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ABSTRACT
                This document contains the following papers on social
studies instruction and technology: (1) "Waking the Sleeping Giant: Social
Studies Teacher Educators Collaborate To Integrate Technology into Methods'
Courses" (Cheryl Mason, Marsha Alibrandi, Michael Berson, Kara Dawson, Rich
Diem, Tony Dralle, David Hicks, Tim Keiper, and John Lee); (2) "Beyond
Primary Sources: A Professional Development Collaboration Designing
Technology Integrated Instruction for Supporting K-12 Historical Thinking and
Understanding" (Elizabeth Wellman, Maya Creedman, and Jana Flores); (3)
"Assessing Pre-Service Students' Knowledge in a Social Studies Methods Course
Using Digital Resources" (John K. Lee); (4) "Collaborative Dialogue: A
Web-Based, Multimedia Case Study Shared among Geographically Disparate Social
Studies Educators" (Kara Dawson and Cheryl Mason); (5) "Interdisciplinary
Applications for Geographic Information Systems" (Marsha Alibrandi and
Timothy Keiper); (6) "A Digital Humanities Resource and Website for Learning"
(Christina Vogt, David Kumrow, and Edward John Kazlauskas); (7) "Integrating
Computer Technology into Social Studies Classroom" (Ask N Asan); (8)
"Hypergroups for Social Studies Teachers: A Critical Issues Dialog for
Technology Integration" (Cameron White); and (9) "Methods Course Connections:
Transforming Social Studies via Technology Integration" (Carolyn Ledford).
Individual papers contain references. (MES)

SOCIAL STUDIES

Section Editor:

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Social Studies has experienced a tremendous transformation regarding the integration of technology. Despite remaining a discipline whose status in schools and society is much less than adequate, professional social studies educators are engaging in dynamic technology oriented projects. These projects not only have a very positive influence on the discipline of social studies itself, but we are also witnessing a greater impact on our students, other teachers and professionals, and society in general. The papers included in this section demonstrate creativity, passion, and a transformative focus so needed in integrating technology into social studies education at all levels.

The first paper provides an overview of activities by Project Impact partners headed up by Cheryl Mason at the University of Virginia. The goal of the project is to improve technology integration in teacher preparation programs. This paper highlights the efforts of Project Impact in social studies in the areas of teaching social issues, government documents online, digital resource centers, GIS, and other web resources.

Wellman, Creedman, and Flores of UCLA describe a project in California whereby participants worked in online collaborative workspaces to develop technology materials. The focus of the materials development is to support historical thinking and understanding in K-12 classrooms. The authors suggest that problem based and constructivist principles are essential in using technology to support historical thinking. The CH-SSP web site holds the completed materials.

John Lee of the University of Virginia presents preliminary finding regarding a study assessing pre-service teachers' knowledge development regarding the teaching of history using digital resources. The findings indicate a distinct difference between historical content knowledge and pedagogical knowledge regarding history.

Dawson and Mason focus on the concept of collaborative dialog in a case study that included web-based multimedia and threaded discussion groups among social studies educators. Preliminary findings indicate the importance of instructional strategies that relate to knowledge construction and interactions among the geographically disparate.

Interdisciplinary applications for Geographic Information Systems (GIS) are the focus of the paper by Alibrandi

and Keiper. Successful examples of GIS integration that offer interdisciplinary applications are included. Successful integration is enhanced through teacher collaboration and the combination of GIS and other technology applications.

The Learning with ISLA (Information System of Los Angeles) project is described in the paper by Vogt, Kumrow, and Kazlauskas. The project web site includes a variety of resources that facilitate the use of primary research materials for the humanities. The web site development process and ideas for applications are also included.

Asan from Karadeniz Technical University in Turkey suggests the technology integration can facilitate students' active involvement in problem solving and critical thinking in the social studies. Analyzing the effectiveness of specific courseware for primary social studies students in Turkey is the focus of this study. A transformation from a traditional teacher -directed focus to a more student-centered model is also described.

The use of online discussion groups within the social studies program area at the University of Houston is the focus of the paper by White. The goals of facilitating reflection, critical dialog, and developing a community of learners are described. Examples from student postings and responses are included. An analysis of the effectiveness and ongoing issues regarding online discussion in social studies is provided.

Integrating technology in elementary social studies is the focus of the last paper in this section. The study describes pre-service students' integration of technology in methods course assignments. Findings suggest that students rarely went beyond basic expectations in integrating technology.

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Waking the Sleeping Giant: Social Studies Teacher Educators Collaborate to Integrate Technology into Methods' Courses

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Abstract: This paper presents an overview of the efforts undertaken by a collaborative group of social studies teacher educators to identify and develop appropriate models of integrating technology into social studies teacher education. The goal of the Impact Project is to facilitate and accelerate change in the nation's teacher education programs, encouraging university faculty to incorporate appropriate uses of technology in teacher preparation programs. The Impact Project promotes appropriate uses of technology in specific content areas. Specific modules and activities are described.

Technology has been called the sleeping giant in the social studies curriculum (Martorella, 1997). A giant, because technology holds extreme potential in our society and in our social studies classrooms. Sleeping, because of the dearth of research, development, and implementation about technology integration by social studies educators. One group of social studies teacher educators, however, have joined together to rouse this sleeping giant. These teacher educators are collaborating together as partners in Project Impact.

The goal of the Impact Project is to facilitate and accelerate change in the nation's teacher education programs, encouraging university faculty to incorporate appropriate uses of technology in teacher preparation programs. The Impact Project promotes appropriate uses of technology in specific content areas. This multi-year initiative has supported the development of technology-infused modules to be used in the social studies curriculum and the identification of existing technology-infused social studies curriculum materials. While the Impact Project targets faculty members who prepare teachers, the materials developed may also be used by practicing teachers. In fact, most of the materials developed have been field-tested in K-12 classrooms by practicing teachers.

Effective integration of technology into the social studies can better promote the goals of education in a democratic society by making learning experiences more active and authentic and by promoting critical thinking. The initial phase of the Impact Project included the creation of technology-infused lessons and of lessons that utilize existing software. We are making concerted efforts to develop lessons for each of the disciplines within social studies. Additionally, we are including a variety of the technology applications used in the social studies. The following sections will highlight modules and instructional materials currently being piloted and developed by Impact partners.

The Impact Materials

Teaching Social Issues
Teachers who wish to emphasize the study of social issues in their social studies curricula have two considerable challenges facing them. First, the typical public school curriculum is often highly structured

and somewhat rigid in terms of scope and sequence. It is unusual to find a separate course on social issues in many schools. Thus, teachers must find creative ways to infuse the study of social issues into the preexisting curricular structure - assuming they have the time to do so. Second, teaching materials for the study of issues may not be as available to teachers and likely take a lower priority in budget considerations than history or geography texts that are purchased for all students.

We have designed a module that invites teachers into an exploration of major social issues, facilitates their knowledge and understanding of these issues, and helps them think of ways to infuse this study into their social studies curricula. Although we cannot, in this module, provide extensive information on a wide variety of issues, we have chosen to focus on six that seem prominent in U. S. society at present: environmental issues, censorship, health care, poverty, gun control, and prejudice and the spread of hate crimes. The module design asks teachers to provide a rationale for incorporating particular topics into a preexisting social studies course, and to use knowledge from multiple perspectives and disciplines in order to understand these issues. For more information about this module, please visit http://www.citeforum.org/social/resources/modules/socialissues/.

Government Documents as Online Primary Sources
Government documents provide a valuable source of up-to-date, consolidated information on topics that are relevant to current issues of interest. The data often have a national scope and applicability, and the statistical information is typically presented in user-friendly formats. Increasingly federal agencies are making reports and data available via the Internet. Online availability facilitates access to evolving knowledge bases nationwide. As updated or new information becomes available the sites are often revised so that users can be assured of accessing the most current information available on the state of our nation.

