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Enhancing Social Studies Instruction: Methods Courses with Telementoring and Telecollaboration

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Abstract

This paper will explore emerging benefits of telecollaboration and telementoring through an examination of the literature, a reflection on current practices at the University of Virginia and the University of South Florida, and a forecast proposal for potential seamless integration of technology with teacher preparation and training in schools of the future. Future considerations for teachers, students, and our learning communities are discussed, and a brief presentation of current research in the area of utilizing technology in social studies teacher education is also provided. The purpose of this paper is to show the potential benefits of enhancing instruction through telecollaboration and telementoring. The paper will examine current best practices with regard to preparing elementary social studies teachers as well as propose that through telementoring and telecollaboration, there can be seamless integration with and about good instruction and a potential for improvement in teacher education.

Introduction

Imagine teaching future teachers while simultaneously exploring other cultures, world perspectives, and artifacts through the seamless integration of technology into social studies instruction. Imagine sharing superior teaching without the limitations of geographic barriers. Imagine, for a moment, teaching without boundaries while meeting standards. Teacher education students and faculty at the University of Virginia and the University of South Florida worked in partnership to create such an experience through the telecollaboration process. The purpose of this paper is to explore potential benefits of telecollaboration and telementoring through an examination of the related literature and through a closer look at the UVA/USF shared class experience example.

Technology in Context

Gibson and Nocente (1999) offer several suggestions for teaching the social studies curriculum with technology, and Mason and Berson (2000) outline five principles as guidelines for the appropriate infusion of technology into social studies teacher preparation programs. Gibson and Nocente's suggestions include enlisting the help of a volunteer with appropriate technological skills, providing teachers with continuous and long-term training in technology, and ensuring that the computer technology is not a stand-

alone instructional method but, rather one that works in conjunction with other teaching methods. The five principles that Mason and Berson (2000) outline include the following: (a) Extend the learning beyond what could be done without technology; (b) introduce technology in context; (c) include opportunities for students to study relationships among science, technology, and society; (d) foster the development of the skills, knowledge, and participation as good citizens, and (e) contribute to the research and evaluation of social studies and technology. Together, these guidelines and principles encourage instructors of all ages and experience levels to reflect and question whenever technology is incorporated. These suggestions and guidelines will provide a basis upon which the standards of our school of the future will be built.

Teachers must learn how to operate the hardware as well as how to integrate connectivity into their teaching practices. Furthermore, educators should infuse networked learning into school culture (Berenfeld, 1996). As with learning anything new, a person must feel comfortable and experience success. Preparing teachers to teach social studies with technology requires extensive technical support; this must come in the form of human resources and maintenance. A major problem may be availability of funds to provide the needed support. Nevertheless, teachers who are supported are less likely to feel threatened and are likely to develop positive attitudes toward technology (Diem, 2000). A teacher with a positive attitude toward infusing technology into the classroom invites endless possibilities for instruction and may positively affect others. Within the school of the future, teachers must possess this positive attitude toward using technology in all aspects of teaching and learning.

There can be barriers to effective social studies instruction. The barriers may be geographical or territorial in nature. These barriers include a broken communication loop between theory, academia, and practice. Other barriers might include a lack of funds for field trips or lack of resources. In the school of the future, to the benefit of everyone, the technology can be used to seamlessly remove the barriers and complete the loop.

Instructors of social studies, K-12 and college methods courses, may have technology- rich classrooms, but the teachers' abilities to apply the resources to the students' learning needs is the key. It is important to not just add-on technology to an existing program or teaching method; rather, teachers and methods instructors should consider if the use of the technology is allowing them to learn and teach in a way they could NOT otherwise do. The school of the future will require new roles for teachers and learners. The teacher may be viewed, at times, as an "expert learner."

Berenfeld (1996) discusses five general educational functionalities of his "infosphere" (the information atmosphere of technology). They include (a) tele-access, (b) virtual publishing, (c) tele-presence, (d) telementoring, and (e) tele-sharing. These

functionalities must not simply be acquired skills that show proficiency in technology, and Diem (2000) warns that technology utilization should not be concentrated in just one class in college. Preservice teachers must see technology demonstrations in several courses to better understand how technology may be used and applied through the curriculum. By seeing technology infused through several different courses, all teachers (preservice and inservice) are more likely to become proficient users of technology in the classroom. An important part of the proposed school of the future, which will be discussed later, is the involvement of all personnel as both teachers and learners.

