King & Milson, 2002; Kurtts, Hibbard, & Levin, 2005; Riley & Stern, 2001; White, 2000). Specifically, one example of a collaborative effort in a social studies methods course utilized the Milken Educators Virtual Workspace (MEVW), allowing participants to use the Internet to create and participate in a collaborative online community (Wellman, Creedman, & Flores, 2000). The project uses both an onsite institute and an online collaborative environment to help teachers develop technology-integrated instructional materials for historical thinking and social understanding. The goal of this project was to explore the use of online collaborative workspaces as a tool for both collaborative work among teachers separated by geographic distance and as a tool for follow-up professional development. Kurtts et al. (2005) reported the successes of a collaborative online problem solving project with preservice general education and special education teacher candidates using cases.

Still others have used videoconferencing to support collaboration within methods courses. This trend has become widely known as telecollaboration. A few examples are discussed next.

Telecollaboration in Teacher Education

According to Harris (2001), telecollaboration is a type of curriculum-based e-learning, essentially online collaboration, in which students are involved in learning activities via electronic communication. Telelearning involves interaction and facilitates the development of dynamic projects with authentic focus. Viable tele-education allows teachers to combine acknowledged learning theory with systematic teaching methods in order to offer imaginative and creative teaching (Karran et al., 2001). Additionally, telecollaborative learning uses telecommunications tools to bring together communities of learners for accomplishing a shared intellectual endeavor without the limits of geographic locales. Teachers and learners connect to the Internet, create their virtual space using meeting software, and communicate just as they would face to face (Lever-Duffy, McDonald, & Mizell, 2003).

Harris (1999) has identified when curriculum-based telecollaboration is most appropriate. It is best when students can be well-served by being exposed to differing opinions, perspectives, beliefs, experiences, and thinking processes. It is best when students have opportunities to compare, contrast, and combine similar information

collected from various locations. It is also best when the students are communicating with a real audience and when the students are expanding their global awareness. As researchers have experimented with such instructional designs, suggestions for proper implementation have evolved.

Proper Infusion of Technology

Through multiple research efforts, five principles for proper infusion of technology into a social studies curriculum have been developed (Mason et al., 2000). They include (a) In what way does the effort extend learning beyond what would normally be accomplished? (b) In what way is technology introduced in context? (c) In what ways are integrative opportunities included and demonstrated? (d) In what ways is citizenship fostered and developed? (e) In what ways does this experience contribute to future research?

These principles were the common thread underscoring this project. While the instructors were trying to answer whether videoconference technology would enhance or enrich their social studies methods course, these five principles served as a reflective guide. Although the instructors of both methods courses expected the students' perceptions of this project to be positive, they also expected some challenges as with the beginning of any new project. In essence, would telecollaboration enrich the courses?

Method

Setting

The study was completed in a telecollaborative learning community created between two universities from different geographical regions of the United States. Institution A is located in the mid-Atlantic region, and Institution B is located on the Gulf. Both universities have rich yet modest histories as teacher training schools and have developed into major research universities. Institution A enrolls nearly 25,000 students, and Institution B enrolls approximately 15,000 students.

Participants

The participants in this study included students enrolled in undergraduate social studies methods courses at these two universities and the instructors of these two courses. The instructors are assistant and associate professors of elementary social studies in their respective College of Education. The students are a mix of traditional and nontraditional students enrolled in the elementary education programs. The course is taken at the end of the undergraduate experience on both campuses. The students were participants in the telecollaborative project in addition to the normal methods course requirements. They were not graded on their responses to the data sources, only on participation in the telecollaborative activities. Institutional Review Board protocol was followed and approval was granted.

Procedures

This study was guided by the following questions: (a) In what ways can technology enhance elementary education social studies methods courses? and (b) In what ways is it possible for telecollaborative efforts to be successfully and seamlessly integrated within a social studies methods course, while offering sufficient social contact? In order to answer the guiding questions, the following procedures occurred.

Instructors of social studies methods courses at two universities began a telecollaborative partnership between two traditional courses. The program included collaboration and the infusion of technology with a social studies focus. The telecollaborative partnership originated after one of the professors submitted an online letter to the NCSS College and University Faculty Assembly (CUFA) listserv seeking an interested social studies methods professor who shared a common social studies and technology philosophy with a commitment to collaboration.

After the two universities matched teaching times and schedules, many conference calls and emails transpired in order to plan, collaborate, and coordinate similar activities for their syllabi, including electronic pal (e-pal) topics and lesson protocols. Appropriate global classroom labs and equipment were reserved for the specific dates chosen as telecollaboration days. Additionally, considerations were made regarding class size, accessibility of technical support staff, compatibility and availability of telecollaborative equipment, and possible time zone differences.