Among the online resources that may be of interest to students in Government, Sociology, and Psychology classes is the U.S. Department of Justice Office of Juvenile Justice and Delinquency Programs *Juvenile Offenders and Victims: 1999 National Report* available at http://www.ncjrs.org/html/ojjdp/nationalreport99/toc.html The report provides the most current information available on juvenile crime, juvenile offending, and the juvenile justice system. In addition to providing students with national statistics on juvenile delinquency and victimization, this information resource may be incorporated into lessons to evolve students' knowledge of juvenile justice and develop students' skills in analyzing statistics and trends.

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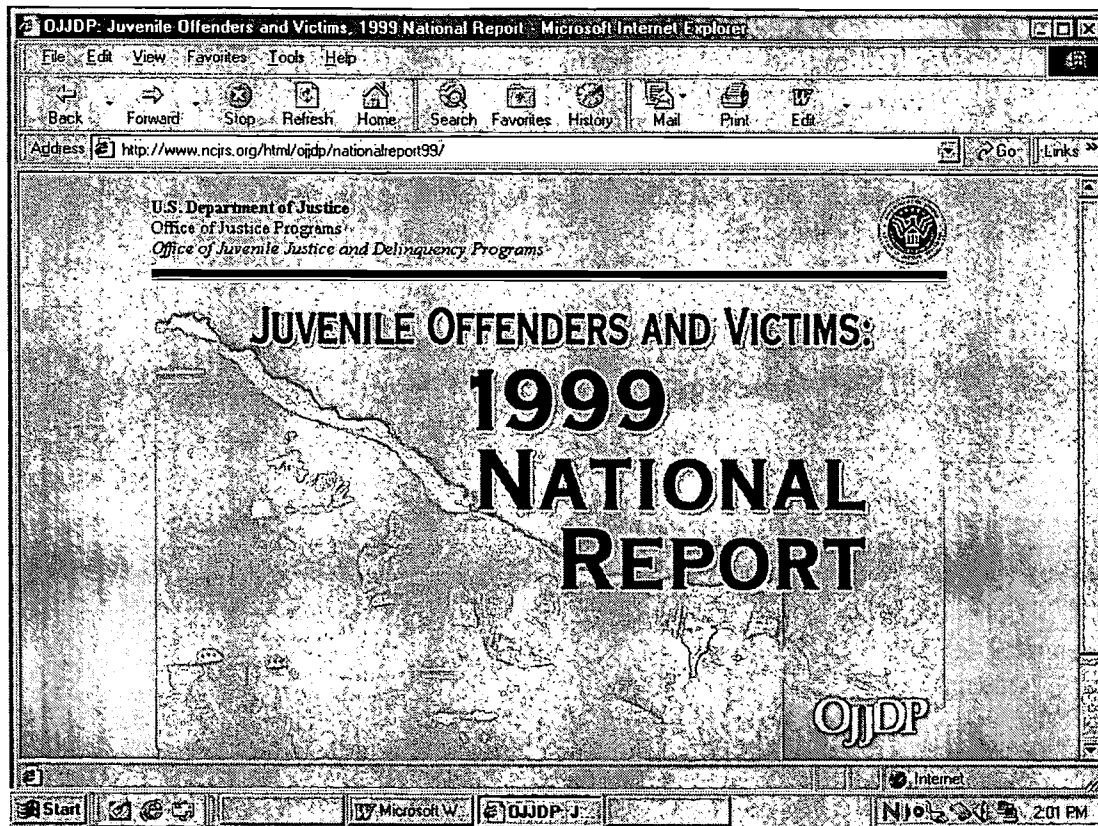
Juvenile Crime in America: What Do We Value? is a module designed to foster secondary students' examination of justice through empathic understanding and procedural knowledge. The lesson evolves students' value formation by assuming the perspectives of juvenile victims and offenders. Moreover, students directly access facts and figures to analyze statistical briefs on population characteristics, juvenile arrests, juveniles as victims, juveniles in court, juveniles as offenders, and juveniles in corrections. Using these national statistics as a guide, students engage in a collaborative group process of creating a story around a juvenile crime using the perspectives of both the juvenile offender and the victim. The national report serves as the basis for creating characters' social situations, including descriptions of their families, ethnic and economic backgrounds. Students may then create a scenario that is descriptive of the situations and causal variables that preceded and followed the crime for the offender and victim. By examining the multiple perspectives of offenders and victims, students may engage in reflection on the complexity of juvenile justice and initiate problem solving in the form of action plans to improve the lives of children and youths and reduce juvenile crime.

Other literature sources may be used to further students' understanding of victim and offender dynamics and the general state of children. Additional online resources for accessing data include the Federal Bureau of Investigation (http://www.fbi.gov), the National Clearinghouse on Child Abuse and Neglect (http://www.calib.com/nccanch), the Bureau of the Census (http://www.census.gov), Bureau of Labor Statistics (http://www.bls.gov), National Center for Health Statistics (http://www.cdc.gov/nchswww), National Center of Education Statistics (http://www.nces.ed.gov), Federal Interagency Forum on Child and Family Statistics (http://childstats.gov), and the National Clearinghouse on Families and Youth (http://www.ncfy.com).

Prior to the advent of online government primary sources with statistical databases, students were relegated to textbooks with sample information that often was out-of-date and was typically accompanied by interpretations that detracted from the experience of students to evolve their higher level processing skills. As current information becomes more easily accessible online, it is increasingly important that students

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have the opportunity to develop their critical analysis capabilities and acquire the motivation to shift from apathy to action in addressing social issues.

Digital Resource Centers

For some time technology has been touted as having the potential to alter the landscape of education. The development and use of web based resources has begun to alter that landscape by changing the relationship between K-12 schools and universities. The most powerful example of this changing relationship can be found with Digital Resource Centers (DRC). Exemplary DRCs are web based academic collections that include the following four elements.

1. The resources have the potential of transforming university teaching and learning.
2. The resources can stand the test of peer review.
3. Each center has a connection to K-12 education.
4. The products are relevant for K-12 education (Bull, Bull, Dawson, 1999).

The unique combination of academic and K-12 educational interests inherent within DRCs developed as a result of the World Wide Web. Through the web DRCs are making primary source documents, maps, census records and other social studies related materials available to K-12 students and teachers. Social studies related DRC's have a broad range of applications in college and university education programs and in K-12 classrooms. The structure of DRCs represent a mechanism for delivering to K-12 schools social studies resources that have to date been in the hands of a select number of advanced college level students and researchers.

The dramatic potential of Digital Resource Centers have been recognized and to a degree realized by the Virginia Center for Digital History (VCDH) at the University of Virginia. The center produces and maintains digital history related projects. More information about the center may be found at: http://jefferson.village.virginia.edu/vcdh. VCDH staff and university students research, design, and create these projects. The center also designs instructional materials for K-12 schools. VCDH currently has six active projects and two in the developmental stages. Each project includes a variety of primary source documents. Active projects include, the Valley of the Shadow, Virtual Jamestown, Race and Place: African American Community Histories, and the Eisenhower, Kennedy, Johnson, and Nixon Presidential recordings project. The best known of these projects, the Valley of the Shadow, is an on-line collection of materials relating to two communities before, during, and after the American Civil War. The documents include letters, diaries, newspapers, images, maps, census records, and military records. The site is one of the most heavily visited history related web sites on the web, receiving traffic from students and non-students alike in countries across the world. The Valley of the Shadow is used in numerous K-12 and higher education settings. Students' in these courses analyze newspaper articles, letters, diaries, census records and more in exercises on historical bias, document verification, and statistical analysis. In addition, students use the archive to research topics, issues, and problems from the period.