There are several ways to integrate technology and to collaborate with technology. Linda Burkhart and Judi Harris provide excellent resources for teachers to browse and potentially utilize in their classrooms. Linda Burkhart's site, http://www.lburkhart.com/elem/internet.htm, describes several ways to collaborate and provides examples and useful links, including a wonderful site, "You Be the Historian," where the students may sort through clues of primary documents and artifacts to learn of a family that lived over 200 years ago. In addition, there are projects for grades K-3 and "Cyberlinks for Cyberkids: Telecommunications projects for the elementary grade level classroom," http://www.2cyberlinks.com/cyber.html. The Virginia Center for Digital History, the Library of Congress' American Memory, and Judi Harris' Virtual Architecture are sites commonly used by social studies methods instructors to model collaborative teaching and learning. The preservice teachers often refer to them in planning for microteaching and their student teaching experience.

Telecollaboration

Telecollaborative learning uses telecommunications tools to bring together communities of learners for accomplishing a shared intellectual endeavor (NCRTEC, 2000). In order to understand telecollaboration, it may serve us to answer the question: What is a collaborative classroom? 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 (Tinzman and Jones, 1990). Tinzman and Jones (1990) find 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. Indeed, it is through dialogue and interaction that curriculum objectives come alive. Collaborative learning affords students enormous advantages not available from more traditional instruction because a group--whether the whole class or a learning group within the class--can accomplish meaningful learning and can

solve problems better than any individual can alone. Telecollaboration allows the group to be redefined and not limited to one geographic locale.

Current practices. The literature reveals many definitions of telecollaboration and many ways to telecollaborate. With modern learning technologies, we can move toward two-way interactive communication that enables learners at many levels to collaboratively construct knowledge (Carroll, 2000). We are observing the early stages of development of this new learning environment in some of the "Preparing Tomorrow's Teachers to Use Technology" (PT3) grants awarded by the U.S. Department of Education (http://www.pt3.org/). Judi Harris (1995) identifies five interpersonal exchanges or ways to telecollaborate. They include keypals, global classrooms, electronic appearances, electronic mentoring, and question and answer services. She states that many of the first steps in telecollaboration are curriculum based, teacher designed, and teacher coordinated. Basically, the teacher leads the discussion, and it is shared direct instruction. Most collaboration is done through already existing projects such as Global SchoolNet (www.gsn.org), KID PROJ (www.kidlink.org), and Innovative Teaching Projects (www.interserf.net). Dawson and Harris (1999) describe teachers as instructional designers instead of direction followers. They also offer a set of activity structures illustrated with real- world classroom-tested project examples to efficiently and effectively create curriculum-based activities for our unique classrooms. They continue with 18 telecollaborative activity structures that have been identified to date. These have been grouped into three genres of online activity: (a) interpersonal exchanges, (b) information collection, and (c) problem solving. These are simply tools-- not prescriptions-- for telecollaboration (Harris, 1998).

A telecollaborative education project is an interdisciplinary curriculum project that fosters collaboration among business, industry, education, government, and many other entities in local, statewide, national, or global contexts. "Discover South Dakota" is an example of a telecollaborative education project framed by the National Social Studies Standards, the American Library Association Information Literacy Standards, and National Technology Education Standards with grounding in technology-infused engaged learning. It involves partner groups, online experts, teacher-teacher collaborations, and student-student collaborations. NickNacks Project Planner is a template of the elements of a successful collaborative project. It demonstrates three types of collaborative projects, complete with plans, calls for participation, and outcomes. NickNack's Telecheck is a template for assessing your hardware and software capabilities. It can be used to catalog what you have and what you need to manage your telecollaboration experiences (Burrall, 2000). The literature suggests that a successful collaborative project can be implemented with little or no problems. There are plenty of examples and existing projects to learn from. Just be sure to plan as you do for your classroom anyway, recruit interested parties, and train as needed.