It was decided there would be four telecollaborative experiences throughout the course of the semester. A topic for each of these experiences was chosen, including (a) discussing personal history artifacts, (b) thinking like a historian, (c) sharing family history projects, and, (d) comparing the two university geographical regions by the means of local and state history (Good et al., 2004).

During the weeks without telecollaborative classes, students communicated via electronic mail as e-pals. In order to model an expanding community design, student e-pal topics included, but were not limited to, introduction and autobiography, family history, local history, state history, discussion of an article, and a unit swap.

The first collaboration required the students to describe a personal history artifact and think like a historian, while making connections with their classmates. Prior to the collaboration, the e-pal protocol required the students to introduce themselves, describe their artifact, and place it in historical context. During the conference, with the help of the document camera, the students shared their artifacts and tried to summarize, contextualize, and infer information regarding each artifact. The instructional purpose of this collaboration was to help students see the relevance of their own life to the social studies.

The next collaborations were related to family history, local history, and state history. The instructional purpose of the family history topic was for the students to experience storytelling, a skill of a social studies professional. The local history collaboration was a more traditional use of the videoconference, involving guest speakers. The state history collaboration allowed for the students to work in groups and share finished projects related to the five themes of geography, similar to what they would share with their own classes in the future. The social atmosphere allowed the students to be exposed to other perspectives of time and history. These activities valued the students' thoughts and ideas, and their experiences were the impetus for future collaborations.

Data Sources

Data sources included reflective tasks, surveys, and field notes, described as follows:

Reflective tasks. The reflective summaries included two open-ended questions the students were asked to complete immediately following each telecollaborative experience. Students received an email from the instructor within 1 hour following the

telecollaborative hook-up. The email message included a question reflecting on the experience, and the second question elicited changes. Students replied electronically within 24-36 hours allowing additional reflection time before responses were due.

End-of-course survey. A six-item open-ended survey was given after the semester-long experience regarding students' perceptions of the collaborative efforts. Students were asked about what they learned and how they thought technology (in particular, telecollaboration) could enrich social studies in higher education and during social studies instruction at the elementary school level. Students were also asked about successes and downfalls associated with the telecollaborative hook-ups, including the pedagogy and content.

Tele-Education Survey. A second survey, the Tele-Education Survey, was distributed to the students after each hook-up throughout the semester. The questions on this survey related to the immediate telecollaborative experience in which the students had just participated. The Tele-Education Survey includes a Likert scale related to the logistics of the videoconferencing experience and examined satisfaction with the performance of the hardware and the quality of the videoconference equipment, as well as the overall videoconference presentation. This survey was developed by the technology support staff at Institution A and is utilized for any and all videoconference experience in the College of Education.

Field notes. The researchers took field notes that focused on the logistics, as well as the challenges and benefits, of implementing the telecollaborative hook-ups and the collaborative activities in the social studies methods course. Additionally, an e-trail of electronic mail correspondence among the researchers was tracked.

Each data source was intended to provide a rich source of information on the participants' experiences with telecollaboration and the telecollaborative experience. The questions from the reflective tasks and surveys were derived from participation in a similar collaborative experience between the University of Virginia and the University of South Florida (Mason & Berson, 2000).

Data Analysis

Content from the end-of-course surveys, reflective tasks, and field notes were analyzed using qualitative approaches. Early categories emerged related to the research questions. While these categories are a helpful organizational tool in conducting the analysis, it is important to allow unexpected patterns in the data to be represented by developing new categories as they appear in each data source. Further levels of analysis accomplished this. The constant-comparative method was used to analyze the survey responses in order to locate themes in the overall data patterns (Glaser & Straus, 1967; Merriam, 1998). Descriptive statistics, means only, were used to analyze the tele-education surveys.

Through the use of these data sources, a rich description of how the preservice educators and the course instructors gained insight into this social studies methods course design was revealed. The data collected from this study are largely descriptive and exploratory in nature. Data were reviewed in attempts to identify ways the videoconferencing technology may enhance social studies methods courses while being seamlessly integrated. The findings allow the instructors to advise others wishing to attempt this instructional design. This study did not include a precollaboration survey instrument; however, the themes and descriptions revealed shaped the study and guided the development of a precollaboration survey used the following semester.

Findings

The findings from this study examine the experiences of preservice student candidates from Institution A while participating in a telecollaborative experience with Institution B. The data sources were reviewed and changed for data collection in subsequent semesters. Data sources were examined, and themes emerged related to content learning, pedagogical learning, and powerful learning. These themes are discussed in the following section, as well as the implementation of telecollaboration, specifically, the successes and challenges encountered during the telecollaborative partnership.