The lesson titled "Substitution in the Civil War" has been created to give middle and secondary social studies an opportunity to explore primary source materials from the Valley of the Shadow Project at the Virginia Center for Digital History. This web-based lesson contains links to four letters and seven newspaper articles dealing with the issue of substitution in Augusta County, Virginia. During the Civil War soldiers in the South and the North could higher substitutes to carry out their military service. The lesson guides students toward defining and explaining substitution. Students are completely dependent on the primary sources at the Valley of Shadow web site to develop their definition. Consequently, students will construct their own evidence based definition for substitution. Students also have an opportunity in the lesson to use their definition to determining the effect substitution had on the southern war effort. With adaptation by the teacher this lesson can be used an introduction to historical methodology or as a vehicle for teaching about broader issues in the Civil War.

Geographic Information System (GIS)

A Geographic Information System (GIS) is commonly thought of as a computerized system that can turn geographically referenced tabular data sets into maps. It allows the user to query the database and discover relationships. Those new to the concept of GIS may find it clarifying to consider the example of the encyclopedic map transparencies that overlay new information one upon another. A county could be

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shown with a transparency rivers, another for roads, for parks, and one with demographic information. An automated GIS would be able to use the tabular data set to produce these "transparencies" and display them on the screen in any thematic order one would choose. In addition, one could use a variety of techniques to analyze this information.

A number of research projects are being conducted in order to consider applications for GIS in the K-12 schools. From research in five North American schools that have successfully integrated GIS, there is strong evidence of teacher collaboration. Because the information system (database) function of a GIS is multi-purpose, its spatial analysis function is an added benefit in interdisciplinary applications. Teachers who collaborated were most often Science teachers, but Geography and Instructional Technology teachers also collaborated on developing GIS options. In the one middle school, a more interdisciplinary project took hold, and data that was gathered in Language Arts classes became data for the GIS application.

Each teacher interviewed discussed the benefits of collaboration, perhaps the most important being the support needed during the steep learning curve of early engagement. Additional perspectives on application, data acquisition, and manipulation of the data were also shared in successful collaborations. As teachers and students learned more about how to use the technology, a synergistic effect of collaborative learning characterized the GIS classrooms.

Web Resources
As the World Wide Web has grown, so have search engines and other methods of locating information on the Internet. The growing amount of information on the Web continually calls for better, more efficient methods to navigate its use. The "Review of Web Sources," located at http://www.citeforum.org/social/resources/web/prof/home.html, aims to address these needs. The information in Review is organized so that users searching for web sites best suited for K-1 2 teachers, or for college methods instructors, or for searching for particular social studies content, or for finding various social studies organizations and conferences, will find what they seek as quickly as possible.

The user may look at a list of all reviewed web sites related to his or her field of social studies interest. Each site is described briefly, with pertinent categories of information described, and with links to the actual site provided. Web surfers interested in various sorts of social studies information may find "Review of Web Sources" to be helpful.

Participation in the Impact Project
Most of the existing Impact materials have been developed by social studies educators at the University of Virginia, University of South Florida, University of Texas-San Antonio, and Western Washington University. Beginning in summer 1999 other members joined the project to field test existing materials and to develop new materials. The materials will also continue to be tested in K-12 classrooms. New members of the Impact social studies team include faculty members from: North Carolina State University, Clinch Valley Community College, Iowa State University, Ohio State University, Rowan University, University of North Carolina, Charlotte, Northern State University, University of Houston, University of Florida, and Virginia Tech. For more information, visit http://www.citeforum.org

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Beyond Primary Sources:
A Professional Development Collaboration Designing Technology Integrated Instruction for Supporting K-12 Historical Thinking and Understanding

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Abstract: *Beyond Primary Sources: Using Technology in the K-12 History-Social Science Classroom* provided K-12 California teacher participants with the opportunity to collaborate on the development of instructional materials using technology to support historical thinking and understanding in K-12 students. Participants examined the use of problem-based learning and technology to support their students' development and engaged in a guided inquiry to design instruction focusing on the use of technology and constructivist learning approaches to solve shared instructional problems. Resources such as the State Board of Education Content Standards in History Social Sciences, case studies in history and social science, exercises and theoretical perspectives provided additional guidance. Following the two-day workshop, the participants worked in online collaborative workspaces collaboratively developing their instructional materials. The completed materials are posted on the CH-SSP web-site (www.sscnet.ucla.edu/ch-ssp) for convenient statewide access.

Background

Traditionally, K-12 teachers are expected to develop instructional materials for their own classroom. Now, teachers often have the additional responsibility of integrating technology into their instruction. However, the integration of technology into current curricula is non-trivial (Starr, 1996). –The existing instructional methodology must be re-evaluated and adapted to take advantage of the technology's potential as, among other uses, an information source, a communication source or an authoring tool. With little to no training or experience, most teachers are inadequately prepared to develop technology-integrated instructional materials. Because of this, professional development activities for teachers in this area should be a top priority.

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Two offices at UCLA have come together to address this concern. The first is the Executive Office of the California History-Social Science Project (CH-SSP), one of nine California Subject Matter Projects (CSMP's). These projects have been mandated by the California State legislature to provide professional development to K-12 teachers statewide. The Executive Office oversees the educational activities of eleven local sites across California. The second is the Office of Technology Projects in Center X, the Graduate School of Education and Information Studies (GSE&IS). This office supports the use of technology for professional development and initiates programs which support K-12 teachers integrating the use of technology into their curriculum. Together, these two offices are offering *Beyond Primary Sources: Using Technology in the K-12 History-Social Science Classroom* to the teachers of the State of California to help meet the need to prepare teachers to develop technology integrated instructional materials.

The Project

Beyond Primary Sources: Using Technology in the K-12 History-Social Science Classroom provides K-12 California teachers with a unique professional development experience. Using both an onsite institute and an online collaborative environment, teacher-participants are both recipients of instruction using technology and designers of instruction which integrates technology. The first institute was held in the Spring of 1999. The 29 participants were selected by the local History Project site directors. The participating teachers ranged from those who had never used technology in the classroom to those who integrated it into their instruction regularly. All participants had attended at least one CH-SSP institute previously. Through both face-to-face and online collaboration, they developed instructional materials which use technology to support historical thinking and understanding in K-12 students. In the two-day onsite institute at UCLA, they examined the use of problem-based learning and technology to support their students' development of historical thinking and understanding. Then, in the three-month online follow-up they continue to work collaboratively to develop instructional materials for their K-12 History classes which reflected their exploration in the institute. Participants were compensated for their hotel, food and travel expenses at UCLA and received a stipend.

The first major goal was to engage participants in guided inquiry to design technology-enhanced instruction that solved shared instructional problems. Resources such as the State Board of Education Content Standards in History Social Sciences, case studies in history and social science, exercises, and theoretical perspectives provided additional guidance. Teachers' questions and concerns about using technology in the history and social science classroom were addressed through the exploration of exemplary teaching and learning in their content area. This guided inquiry is discussed in more detail below.

The second major goal of this project was to explore the use of online collaborative workspaces as a tool both for collaborative work among teachers separated by geographic distance and as a tool for follow up for other professional development institutes. We felt that approaching teacher training in technology using an online environment was appropriate as it has been shown that the most effective technology training for new teachers includes participating in electronic networks (OTA, 1996). For the Institute in Spring, 1999, The

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Milken Educators Virtual Workspace (MEVW) was used. The MEVW space allowed participants to use the Internet to create and participate in a collaborative online learning community. Included in the MEVW space, and used in these collaboratives, is a collaborative documents space where participants can post, read, comment on and edit documents, a question and answers space which allows participants to engage in asynchronous discussion; and a chat room, which allows participants to engage in synchronous discussion. MEVW is ceasing operations in December, 1999. For the academy in January, we will be moving to a combination of the Nexus workspace and Blackboard.com. The Nexus workspace was developed and is maintained by the Nexus Project, a State of California K-16 technology initiative. It is conducive to collaborative development of documents. Blackboard.com is a more appropriate space for online synchronous and asynchronous discussion.