One of the first large-scale telecollaborative projects was the InterCultural Learning Network, which started as a collaboration between classes in Alaska and San Diego to produce a newspaper called The Computer Chronicles. It culminated in an expanded network in which K-12 teachers, students, and college faculty in the United States, Mexico, Japan, and Israel engaged in joint newspaper writing activities (Berenfeld, 1996). New collaborative technology makes it easier for geographically dispersed groups such as this to work together. New models of network use are emerging which make use of the power of the Internet to involve students in computer- and network-based collaboration that provide them access to rich human informational and computational resources (Feldman, et al, 1995).

Berenfeld (1996) has identified a beginner stage of telecollaboration use where the collaboration goes beyond the sharing of data, and the teachers need not revamp either their curricula or teaching practices. The intermediate and advanced stages involve the teachers integrating telecollaboration at least one day a week, where collaborative units are taught. Ultimately, telecollaboration becomes an integral part of classroom instruction. Important social studies skills, such as active construction of knowledge, and reflective writing, which connects past ideas to current thoughts, can be enhanced through various web-based scenarios. These may include, but are not limited to, electronic bulletin boards, threaded discussions, synchronous chats, newsgroups, and other tools, such as on-line quizzes and self-evaluations.

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. Harris (1998) identifies many examples of on-line information that has been synthesized and published for educational use. WEB66 is an international school web site registry that can help teachers in their investigations of how their class can best telecollaborate. This is a useful and frequently updated page containing links to all Internet accessible elementary, middle school, and secondary servers, plus sites that are set up by local, regional, and national school administration organizations for the benefit of preservice and inservice teachers.

Current practices yield data showing telecollaboration as not an easy process. There are difficulties in establishing and maintaining the true collaborative format. Judi Harris (2002) acknowledges the more teachers have to negotiate with others, the more challenging the teaching becomes. Despite the difficulties, there are more and more opportunities across the K-16 curriculum for telecollaborative learning. Curt Bonk (2003-2004) recognizes the abundance of prospective

online telecooperative and telecollaborative efforts to be explored. Of course, as with any relatively new endeavor, more action research is needed to evaluate the effectiveness of the incorporation of telecollaboration into the traditional methods course. One example was found between the University of Virginia and the University of Southern Florida. As a result of this experience, a similar partnership as resulted between East Carolina University and University of Southern Mississippi.

The UVA/USF Experience

Effectively integrating technology into methods courses offers preservice teachers opportunities to see potential for their own classrooms of the future. One example of an innovative, effective use of technology in a social studies methods course began in 1999 between the University of Virginia and the University of South Florida. Each day, in a telecollaborative format, this methods course provokes new ideas and considerations for classroom instruction. The preservice teachers at both schools observe and participate in the seamless integration of technology and are taught through telecollaborating instructors. Through enthusiastic instruction, the inexperienced teachers have this technology integration instilled into their ever-developing teaching philosophy. The preservice teachers begin to combine their creativity with their exposure to telecollaboration, and the results are evident in their lessons, discussions, and written assignments for class. For this example to be successful, many tools are needed, including theV-Comm Camera, the electronic white board, NetMeeting, and sharing applications over the web. The most important tools are the instructors, who obviously enjoy what they do and who make the difference. They just happen to be in completely different geographic locations. The instructors realize that it is essential for preservice teachers to be given experiences using technology for instruction and to have opportunities to apply their computer instruction in the classroom, as well as to see their methods instructors doing the same.

The courses were typical methods courses in that there were required readings, weekly assignments pertaining to the topic of social studies, and teaching techniques designed to develop young citizens. The students were also required to create lessons incorporating digital technology and complete field experiences with students in the local schools. The basic goal of these courses was to address practical and significant topics and issues related to the teaching of social studies. The methods courses were enhanced with a weekly videoconference session between UVA and USF. The students shared artifacts and discussed controversial topics and instructional methods designed for social studies. UVA and USF students were able to share cyber book chats, model teaching with artifacts, and teaching with case studies. They experienced digital history projects and shared writing assignments. The students and faculty of both schools shared teaching strategies such as teaching with virtual field trips and utilizing digital history lessons. Internet safety was taught collaboratively over

the web by sharing http://www.coedu.usf.edu/internetsafety. The classes also learned of other tellecollaborative projects by visiting http:///ccwf.cc.utexas.edu/~jbharris/Virtual-Architecture/. Judi Harris, who received her PhD from the University of Virginia in 1990, created this site. Judi Harris is noted for expertise on telecollaborative uses of the Internet in schools. Dr. Harris' research focuses upon curriculum-based telecomputing, telementoring, and authentic professional development. Adding to the excitement surrounding the innovations of this course, it was taught during the controversial U. S. Presidential Election of 2000, and the UVA students were able to experience debate with students in Florida who were very close to the ballot controversy.