Enriching the Social Studies Methods

Analysis of the data sources revealed that the social studies course, as well as the preservice teachers' learning, was enhanced in several ways. Preservice teachers commented that they learned more about content and pedagogy. Additio nally, their comments indicated that they experienced the kind of powerful social studies learning the NCSS encourages.

Content learning in telecollaborative contexts. When asked on the final survey what they learned about social studies during the techno logy-infused methods section, 17 of the 18 preservice teacher candidates mentioned learning about another location, specifically the telecollaborative's partner state. Similarly, on the reflective tasks, learning about the telecollaborative partner's state was the most popular response. Specifically, they reported learning about the geography (i.e., types of land, soil compositions, surrounding water, regions), state history facts, the culture (i.e., traditions, social customs, types of restaurants), and state information including elderhostels, people, the environment, and occupations. As one preservice teacher commented, "I honestly knew nothing about this state before we had the telecollaboration hook-ups…. Now that I have learned that there is so much history there, my fiancé and I are talking about planning a trip there." Another preservice teacher candidate stated, "I think the relationship was a success because it allowed us to see the different aspects of life in another state. It also lets us venture out from home, into another part of our country without leaving."

Ten out of 18, or 56%, of the preservice teacher candidates mentioned learning about their own state's history. Participants reported learning facts, geographic regions, local histories, culture, social customs, and occupations in their home state and cited it as new learned content. Likewise, the reflective task responses yielded similar results. Learning about their home state was the second most frequently mentioned social studies content item.

Pedagogical learning in telecollaborative contexts. All of the preservice teacher candidates thought that technology could enhance social studies instruction in elementary schools. They mentioned using other types of technology in addition to telecollaborative hook-ups, such as laptops, overhead projectors, digital cameras, and PowerPoint. One preservice teacher stated that participating in a telecollaborative experience with someone overseas could be beneficial to elementary students because telecollaboration, "gives [students] the chance to ask questions and form a one-on-one relationship" with people from other environments and cultures.

Another preservice teacher candidate described using technology in order to tour places such as the White House in Washington, DC, and the Biltmore Estate in Asheville, North Carolina, with children. Two issues that reoccurred about technology in elementary classrooms were teacher training and the status of current social studies programs.

"There must already be an effective social studies program existing in the classroom for technology to work as it is intended....Also, the teachers must be trained and knowledgeable in technology," summarized one teacher candidate.

As the instructors reflected on the likelihood of offering this section of social studies methods again, the preservice teacher candidates were asked about their views on the matter. Sixteen of the 18 participants in the telecollaboration said they would recommend the technology-infused section of social studies methods to a friend. The remaining two said they were not sure. Those who would recommend the course said that telecollaborative activities were "innovative," "interesting," and "fun." Half of teacher candidates stated that they benefited from seeing technology use modeled in their methods courses, as well as from learning about "ways to use technology with children in the future." One preservice teacher candidate remarked, "I think it was a success because it helped us see what we could possibly do with our own students." This technology use was modeled for preservice teacher candidates in the hopes of motivating students to utilize appropriate technologies in their own classrooms of the future.

Powerful learning in telecollaborative contexts. Powerful teaching creates powerful learning. Mason et al. (2000) described powerful teaching as going beyond what would normally be accomplished, using technology in context, having integrative opportunities demonstrated, and fostering citizenship. The technology-infused course described in this study provided preservice teacher candidates an opportunity to experience powerful learning.

When the preservice teacher candidates reflected on whether technology could enhance social studies instruction in higher education, the response was overwhelmingly positive with each participant agreeing that it could. Again and again technology was mentioned, in particular telecollaboration, as needing to have a clear purpose in the instruction. Preservice teacher candidates said that activities used for hook-ups need to be well-planned and researched. "I don't think [our hook-ups] would have worked if you just sat us in front of the screen and told us to talk about state history." Another teacher candidate suggested that working on one group task together, instead of trading information, would be another way to augment telecollaboration experiences. Repeatedly, preservice teacher candidates stated that using technology in higher education classrooms was more engaging than lectures and long exams. One preservice teacher candidate stated, "With technology infused into the course, the learning happens naturally."

The preservice teacher candidates also commented that telecollaboration hook-ups went beyond lectures, tests, and textbooks. One participant remarked, "I would definitely recommend it to anyone. This course was a breath of fresh air. It goes beyond the ordinary lecture and chapter tests." Furthermore, another teacher candidate commented that the telecollaboration experience was "better than sitting in class hearing the professor talk about how technology can be integrated into the classroom." Finally, those preservice teacher candidates who would recommend this course to a friend mentioned that after taking the course they were more comfortable with technology and enjoyed learning about a current use of technology.