The Inquiry Model

Teachers rarely have the opportunity to experience good instruction as learners. As teachers often teach in the same way that they themselves are taught (Day et al., 1990), we believe it is important for professional development to model the teaching that we expect the participants to engage in. In this institute, teacher participants were both recipients (learning how to develop instruction) and developers (developing the instruction for their students) of the same learning model. The model is composed of three elements: the acquisition of high level thinking skills, the optimal use of technology as an instructional tool, and problem based learning as an instructional model.

As recipients, teacher participants engaged in constructivist, problem based inquiry and technology based collaboration to examine their practice. Problem-based inquiry required the teacher participant to identify and solve an "instructional problem" they encountered when teaching historical thinking and understanding. Through collaborative discussion, the participants used technology and problem-based learning to develop instructional solutions to the problem. Participants actively engaged in higher level thinking through continuous reflection on their own design process. They compared their own solutions with those of other participants, providing multiple perspectives and approaches to the problem. These instructional materials require students to engage in higher level thinking (specifically historical thinking and understanding), reflect on their own cognitive processes, solve a problem collaboratively and use technology to support their learning.

As developers, teachers designed instruction using problem-based learning and technology to support the development of higher level thinking skills in students. These instructional materials ask students to engage in higher level thinking, specifically historical thinking and understanding, reflect on their own cognitive processes, solve a problem collaboratively and engage them in the use of technology to support their learning.

Technology and Student Outcomes

This initiative gives teachers an opportunity to use technology to support instruction in a specific way. Exemplary technology integration involves constructivist learning approaches (Jonassen et al., 1999). Teachers have many choices in determining how to use technology to encourage historical thinking and understanding. Students might develop their own instructional software (using authoring software such as HyperStudio) or participate in

international distance learning projects (for instance, the sharing and comparing of town, regional and country histories through email, newsgroups and conferencing software). By solving an instructional problem with technology and problem-based learning, teachers must think about how to integrate technology effectively. This project required teachers to determine how the use of technology in their instruction will help them attain their instructional goals.

The Online Collaborative

The on-line community formed by this initiative consisted of two history teacher facilitators, two educational technology facilitators, and 29 teacher participants. Participants worked in small groups with a facilitator who helped maintain an environment conducive to communication, professional networking and the creation of exemplary instructional materials. Following the two-day workshop, the participants continued to develop their instructional materials as part of this online collaborative. We believe that participant to participant online communication is important as research suggests that knowledgeable teachers positively affects other teachers' attitudes and behaviors about using computers in the classroom (Becker, 1994). There are five different forms of online communication -- chat, original written material, response to written material, participation in the discussion forums, and e-mail. This wide variety of communication activities encouraged participants to form a collaborative community supporting the instructional materials development. These completed materials are posted on the CH-SSP web-site (www.sscnet.ucla.edu/ch-ssp). Seventy percent of the participants produced completed lessons.

We believe this project is an example of the direction professional development will be going in, in the future. The problem-based learning model allows teachers to solve an historical thinking and understanding problems in students by creating technology-integrated instruction. The combination of both offline and online activities enables teacher participants to establish professional relationships in a familiar and comfortable environment and then extend and utilize these relationships in an online environment. Without this online environment, it is difficult to maintain the relationships established in professional development institutes because of geographical and time constraints. This project explores the use of an online collaboration tool for developing and supporting statewide networking of teachers sustained over time.

Outcomes

This institute achieved it's goals moderately well. The guided inquiry process worked well as a discussion tool, but feel short of our expectations when it came time for the teachers to transfer that discussion into the development of a process for developing instructional materials. It also did not carry well into the online environment, although we believe that was due to motivational factors and not the nature of the discussion itself. We believe, and the feedback we received confirms this, that not enough structure was provided for the teachers in going from the discussion to the implementation. This is a difficult step for many teachers. We were committed to this structure being provided by the teachers themselves as opposed to being imposed from a central leadership. However, this did not happen.

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The online environment as a community building tool and a collaborative environment was less than satisfactory. This was due to several factors. First, the environment that was used is completely text-based and was unreliable technically. Second, teachers had a difficult time remaining committed to the project once they returned to their schools. Third, many teachers had technical difficulties which were time consuming and difficult to overcome. Fourth, many teachers were relative novices to technology and were not comfortable establishing relationships electronically. For some of the groups, the online environment worked fairly well. For others it was hardly used at all.

Approximately 70% of the participants completed their instructional materials. Of these, about half were satisfactory. Of those that were not, in many cases the integration of technology was not at the level which we hoped it would be. It tended to be a superficial integration and not a use which directly encouraged and supported higher order thinking. A few lessons indicated a lack of understanding of what the product was expected to be.

As a professional development institute, we feel that several changes can be made to improve the participants understanding of technology as an instructional tool, to improve the utilization of the online environment to conduct the professional development and to improve the support for the teachers to move from a strong and informed discussion to the implementation of that discussion in a development context. These changes are discussed in the next section.

Recommendations

This professional development institute will be repeated in January 2000. We have several recommendations. They are as follows:

1) Address the teachers' level of motivation to continue in the online environment.
2) Provide consistent technical support
3) Require school site administrator support.
4) Provide more direction for the development process.
5) Provide a more concrete discussion of technology and its' classroom uses.

There were many difficulties with the professional development institute, some of them centered around participants actively engaging in the online communications. Teachers, once they returned to their original school sites, lost track of the online effort and gradually participated less and less. The stipend offered was small and not of sufficient motivation. We are suggesting that providing participants with a larger stipend or University Extension credit towards salary points may be an important motivational component. Technical support is also essential. Several teachers could not participate because they did not have access to the appropriate technology, or the technology failed them. This ties in directly with school administrator support. We will be requesting that schools provide the technical support necessary for these teachers to participate in the institute in the future. There are several reasons for this. First, this gives the school "buy in" to the project, motivating both the school and the teacher to continue participation. Second, many schools provide the ISP for

the teachers in any case. Technical support is part of that responsibility. This request is not a requirement - the teacher can find other sources of technical support. We can also provide a limited amount. However, we feel that by asking for administrator support and technical support, we involve a greater community in the project and create more motivation to continue participation.

The process for instructional materials development was an issue. We would prefer, encourage and work towards that process being developed by the participants themselves. However, many of the participants requested a more structured process for developing the materials. We do not know if this was because they were using a new environment and felt unsure about how to proceed, or if they would have difficulty developing instructional materials without an imposed process in any environment. In the future we would recommend that direction and additional structure needs to be provided for the development process. We will also be adding an extra day to the initial institute. A significant portion of that time will be spent more directly addressing uses of technology in the K-12 History and Social Science classroom. It is anticipated that teachers will take from that discussion specific ideas about how to use technology in the instructional materials that they will be developing.

Conclusion

In general, a professional development effort using online instructional materials development, in a group, collaborative setting, needs a structure to support it which includes facilitator support for the multiple forms of online communication, technical support, and clear guidelines for the participants process. In addition, participants need a tangible motivation for completing the project, such as salary points or a stipend. These online development projects differ from traditional development projects in that they can be conducted asynchronously and between participants who are at a geographic distance. For the future, we hope that the communities that are formed can continue on, develop further materials and expand to provide online support for other teachers in their subject areas or grade levels.