The instructors of the social studies methods courses at UVA and USF wanted to know how this course, enhanced through telecollaboration, affected the students' attitudes and perceptions about teaching social studies. They hoped that the integration of technology would not be the focus of the responses, but that instruction of social studies and citizenship would be the focus of what the students gleaned from the telecollaborative experience. They wanted more feedback than a course evaluation might provide.

The UVA and USF students were asked to answer five questions after they completed this innovative methods course. The feedback was anonymous and the students voluntarily answered the questions on paper; approximately 40 students submitted them to a graduate assistant for content analysis. Their responses in no way affected their grade in the course. The students were asked open-ended questions including:

1. What will you remember most from this methods course?
2. What did you learn about teaching social studies?
3. In what ways do you predict the teacher preparation program changing in the future?
4. How would you define telecollaboration?
5. What experiences did you have this semester that you would not have had if UVA and USF had not been meeting regularly?

Their responses included similar themes.

1. What will you remember most from this course?

" …Reading the newspaper and being informed is an essential part of being a good citizen and a good teacher. Our job as teachers is to give students the information, the ability to find information, in order to make good decisions and to be concerned citizens. I have learned that making social studies exciting and fun will tremendously benefit children. Children will remember information about historical figures that they can personally relate to."

Technology was not a recurring theme in the students' responses to this question. Enthusiasm, dedication, and creative

teaching ideas from the instructors was found in a majority of the responses, as well as, how fun teaching social studies can be and how important it is to relate students' lives to history.

2. What did you learn about teaching social studies?

" It was interesting to see social studies through the eyes of a prospective teacher rather than a student. Social Studies as I remember it in school was 'copy the bold-faced words' approach. This semester I have seen social studies 'come to life' in ways that students will appreciate and respond to. There were a lot of great ideas…from artifact boxes, to dressing up as a Statue of Liberty, to creating an election headquarters in the classroom that will definitely be of use in my class. Also great literature and website links to add to our files."

Common themes in the responses included how to teach social studies with various models of instruction. Most students remarked that they had learned the importance of being an informed instructor and that standards are a "floor, not a ceiling."

3. How do you predict the teacher preparation program changing in the future?

"I see it becoming more multi-media, more teaching opportunities using technology and methods incorporating technology. I think that a class like our social studies class could really be useful for any subject methods course- for example, science; the applications with technology seem endless. I think there should be a curriculum and instruction field methods course because this would be the optimal class to introduce how to incorporate technology in the classroom in all aspects, how to plan the physical set-up, what to do with the resources provided, and how to instruct for all students."

According to the students' responses, more technology should be infused into programs as an instructional tool, standards and accountability for students and teachers should be developed, and more varied experiences for student teachers are needed. The students responded that the teacher preparation programs of the future must include more experiences with multicultural education, provide English as a Second or Other Language (ESOL) training, and require field experiences in urban and rural settings.

4. Based on your experiences this semester, how would you define telecollaboration?

"Telecollaboration- working with, learning from, sharing ideas with, reaching out to, and adopting the perspective of people from different regions of the world using a form of technology."

Other students responded to this question with common themes around communication and utilizing media that allows parties to

communicate who otherwise would not be able to due to geographic separation.

5. What experiences did you have this semester that you would not have had if we had not been meeting regularly?

" I think that sharing our state artifacts with each other was a valuable experience for both UVA and USF students in that it allowed us to note some of the characteristic differences between Florida and Virginia yet also recognize some similarities. I think that activities such as this one would be most effective in such a collaborative learning session, because it allows the students to get to know a little about the lives of their on-line classmates and appreciate how significant this connection is. A lecture presented to both classes would not have optimized the opportunity available in the way the artifact activities did."