On the other hand, the two preservice teacher candidates who were unsure about recommending this technology-infused course to a friend noted that they enjoyed the biweekly face-to-face activities with their classmates, and they did not want to give up this face-to-face time for telecollaboration hook-up days. "I think it was a cool idea; however, I also think we could have learned all that stuff in a shorter amount of time," stated one

preservice teacher. Another participant noted, "Even though I enjoyed the telecollaborations, I enjoyed the class time a whole lot more."

Implementing Telecollaboration

The instructors were constantly reflecting on their own beliefs regarding what the social studies professional requires. This constant reflection drives this study of technology integration. On a quest to model proper use of technology to the students and to help prepare teachers to integrate technology into content areas to advance student learning (Cooper & Bull, 1997) while aiming for seamless integration, the instructors felt the technology was, for the most part, "sitting in the background of the classroom, behind the content" (Mason et al., 2000). The instructors strived not to use technology for the sake of meeting a technology standard requirement, but rather to implement it hand-in-hand with other instructional strategies.

Implementation successes in telecollaborative contexts. Preservice teacher candidates cited the telecollaborative experience as a success because it enabled them to become more comfortable with technology, to write to e-pals, to learn new ideas for their future classrooms, to form long-distance relationships, and to experience relevant and organized hook-ups. Likewise, the instructors' perspectives throughout this study revealed agreement with Heafner (2004), who stated that "effective technology integration offers opportunities to enhance social studies instruction and to increase student motivation, while preparing students with the knowledge, skills, and values necessary to become good citizens, which are the fundamental goals of the social studies" (p. 49). The nature of the social studies classroom lends itself well to any attempts to provide a stage for deliberation, discussion, and cooperation.

On the last collaboration date, two local history experts participated in the discussion about community. Preservice teacher candidates frequently asked questions of the guest speaker panel, and they later commented about how much they had learned. A lot of information was "unearthed" at this session. The participants' reflective summaries recommended that the panel discussion transpire in an earlier hook-up when family and local history are covered since both men spoke about their personal histories and their local cities. Another success documented is the fact that the preservice teacher candidates requested more of an "active" communication role for the future collaboration.

The telecollaborative setting proved to be similar to that of a regular classroom. Successes continued to be noted in the instructors' field notes, as the technology seemed to "disappear" while the participants became engaged in the instruction and learning. Because the instructors are comfortable in a regular classroom setting, such use of this particular technology can occur with ease. For an outside observer of this class, it would probably seem effortless and close to traditional learning design. The professors and preservice teacher candidates could appear comfortable with the technology because of the cooperating support staff at each university. The instructors did not need to "produce the show," as the technology support services at both universities are so comprehensive. Similar to the participants, successful moments of implementation occurred when the professors reached the point of not feeling like TV hosts or news correspondents, but rather, simply teachers.

Implementation challenges in telecollaborative contexts. Several preservice teacher candidates who cited successes also pointed out some incidents when the telecollaboration hook-ups were not successful. These included when e-pals did not return emails, when the sound during hook-ups was inaudible, when the hook-ups lasted longer than 75 minutes, and when the time interval between hook-ups was more than 3

weeks. A teacher candidate made the following comment in regard to the few technical problems: "Sometimes we couldn't hear our classmates or vice versa, but these technology problems were nothing compared to the success of the telecollaboration as a whole."

Students were also asked to complete a Tele-Education Survey following each telecollaborative meeting. The survey contained four Likert scale type questions regarding the technology. Students were asked about the videoconference audio, the picture quality, the overall quality, and the overall presentation. Answer choices were as follows:

1. Not effective: I could not follow the presentation or class instruction and/or participate in class.
2. Acceptable: I was able to follow the presentation or instruction and participate with some difficulty.
3. Good: I could follow the presentation or instruction and participate in the class. The majority of the responses included "3" for each question.

The audio and video/picture had lower means versus the overall presentation and overall videoconference activities means. The researchers realized that there was not enough variability in the results of this Likert scale questionnaire to run any statistical analysis tests. They also recognized that this particular survey instrument, given to all classes using videoconferencing equipment in the College of Education, was generic and was limited only to having a technical focus.

During the first and second hook-up sessions, one professor provided an agenda in hopes of avoiding "dead air time." Regrettably, the contrary occurred. Instead of avoiding uneasiness and silence, having an agenda promoted it because the preservice teacher candidates were too worried about following the order of events on the agenda to concentrate on becoming comfortable with this new form of collaboration. Having an agenda actually served to stifle the discussion. After reading the reflective tasks, the agendas were abandoned.