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Assessing Pre-Service Students' Knowledge In A Social Studies Methods Course Using Digital Resources

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Abstract: This paper is a preliminary report on the findings of a study assessing the processes related to pre-service social studies students' development of knowledge about to teaching history using digital historical resources. A comparison of participants' subject matter knowledge and pedagogical content knowledge uncovered a divergence between what social studies pre-service students know about history and what the know about teaching history.

Introduction

The most significant new issue impacting the construction of knowledge among pre-service social studies students relates to the use of resources on the World Wide Web (Johnson, 1998; Martin, Smart, & Yoemans, 1997). Changes in the development of social studies teacher knowledge attributed to the World Wide Web have been particularly significant within the discipline of history. The application of the World Wide Web has led to dramatic changes in the way historical content is stored, retrieved, and used (Ayers, 1999). Web based digital historical resources are now part of pre-service social studies students' experiences in learning history and learning how to teach history. As such, digital historical resources should be accounted for in new research on the development of social studies' teachers' knowledge.

Shulman (1987) conceptualized teacher knowledge as consisting of seven categories: subject matter content knowledge, pedagogical content knowledge, curriculum content knowledge, general pedagogical knowledge, knowledge of learners, knowledge of educational contexts, and knowledge of educational ends. The development of subject matter content knowledge and pedagogical content knowledge are an important part of pre-service social studies students' education. The social studies methods course plays a particularly important role in developing pedagogical content knowledge about how to teach using historical documents (Fehn & Koppen, 1998). Since the advent of the World Wide Web instruction in how to teach using historical documents has included digital historical resources.

Very little research has been conducted on the development of pedagogical content knowledge using digital historical resources. There has been some research on the development of pre-service social studies students' subject matter content knowledge (specifically historical thinking), but this research base needs to be expanded (Downey & Levstik, 1991). New research should focus on inquires into the relationship between subject matter content knowledge and the development of pedagogical content knowledge (Adler, 1991). An analysis of pre-service social studies students' subject matter and pedagogical content knowledge and the relationship between the two may illuminate new ways to develop pre-service students' teacher knowledge (Adler, 1991; Wilson, Shulman, & Richert, 1987). New research in this area must take into account the effects of information technology on the creation of new pedagogical content knowledge (Bohen and Davis, 1998). In addition, the relationship between the historical scholarship and education should be considered

The dramatic potential of scholarship produced from digital historical collections has been recognized and to a degree realized by the Virginia Center for Digital History (VCDH) at the University of Virginia. VCDH is the home of the Valley of the Shadow an on-line collection of materials relating to two communities before, during, and after the American Civil War. The collection includes letters, diaries, newspapers, images, maps, census records, and military records. The site is one of the most heavily visited history related web sites, receiving traffic from students and non-students alike in countries across the world (Thomas, 1999). The Valley of the Shadow has been used in numerous K-12 and higher education settings. Galgano (1999) reported

on his use of the site in an undergraduate history methods course. Students' in the course analyzed newspaper articles, letters, and diaries in exercises on historical bias, document verification, and statistical analysis. In addition, students used the archive to research a paper relating to some issue or problem from the period. The author posited that the Valley of the Shadow presents "virtually unlimited research potential" (p.26).

Since pre-service social studies students are expected to learn content by using information technologies, these technologies should be accounted for when researching the development of pedagogical content knowledge. While the role of the information technologies does not need to be the primary focus of an inquiry into development of pedagogical content knowledge, not considering or ignoring it would be unrealistic. The recognition of the place of information technology in the development of pre-service students' pedagogical content knowledge is practical and realistic.

The Study

This research study was concerned with analyzing the development of participants' pedagogical content knowledge of specific historical topics relating to the American Civil War. The rationale for choosing content from the American Civil War related to its relevance. The Civil War was a pivotal event in American history and is taught in secondary American history classes. Documents from the Virginia Center for Digital History's Valley of the Shadow were used. The setting for this research study was a social studies methods course at a large southern public university. This course was conducted over a two semester period. Data was collected from the first semester. During this semester an emphasis was placed on the use of digital primary historical resources.

The participants in this study were enrolled in the social studies methods course described above. The course had nineteen students enrolled. Of these nineteen students twelve participated in this study. All the participants in this study had taken numerous courses in history and were pursuing an undergraduate major in history or had received a four-year degree with a major in history. Participants pursuing an undergraduate major in history had taken three education courses: foundations of education, philosophy of education, and introduction to instructional technology. Participants with a four year degree were enrolled in their first education courses. All participants were enrolled in a general educational methods course as well as the social studies methods course.

This study was qualitative in nature, but did involve the collection of some quantitative data. Data was collected using written assessments of subject matter knowledge, interviews, and observations of the participants' social studies methods course. Data was analyzed using Erickson's (1986) qualitative methodology. The analysis was written in the form of assertions derived from the data and vignettes that supported the assertions. Pilot research related to this project has been conducted. The preliminary findings from this piloting helped to provide clarity for the remaining research.

Subject matter content knowledge relating to history was conceived of as historical understanding and historical reasoning. Participants' historical understanding was measured using the multiple-choice section of the 1988 College Board Advanced Placement (AP) test for history. Actual AP test scores from the 1988 test ranged from 1 to 5. These scores included the multiple choice test and writing test scores. For the purposes of this study participants' multiple choice scores were converted into a 1 to 5 score using results from the 1988 test. Each converted score represented the score made by the largest percentage of test takers on the actual 1988 test. For example, 60.3 percent of all 1988 test takers who scored a 5 on the AP test scored between 71 and 100 on the multiple choice section. Consequently, participants who scored a 71 or higher were given a 5. The remaining four scores ranged as follows, 4 = 56 to 70, 3 = 44 to 55, 2 = 24 to 43, and 1 = 0 to 24. All participants' also completed a writing assignment that was used to measure historical reasoning. This assignment involved participants writing an essay on a question relating to the American Civil War. The question asked students to define substitution and describe its effect on the southern army. Participants were given two documents from the Valley of the Shadow web site. They were also instructed to search the Valley of the Shadow for additional documents. Participants were given a letter from a southern soldier to his brother about the soldier's efforts to obtain a substitute to serve in his place in the army. The second document was a newspaper article detailing Confederate President Jefferson Davis' opposition to substitution.

The analyses of participants' essays consist of four parts.
1. Ratio of support statements to claims - Claims were considered a phrase or statement that put

forward a position that could be argued. Support was considered any phrase or sentence that offered to extend, justify, cite, or explain a claim. It was possible to have more support statements than claims.

2. Evidence of additional research - The participants were given two documents to read before writing their essay. They were also asked to search the Valley of the Shadow for additional documents relating to the question. Each essay was evaluated for evidence that additional documents were consulted.

3. Evidence of document citation - Each essay was checked for citation of the documents used as evidence.

4. Organization - Each essay was checked for organization in terms of introduction and conclusion.

The ratio of support statements to claims was converted to a score between 0 and 2. All other parts of the analysis were scored 0 for not evident and 1 for evident. The total possible score on the historical reasoning as measured by the essay on substitution was 5.

In order to assess the transformation of participants' pedagogical content knowledge an activity was developed in which participants had to learn about some content and then develop an instructional idea related to that content. In this activity participants were given one of three topics to research using the newspaper archives at the Valley of the Shadow. The topics included African culture in America, the abolition of slavery, and political party positions on issues relating to slavery. The participants were asked to search for and read at least one article from the two Franklin County newspapers at the Valley of the Shadow web site. After reading the articles participants were asked to answer two questions relating to their topic and to develop and answer two more questions. They were also asked to think of an instructional idea relating to their topic using the resources at the Valley of the Shadow. The instructional ideas and a summary of participants' subject matter content knowledge were submitted in the form of a message posting to a discussion group. The content and lesson ideas were also discussed during social studies methods class meeting.