Most students' responses included learning different perspectives regarding the Presidential Election and meeting peers from a different state while being able to share teaching ideas and perspectives.

Providing opportunities where the roles of "student" and "teacher" were not so clearly defined could have enhanced the UVA/USF experience. Social studies suggest a study of community; what better way to expand and enhance the community than through exchanging ideas in a telementoring format. This could begin with the exchange of electronic mail between students and teachers, and from there, the potential benefits of the telementoring/ telecollaboration experience will continue to be explored.

Telementoring

What is telementoring and how can it be utilized to enhance instruction and learning?

Literally, telementoring is a typical Germanic compound. "Tele" signifies telecommunications. For example, communicating from a distance via electronic impulses. "Mentoring" refers to the act of providing guidance and information from a knowledgeable and seasoned source, which customarily provides encouragement and support as well (Hackworth, 1987). Most literature shows telementoring between a subject expert and a student through e-mail where there is a content expert and novice. Harris and Jones (1999) define telementoring as the "use of e-mail or computer conferencing systems to support a mentoring relationship, when face-to-face meetings are impractical." Eisenman and Thorton (1999) and Foster (1999) define the word telementoring as referring to the use of electronic mail to support a mentoring relationship. The authors define telementoring as a mentoring relationship or program in which the primary form of contact between mentor and mentee is made through the use of telecommunication media.

The Internet is an international, virtual meeting place for numbers of teachers, students, and subject matter experts (SMEs). Telementoring allows for interaction beyond electronic mail exchanges, only. The cross-institutional, telecollaborative, mentoring teams are brought together through the Electronic Emissary Project, which was launched in 1993. It is a "matching service" pairing SME volunteers with K-12 teachers and students who are studying in the fields of the SME's expertise. In doing so, the project helps establish content-related curriculum-based teleapprenticeships or electronic mentorships (Harris & Jones, 1999). Often, however, traditional mentoring programs have failed, in part due to disrupting work routines of the participants and due to the fact that the communication may stop at electronic mail, or e-pals. Electronic mail may seem impersonal; it is important that mentors remain accessible and take the lead in communication (Eisenman and Thorton, 1999).

Telementoring through e-mail has positive aspects, as well. Foster (1999) points out that sending an e-mail to a student takes much less time than visiting a school. In fact, the student does not have to be nearby; he or she can be across the country. Examples of success stories with telementoring can be found at http://www.telementor.org/hp/examples. Hewlett Packard has led the way in telementoring in hopes of serving as a model for other companies to create one-to-one mentor relationships between employees and students in grades 5-12. Hewlett Packard employees motivate students via e-mail to excel in math, and science and to improve communication and problem solving skills.

Telementoring and mentoring may allow for roles to change and transform in the future. In New Mexico, Kansas, and dozens of PT3 Projects around the country, student teachers are now in the early stages of becoming the Expert Learners. As Expert Learners they are mentoring the faculty on the use of technology that will improve the faculty members' ability to construct knowledge with their students. Many student teachers are now mentoring K-12 teachers in the schools on the use of new technologies, as they themselves learn effective strategies from master teachers for helping K-12 students develop new math or science knowledge (Carroll, 2000).

Telementoring is not simply the exchange of electronic mail addresses; there are challenges and obstacles to consider. The type of education activities mounted on line might be limited by the difficulty that may be encountered transmitting graphics across different computers. Telementoring is not just having keypals. Mentoring projects should be structured to support educational goals. Also, Computer Mediated Communication (CMC) can lack intimacy and spontaneity of voice communication. The literature suggests there is a critical need for an on-line facilitator who has background in education and understands the technology being used (Harris, 1996). Harris (1996) believes that while bringing people together for purposes of telecollaboration and telementoring can be a challenging endeavor, the benefits for all involved far outweigh the

inconveniences and miscommunications encountered.

Professional development schools. Pierson and McNeil (2000) recognize the following: New teachers can't simply be given one disconnected technology course; true modeling of integration is rare; there is a need for professional development for education faculty; and preservice teachers want to learn but express feelings of frustration. The University of Houston is instituting an action research to actively collaborate with the Houston area school district to establish networked learning communities of university faculty, preservice teachers, and school-based educators in order to support the development of future teachers. This will allow students to develop appropriate content methods-based technology proficiencies (Pierson & McNeil, 2000). This action research will involve the mentoring of technology fellows, preservice educators working in Professional Development Schools with university faculty and qualified school-based teacher educators. The action research will also involve the university faculty teaching subject specific courses in 31 Professional Development Schools across eight districts.