Preservice teacher candidates also requested a bigger role in the telecollaboration. By the third hook-up, several participants mentioned wanting to facilitate a hook-up. While the researchers in this study never had a preservice teacher candidate completely facilitate and "drive" the technology, it is a possibility that will be welcomed in the future.

Another reoccurring issue was the lack of participation by their e-pals. Comments about this helped the professors realize that although communicating with e-pals was a separate ongoing activity that occurred during weeks that hook-ups did not occur, e-pal situations did impact preservice teacher candidates' perceptions and attitudes on the telecollaboration hook-up weeks. A stronger e-pal protocol would have made for a more effective experience for the preservice teacher candidates. The researchers need to consider the e-pal and telecollaboration connection further.

Equally challenging was finding the time for communication. Throughout the semester, the professors also gained insight on the importance of collaborating among themselves. Collaborative planning is crucial to the design and it directly affects the course delivery. Outlining each telecollaboration lesson, even before the semester began, was crucial. Preservice teacher candidates knew what to expect and the professors felt more prepared.

Conclusions and Implications

Analysis of the surveys, reflections, and field notes revealed that this technology integration has both limitations and benefits. Each is discussed next and is followed by suggestions for implementation for others who may wish to attempt such an instructional design.

Conclusions

Limitations include the potential difficulty of using technology, the comfort level of the participants, and a possible lack of social interaction. Participation is time-consuming and requires efficient technology support. Telecollaboration is not for those with limited technology skills or technology support, because technology glitches can seriously affect the quality of the experience. Additionally, all participants must be comfortable being on a television screen in order to effectively and adequately participate. Finally, unless preservice teacher candidates participate in social activities outside of scheduled class time, there may be a lack of sufficient social interaction.

Data did reveal benefits of a telecollaborative class. Some benefits included the preservice teacher candidates' exposure to different perspectives from locations outside of their community while in the familiar comfort of their room, a classroom just like any other. The preservice teacher candidates were able to observe actively their instructors modeling infusion of technology. They collaborated with other future social studies professionals, and certain telecollaborative activities allowed them to have firsthand accounts of life in another region of the country. Another benefit is that the technology allowed for sharing of resources, guest speakers, and the modeling of collaboration between course instructors and preservice teacher candidates in real time.

Implications for Implementation

Table 1 offers suggestions for those interested in attempting a technology-infused course. These suggestions were developed from the researchers' experiences with implementing the technology and through a thorough analysis of the data sources.

The goal of this telecollaborative endeavor was to enrich the educational experience using collaboration technology, with the emphasis being on collaboration within the social studies content area. The goal of the research was to discover ways technology could enhance a social studies methods course. Specifically, the researchers wondered if telecollaboration could be successfully and seamlessly integrated into their courses. Professors modeled the practical use of technology during these courses to help preservice teachers see firsthand the possibilities of seamless technology integration. Instructors planned in advance to avoid the "talking head syndrome" commonly experienced in teleconferencing, where it seems the participants are merely watching a video or television program. In the beginning of the telecollaborative experience, the instructors and preservice teacher candidates required time and experience to go beyond merely focusing on the technology to focusing on learning. By the end of the experience, the preservice teacher candidates were aware of and had learned to consider the seemingly endless possibilities that technology-infused classrooms offer for pedagogy, content instruction, and collaboration.

Table 1
Tele-Advice

Advice	Description
Start small	In the beginning, do not try to have telecollaborative hook-ups each week.
Be a reflective practitioner	Following each hook-up, after the students leave, spend time reviewing the pros and cons of what occurred in the classroom via conference call, email, chat rooms, or threaded discussions.
Collaborate	Experience other collaborative efforts. Be sure that this type of collaboration is for you. Participate in substantive collaborative efforts. Collaborate on a small project with a colleague(s) or students in your own geographic locale.
Technology support	Establish a relationship with tech support staff in advance of the telecollaboration. Be familiar with the basic terms for the hardware and software needed. Be sure the technology at both locales can "shake hands."
Interchange roles	Prepare to interchange roles of teacher and student. Encourage student-led activities and let students "drive" the equipment.
Be patient	The first meetings will be awkward.
Review "netiquette"	Discuss rules for behavior and mannerisms while video-conferencing.
Be well-planned	Plan lessons carefully, but throw away agendas.
Interaction	Provide students with opportunities to interact outside of the hook-up. Consider using e-pals with helpful guiding topics.
"Practice what you preach"	Be a collaborator and model collaboration.

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