Findings

Participants subject matter content knowledge as measured by historical understanding and historical reasoning was well developed (Chart 1). Participants' scores on the AP test ranged from 46 to 71 percent correct. The convert scores ranged from 3 to 5. Scores on the historical reasoning assessment ranged from 1.6 to 5. Ten of the twelve participants scored a 4 or better (above 56) on the AP test. Two participants scored a 3 on the AP test, but scored well on the historical reasoning assessment. Three participants scored below 3 on the historical reasoning assessment. All three of these participants scored 4 on their AP test. Scores on both measures were divided into high and low groups with 2.5 serving as the dividing line. Eleven participants scored in the high region on both historical understanding and historical reasoning. One participant scored in the high region on historical understanding and the low region on historical reasoning. The scores indicated that participants' subject matter content knowledge conceptualized as historical understanding and reasoning was clearly advanced. Participants' pedagogical content knowledge was not as advanced.

Name	Historical understanding (HU) AP test score percent / extrapolated score (of 5)	Historical reasoning (HR) Score (of 5) on Substitution essay	Grouping on HU and HR (HU/NR)
Sarah	71 / 5	3.4	High/High
Jane	69 / 4	3.5	High/High
Jerry	67 / 4	5	High/High
Doug	67 / 4	3.5	High/High
Mandy	67 / 4	2.8	High/High
Noel	65 / 4	1.6	High/Low
Jennifer	65 / 4	3.5	High/High
Stacey	63 / 4	2.8	High/High
Melanie	61 / 4	3.2	High/High
Peter	58 / 4	4	High/High

Erin	49 / 3	4.2	High/High
Emily	46 / 3	4.2	High/High

Chart 1 Participants subject matter content knowledge

Pedagogical content knowledge was intricately tied to subject matter content knowledge. It might be expected that given the context of participants' well developed subject matter knowledge, pedagogical content knowledge would be as well developed. For some participants' this was the case, but the subject matter content knowledge was never fully transformed into pedagogical content knowledge. The manner in which participants' transformed their subject matter content knowledge into pedagogical content knowledge was expressed in varying degrees of completion. Jane most fully transformed her subject matter knowledge into pedagogical knowledge. Doug partially transformed his subject matter knowledge into pedagogical content knowledge. Jerry incompletely transformed his subject matter knowledge into pedagogical content knowledge

Jane

As one of three participants who researched Franklin County newspaper accounts of African culture, Jane noted several discrepancies. While racist and "derogatory" language dominated the Democratic Valley Spirit, Jane found one article in the paper that spoke in positive tones about a black social event. She noted similar discrepancies in the Republican Franklin Repository and Transcript. Although the paper was more likely to use "neutral language" when reporting on African culture, Jane found some articles that "revealed a still-prejudice nation." Overall the general tendencies of the two papers where found to be similar. Jane noted that the two newspapers treated the topic of African culture with equal disdain. "The tendencies of these newspapers were certainly to portray African American culture as threatening and foreign." Jane's understanding of the content was compete but left her feeling tenuous and confused. Referring to an article she found in the Valley Spirit Jane wrote "another article, though, spoke of the entertainment one evening at a church as an evening 'to be remembered'; this positive article certainly confused me." She indicated that the papers reflected similar yet discrepant attitudes about African culture. Jane's subtle subject matter knowledge of contradictions within the newspapers was transformed into a coherent and cleaver pedagogical idea.

Jane's pedagogical or instructional idea was cast around a concern she expressed with the content of the lesson. She felt the resources that she used to learn about the topic would pose problems for high school students. Specifically, she was concerned about the language used in the newspaper articles and a quote attributed to Thomas Jefferson. Jefferson was quoted as saying there were seventeen differences between blacks and whites. Jane was concerned that this quote "could potentially hurt the class' atmosphere." Despite this misgiving she felt the introduction of the quote offered a "learning moment" where she would have to "teach about the difference between Presidents' opinions and their cultural ramifications." These concerns were similar to the sense of contradiction Jane felt when she read newspaper articles about African culture. On one hand she did not want to include certain newspaper accounts for fear of offending some students. At the same time Jane viewed the particularly inflammatory Jefferson article as beneficial. Her sense that the newspaper articles she read did not express a consistent view led her to suggest a debate as an instructional idea. The debate would allow students to deal with what Jane considered a controversial subject matter in an acceptably environment. The pedagogy of debate captured the central elements of contradiction evident in Jane's subject matter content knowledge.

Doug

Doug was one of five participants who researched political party positions on slavery. These five participants answered the following two questions. 1) What was the party position on slavery as expressed in the articles? 2) What was the context of the articles? Doug's understanding of political party positions on slavery was characterized by a view of abolition that was comparative in nature. Doug indicated that the Republican Party was indecisive on abolition while the Democratic Party was completely opposed to abolition. "The Republican Party, as represented by the paper, was cautiously opposed to slavery. Abolition was a touch subject, with Republicans siding on either side of the subject." In contrast to this view Doug stated that the Democratic paper, the Valley Spirit, took a "very anti-abolitionist stance." He further argued that as expressed in the Valley Spirit Democrats believed that "abolition, by giving freedom to slaves, would give the south more

political clout, as freed slaves would now constitute a whole person in terms of population, rather that the 3/5 as in the past." Doug's subject matter content knowledge of political parties' position on slavery was characterized by two organizing factors. First, Doug focused on the term abolition. He referred to the Democrats as being anti-abolitionist. Abolition for Republicans was a "touch subject" with party members holding a variety of positions on the subject. Second, with regard to the Republican Party Doug focused on a contrary view of Civil War politics. He saw the Republican Party as incompletely abolitionist. These subtleties only partly translated into pedagogical content knowledge.

As an instructional idea Doug suggested that students complete a worksheet like the one he had done. He indicated that this type of work could "direct student research." He further stated that "by giving the students an issue to address and some questions to answer, the students have a clear understanding of how to proceed." He suggested that students could synthesize and generalize from their answers. Doug saw the pedagogical strength of the activity in the comparative aspects. "I like the comparative aspects of the assignment, contrasting the Republican and Democratic views." Although this instructional activity allowed for the possibility of differences and similarities being discussed, they was no assurance that students would uncover the range of opinion on abolition that Doug recognized within the Republican party. In fact, by having students compare and contrast Republican and Democratic party positions the lesson facilitated a simple dichotomous consideration of the respective parties' views on slavery. Doug's subject matter content knowledge was much more sophisticated than his pedagogical content knowledge. The transformation of subject matter knowledge into pedagogical content knowledge was impeded by an inability to express the intricacy of his subject matter knowledge in pedagogical terms. The pedagogical terms compare and contrast would not allow for the "spectrum" of positions on slavery that Doug said were represented within the Republican Party. Although the Valley of Shadow may contain resources that would facilitate students understanding the differences between Republicans and Democrats on issues relating to slavery, Doug never indicated how they might be used. Doug approached the lesson as a learner instead of a teacher. He invoked a strategy that may summed up as, if it worked for me it will work or them. Given Doug's status as fourth year student majoring in history at a large university this assumption was highly problematic.

Jerry

Jerry researched newspaper positions on slavery. His subject matter content understanding was expressed during a class discussion conducted after participants searched the Valley of the Shadow for information relating to their questions. "The articles that I found support the fact that neither party, the Republicans or the Democrats supported abolition. The Republican Party was antislavery...I found one article that indicated that they did not like the mixing." After indicating that the antislavery movement was the majority view in the north Jerry implied that this antislavery position was morally inferior to the abolitionist position. He believed that antislavery sentiment did not necessarily translate into notions of equality or integration. He developed an instructional idea that related to the central focus of this content understanding, but incompletely transformed the subject matter into pedagogy.