A national educational Technology Transfer School. A site where best practices could be employed in a model school is the idea behind the Technology Transfer School proposal (Bull, 2000). The collaborative facilities would not only be designed to encourage school-university interactions but also would make it possible to provide virtual field experiences for preservice teachers across the nation, allowing them to observe best practices integrating educational technologies into the social studies classroom. The goal of the Technology Transfer School is to identify how university and corporate innovations and research can be adapted for K-12 use in ways that can be readily adopted by other schools. The methods course taught between UVA and USF may offer an optimum place to start on these goals.

Berenfeld (1996) suggests that the full integration phase of any effort requires schools to (a) give students sufficient telecommunication access, (b) redefine their pedagogical goals, (c) restructure curricular offerings, and (d) provide teachers with training and support materials. Berenfeld (1996) cautions that often teacher-inspired grassroots efforts lack the resources to provide the support and curricular framework that telecollaborative-based teaching demands. Goodlad's Professional Development School (1990) and the Technology Transfer (Bull, 2000) idea give hope that we can truly prepare generations of students for the future. Students will benefit from the newest technology rather than be the last to use it. The roles of student and teacher will become exchangeable in the preparation of future teachers at institutions of higher education.

"The School of the Future"

Today's model of school is changing. We must recognize that schools and classrooms are becoming nodes in networked learning

communities. We must begin to think about how to organize learning in networked communities and not limit learning within the boundaries of classrooms and school buildings (Carroll, 2000). We must not limit our thinking. So call it a proposal, a challenge, or a necessity. We will call it "The School of the Future."

Goals for the School of the Future

In order to capitalize on this broad thinking, we need goals, including long-term goals where teachers (inservice and preservice) are trained in teaching strategies using technology. The teachers will be able to use existing teaching strategies and will not have to alter their style. They will learn how technology can enhance their teaching. Teachers of all grade levels will telecollaborate with other teachers at universities and K-12 schools across the country. Teachers will also telementor other teachers on methods of telecollaboration and teaching strategies.

Stakeholders, such as National Board for Professional Teaching Standards (NBPTS), NCSS (National Council for the Social Studies), and National Technology and Leadership Initiative (NTLI) will be engaged in the process. The National Board may be interested because certified teachers will need to recertify, and telecollaboration may be the key to improving existing certification processes and may facilitate the recertification of certified teachers. The UVA/USF model represents a social studies methods course, so operations committee members of NCSS may take notice of such innovative teaching methods.

All involved (students, teachers, community, education organizations, and higher education institutions) will benefit because technology is used as a tool to break barriers of geography and communication. The technology will not interfere but will enhance the teaching through telementoring and telecollaboration. All involved will gain different perspectives, resources, and experiences. Standards for each phase of development will be created by those involved and will be revised often. Eventually, the technology will not be the focus of the endeavor; teaching and learning will be the focus.

Interchanging Roles in the School of the Future

In the school of the future, traditional roles will change and continually interchange. "Student" will be a role assumed by all involved at one point or another. Students may collaborate with other students to access resources at the university level and will have exposure to other perspectives and ideas.

"Teacher" is another interchangeable role and may be defined as continuing educator with expanded opportunities to educate. A teacher may seek certification or recertification from NBPTS through telecollaboration with the organization. A teacher will have direct access to academia and theory without geographic barriers.

"Student Teachers" may see their role change to mentors or resource teachers as well as learners. Their seminars may be conducted online, so travel is minimized and they may concentrate on the teaching. They will gain experience in rural and urban settings without moving and will be exposed to best practices as teacher associates or student teachers in order to prepare to address the challenges of a diverse public school setting.

The role of "University Supervisor" will involve telecollaborating with other supervising agencies, including NCATE and NCSS. The supervisors will also be seen as facilitators/liaisons between the university and the K-12 community. They will be required to organize seminars that will be enhanced with technological media.