In Jerry's lesson students would first define the words abolitionist and antislavery. These definitions would be obtained from the Valley of the Shadow or another Internet site. After these terms were defined Jerry wanted students to determine how the two Franklin County newspapers represented the issues of slavery and anti-abolitionism. His instructional direction reflected a concern that students do not understand the meaning of antislavery or abolitionism. By having students define the two terms Jerry thought that his students would have grounds for making the comparison that he made in his content understanding. Jerry expressed that he also wanted his students to examine the differences in practice between abolitionism and anti-slavery. "I would like students to understand that the majority of Northerners held anti-slavery sentiments, rather than abolitionist sentiments." This instructional interest was reflective of the central focus of Jerry's subject matter understanding. When asked to indicate what he thought students should learn in the lesson Jerry said: "I would like for the students to dispel the myth that the North held primarily abolitionist views during the Civil War." This content was not facilitated by the instructional idea. Jerry suggested discussion as a way to get his students to understand what he perceived to be a myth about the abolitionist movement. Although discussion can facilitate an almost infinite number of instructional goals, Jerry never indicated how students would use the resources at the Valley of the Shadow to facilitate this discussion or assist them in understanding the abolitionist myth. The discussion strategy represented an incomplete pedagogy that was presumably dependent on Jerry's ability to direct the discussion.

Conclusions

The implications of this research project relate to the development of pedagogical content knowledge while using digital historical materials in social studies education methods courses. Participants had little trouble in using the Valley of the Shadow to develop their own subject matter content knowledge, but where often unsure about how the site could be used in K-12. Given the impact of technology on the development of teacher knowledge, understanding of how pre-service social studies students' think when using digital historical resources is very timely and significant. Research relating to the transformation of subject matter content knowledge into pedagogical content knowledge using digital historical resources is central to the purpose of social studies education methods courses. In this study even though participants had a sophisticated level of historical content knowledge when using digital resources in a broadly studied area such as the American Civil War, they struggled to transform that subject matter knowledge into pedagogical content knowledge. To resolve this problem social pre-service students must be given the time and resources necessary to develop their pedagogical content knowledge.

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Collaborative dialogue: A web-based, multimedia case study shared among geographically disparate social studies educators

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Abstract: This study combines the use of a web-based multimedia case study and threaded discussion groups in an attempt to bridge the gap between theory and practice via dialogue among geographically distant preservice teachers, inservice teachers and university faculty members. The paradigm for this study is interpretive inquiry and we employ Erickson's (1986) method of analytic induction to formulate empirical assertions. Preliminary assertions relate to instructional strategies that facilitate collaborative case-based teaching and learning among students in geographically disparate locations and relate to the kinds of knowledge constructed and interactions observed via such dialogue. Final results will be available by the SITE 2000 meeting in San Diego.

Introduction

A wealth of literature reveals that completion of teacher education courses does not necessarily result in the ability to teach (Cochran-Smith, 1991; Feiman-Nemser & Buchmann, 1987; Knowles, Cole, & Presswood, 1994; Lanier & Little, 1986; National Commission on Teaching and America's Future, 1996). Bridging the gap between theory and practice has been a challenge for teacher education programs for many decades. John Dewey (1965) encouraged teacher education programs to prepare teachers to reflect upon theoretical issues and their relationship to practical classroom application. Nearly twenty years later, Zeichner (1983)called for development of reflective teachers who critically analyze classroom situations. Recently, Cooper and McNergney (1995, p. 2) claimed "...the problem is not that programs are too theoretical, but that theory has not been related to real circumstances to help prospective teachers interpret what is happening and to guide their actions."

Case-based learning originated in business and law schools (Christensen, 1987) and has recently been used in teacher education in an attempt to bridge the gap between theory and practice (Bliss & Mazur, 1996; Cooper & McNergney, 1995). Benefits of applying cases to teacher education include (1) development of critical analysis and problem solving skills, (2) opportunities for reflective practice, (3) analysis and decision-making in complex situations, (4) active learning, and (5) creation of a community of learners (Merseth, 1991). As we head into the twentieth century, technological advances have made it possible to improve traditional case-based learning with multimedia features that enhance authenticity and active learning. For example, technology allows us to go beyond the traditional one-dimensional text based case study to include features such as audio and video clips. Technological advances have also made it possible to extend the learning community beyond the walls of traditional teacher education courses (Bliss & Mazur, 1996; Schrum, 1991). Preservice teacher education learning communities are being redefined to include preservice teachers from geographically disparate locations, experienced classroom teachers, and university instructors. This study will combine the use of a web-based multimedia case study and threaded discussion groups in an attempt to bridge the gap between theory and practice via dialogue among geographically distant preservice teachers, inservice teachers and university faculty members.

The case study was written by a team including inservice teachers, university faculty members and doctoral students with the goal of creating opportunities for students to analyze and reflect upon real-world classroom issues (Merseth, 1996) such as classroom discipline, classroom organization, parental communication, and integration of technology. Educational technology faculty members and doctoral students worked with the case study team to transform the case into a web-based, multimedia format that includes images, audio and video files and pop-up text windows. The case features a first year social studies teacher who is struggling to design a meaningful project that will not only introduce her eighth grade students to the Bill of Rights, but will also encourage them to investigate the continuing significance of these essential freedoms. (http://www.citeforum.org/social/case/casestudies/reflections/home.html)

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The participants in this study will communicate via a Usenet newsgroup. A Usenet newsgroup is an electronic community typically organized around a specific theme or topic, and is displayed in a way that reflects the threaded conversation structure. The mechanism for mirroring the newsgroup with remote sites is a part of the Network News Transfer Protocol (NNTP) that is implemented by Usenet server software. The University of Virginia and the University of Florida have arranged to exchange the newsgroup between the two universities. This distributed model alleviates excessive connection delays since the data is available on a server at each site. Participants in the newsgroups discussions include preservice teachers, inservice teachers, and university faculty members.

Purpose of Study

Social studies teacher education programs have a responsibility to "build ongoing and stimulating collaborative links among social studies educators" (Armento, 1996, p.497). Likewise, teacher education programs have a responsibility to prepare prospective teachers to know and apply educational theory (Cooper & McNergney, 1995) so that professional knowledge is considered when making classroom decisions (Schon, 1987). We are attempting to expand the learning community of preservice social studies teachers at two Research I universities by presenting them with a multimedia case study that will serve as the focus of their online dialogue. The purpose of this research is to study the development of a cohort of social studies educators who expand their own learning community by engaging in professional discourse with colleagues in geographically disparate locations.

Paradigm and Methodology

The paradigm for this study is interpretive inquiry. Interpretive inquiry was developed under the thesis that "human discourse and action could not be analyzed with the methods of natural and physical
      (Miles & Huberman, 1994, p. 8). We selected this paradigm because we wish to explore the interactions in the on-line learning community from the perspective of individual and collaborative student experiences.

We will employ an interpretivist research strategy (Erickson, 1986). Specifically, we will employ Erickson's analytic induction (Erickson, 1986)approach to data analysis that centers on the formulation of empirical assertions that are confirmed or disconfirmed by a search for empirical warrants within the data. Validity will be established via carefully attention to the "five major types of evidentiary inadequacy" (Erickson, 1986, p. 149) and triangulation (Lincoln & Guba, 1985).

A variety of strategies will be used for collecting data. The primary data source will be transcripts from the threaded discussion group. Additional data sources will include class face-to-face discussion transcripts, purposefully selected student interviews, student reflections, and weekly instructor reflective journals.

Results

The data for this study is currently being analyzed and we anticipate that the study will be complete by the SITE 2000 meeting in San Diego. Preliminary assertions relate to instructional strategies that facilitate collaborative case-based teaching and learning among students in geographically disparate locations and relate to the kinds of knowledge constructed and interactions observed via such dialogue.