"Professors" and university faculty will serve as instructors as well as observers of the classroom to regain K-12 perspective, maintain communication, and keep skills sharp. "Administrators" will be attending virtual workshops and learning with their faculty. They will also be observers and provide the base of an important support system in the schools.

"Community Members" will take an active role as collaboration is opened to a more global community. This will include contributing as mentors, guest speakers, instructors, trainers, interns, and so forth. "Technology Mentors" are experts at technology with a background in education who allow the focus to be on teaching and learning, not troubleshooting. They have an appreciation for what teachers do on a day-to-day basis and create training experiences with a practical approach as well as are facilitate all technology use.

Recruiting, Planning, and Action Phases for the School of the Future

Many ongoing phases will be required in order for the School of the Future to evolve and come to fruition. The first three phases are outlined below. The initiative will not be successful unless some necessary small steps are taken, which will be frustrating at times, especially for those who see the potential for such an endeavor. The three phases may be referred to as the recruiting phase, the planning phase, and the action phase. Throughout these phases it must be remembered to "think globally, but start locally."

Phase one: Recruiting. In the recruiting phase, many contacts must be made. Determining who will be involved, inspiring, motivation, and getting a commitment are important. Within this phase, many things must happen, including (a) identifying the organizational support system, including universities and corporations; (b) identifying a school in a rural setting and an urban setting to participate; (c) initiating contact with NBPTS, NCSS, and NTLI to identify best practices; (d) involving the existing school community in the development of goals, roles, and rationale; (e) deciding on curricular units to be taught; (f) setting up basic electronic mail exchanges for all

involved; (g) identifying one middle-childhood-age social studies classroom at each school; (h) training and identifying technology mentors.

Phase two: Planning. The planning phase is where telecollaboration and telementoring is essential because of the transfer of the process. This is when the questions "What are we doing?" and "How do we do it?" are answered. During this phase, telementoring and telecollaboration will be defined. The guidelines for how to telementor and telecollaborate while telementoring and telecollaborating are written and followed. The University of Virginia and the University of South Florida will be telementoring and modeling through their existing unique social studies methods course. Preservice teachers only from social studies areas will begin work with the school and will begin training of technologies beyond electronic mail. Purchase of needed equipment will need to occur in both phase one and phase two.

Phase three: Action. In the first year of this action phase, there will only be a focus on connectivity; the technology will be the focus in the first year. This year will also include training and experience with NetMeeting, V-Comm Cameras, and white boards. In the second year, telecollaboration becomes the focus. The teachers are invited to try very simple collaboration activities related to the social studies curriculum. They will complete these with their students successfully. During the third year, identified preservice teachers begin virtual field experiences and observations where their roles are constantly changing and evolving to fit the situation.

During the fourth and fifth years, preservice teachers begin instruction and become more instrumental in their own teaching and learning. University Supervisors will conduct observations of preservice teachers effectively and seamlessly integrating technology into social studies instruction.

Conclusion

When asked to predict changes in the teacher preparation program in the near future, one student of the telecollaborative UVA/USF social studies methods course responded:

"This class is definitely a sign of what's to come… In the future, all subject methods courses will discuss and utilize technology and standards more and more. I would hope that there is also more time in the classroom for us to apply our knowledge in real life situations, for all methods courses, not just social studies. In addition, preservice teachers teaching technology to local school teachers would be awesome!"

Other students mentioned that they would like to have more time teaching and observing in an actual classroom. With technological assistance, future teachers could have access to classrooms around

the world. The students' responses speak of a changing role for education students, where preservice teachers could be technology instructors to inservice teachers. With technology, they could instruct not only local teachers but educators in any geographic location.

Schools have a responsibility to ensure that all students are prepared to participate in a digital future. Dawson, Bull and Swain (2000) realize there is no single method that will allow schools to accept this responsibility. The adoption process requires longer periods of time for widespread integration. The proposed School of the Future will allow innovations to be tried on a smaller scale and will allow the pilot to demonstrate efficiency before adoption on a larger scale. While this proposal may suggest a monumental task, it is necessary to continually rethink and reflect on the traditional classroom configurations, and with technology and superior teaching, the possibilities are endless. The world is our classroom!

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