Results from this study will provide a platform for continued research addressing (1) the isolationistic tendencies of teacher education programs, (2) mechanisms for bridging educational theory and practice, and (3) preparation of reflective preservice teachers who are prepared to utilize collaborative technologies for professional development during their induction years and beyond.

Educational Significance

Many studies related to the use of alternative communication and collaborative technologies are not grounded in solid research methodology but are merely anecdotal accounts (Blanton, Moorman, & Trathen, 1998). This study is grounded in the interpretive paradigm (Miles & Huberman, 1994) and implements analytic induction (Erickson, 1986) in an attempt to shed light on important issues related to on-line collaborative learning environments including but not limited to: effective instructional strategies, the types of the knowledge constructed, and the nature of interaction within such environments.

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Interdisciplinary Applications for Geographic Information Systems

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Abstract: Automated Geographic Information Systems are capable of creating layered
maps from a tabular data set and further, of allowing the user to analyze the information.
This paper describes five North American schools that have successfully integrated GIS
and have shown evidence of the value of teacher collaboration. The spatial analysis
function of the database strongly supports interdisciplinary applications. Because of this,
interdisciplinary projects between science and technology classes, history, science,
language arts and technology classes can be coordinated using a combination of GIS and
other applications such as word processing, database or spreadsheet information, power
point or web page applications.

In recent years, a number of reports indicated a general geographic illiteracy among students in the United States. This illiteracy, coupled with the increase of communication technologies which demand greater global awareness, naturally caused a great deal of concern for parents and educators. These concerns led to a reevaluation of the way geography is taught in the American classroom.

One response to these studies was the National Geography Standards, prepared by the Geography Education Standards Project in 1994. "Geography is composed of three interrelated and inseparable components: subject matter, skills, and perspectives... All three - subject matter, skills, and perspectives - are necessary to being geographically informed" (Geography Education Standards Project, 1994, p.30). In order to more adequately develop geographic skills, an environment that encourages this development needs to be created. The Standards also emphasize the potential role of Geographic Information Systems (GIS), a computerized spatial analysis tool, in meeting this educational challenge. With the availability of new powerful personal computers, it appears the use of this technology is now a reasonable possibility for the average classroom. GIS, therefore, appears to be poised to become a powerful tool in the development of geographic skills. Significantly for educators, GIS also appears to fit in well with the constructivist environment that many classroom teachers are seeking. The focus of this paper will center on the development of interdisciplinary applications for GIS in K-12 and higher education classrooms.

Definition

Since the 1980's, GIS has been rapidly expanding throughout the world. Those seeking to analyze data spatially have found in it a tremendous technological aid. The United States Geological Survey (USGS) describes GIS as a "system capable of assembling, storing, manipulating, and displaying geographically referenced information" (USGS, 1992). This information has a spatial component, and so, a map can be produced from the data set. The power of GIS is displayed in its ability to turn this data into layered referenced maps and then query through those layers allowing the analyst to see relationships.

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Those new to the concept of GIS may find it clarifying to consider the example of the encyclopedic map transparencies that overlay new information one upon another. An overhead with several transparencies laid upon it is another good example. If a teacher were to teach about the five themes of geography using an overhead, they might use five transparencies. A town could be shown with a transparency for each theme - place, location, human environmental interaction, region, and movement. An automated GIS would be able to use the tabular data set to produce these "transparencies" and display them on the screen in any thematic order one would choose. In addition, one could use a variety of techniques to analyze this information.

Applications

From research in five North American schools that have successfully integrated GIS, there is strong evidence of the value of teacher collaboration. Because the information system (database) function of a GIS is multi-purpose, its spatial analysis function is an added benefit in interdisciplinary applications. In a database or spreadsheet, if there is a "geocoded" field such as a street address or coordinates of latitude and longitude, the data can be displayed in a map format. Interdisciplinary projects between science and technology classes, history, science, language arts and technology classes can be coordinated using a combination of GIS and other applications such as word processing, database or spreadsheet information, power point or web page applications.

Teachers who collaborated on developing GIS options were most often Science teachers, Instructional Technology teachers, or Geography teachers. The Geography team was a Canadian pair. In Canada, Geography is taught as a major subject throughout the K-12 curriculum. In all of the US schools, at least one teacher was a Science teacher, and some teams were both Science teachers (Alibrandi 1997). In the one middle school, a more interdisciplinary project took hold, and data that was gathered in Language Arts classes became data for the GIS application. In the middle school studied, all but a math teacher participated in the interdisciplinary project.

Each teacher interviewed discussed the benefits of collaboration, perhaps the most important being the support needed during the steep learning curve of early engagement of GIS. Additional perspectives on application, data acquisition, and manipulation of the data were also shared in successful collaborations. As teachers and students learned more about how to use GIS technology, a synergistic effect of collaborative learning characterized the GIS classrooms. These teachers were not afraid to have students develop their own interests and inquiries. When those inquiries moved beyond the teachers' current capabilities, the teachers engaged community partners, other teachers, or technical assistants to guide their learning.

In each case, GIS use spread somewhat laterally across curricula and made new and more sophisticated projects possible. In the next section, I introduce five schools that have integrated GIS into various curricular applications. In each case, there was collaboration. In most cases, there was in-school collaboration and partnership with a community partner. In addition, in most cases, there was an *actual* field component as well as a *virtual* application. As we develop avenues for GIS use in classrooms, the integration of field and community work will greatly enhance the mutual benefits to schools and communities as there is great potential for capacity-building as a result of these collaborations.

Five Cases:

Baymouth High School

Baymouth (a pseudonym), located in a seaside community in New England, the project was an after-school environmental community service project. Baymouth is the only high school in a 60-square mile, town; the historic county seat. Students met weekly after school to gather water quality data for an ongoing study of a small source-to-sea river that had suffered degradation from channeling, municipal, private, agricultural and golf course withdrawals, encroaching

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development, and high densities of nesting waterfowl. Students worked at streamside, taking weekly samples and conducting physical, chemical, and biological tests at four locations on the river in fall and spring. During winter, students built a database of their findings using the streamside locations as the "geo-coded" points to link (fields in the database) to existing database information and GIS maps from the town's GIS department.

This was a partnership project funded by a state community service organization for capacity-building between school and local government, NPO's, and local businesses. Well-developed GIS information at the town and county levels supported the student-generated data. Two teachers in the Science department; one who had developed an Instructional Technology lab for student use, facilitated the project at the school. Neither teacher had been trained in GIS use prior to the project, but both saw its value for environmental science. The project had been funded through a state Community Service Learning grant administered by the non-profit land trust partner (Alibrandi, 1998). Students were responsible for presenting their findings and participated in a locally sponsored "River Day" event and at a state-wide conference for environmental community service.

Delany Magnet Middle School

Delany is a 'magnet' Middle School for "Academically Gifted and Talented" students in a city in the south east. The school is located in a historically Black community, and the students participating in the GIS electives came from the student body at large. At Delany (a pseudonym), the teacher team was a combination of a Science and an Instructional Technology teacher who collaborated on developing a GIS elective. One teacher had participated in a one-week In-service teacher training course in GIS and water quality and hazardous waste.

The students came from 6th to 8th grades. Most of the students interviewed had participated in more than one quarter of the elective course entitled "Satellites, Computers and Mapping" (Thompson & Hagevik: URL). The teachers had developed the GIS course as an elective, and found that students wanted to continue to develop GIS skills. The course has evolved with teacher and student interest for several quarters.

Farr Tech

Farr Tech (a pseudonym), another 'magnet' school for Science and Technology located in a major city in the Great Lakes region, draws students from the greater metropolitan area. The teacher is a highly respected innovator and GIS technician, and has reached out to community business and educational partners. The teacher had instituted GIS in the context of his science courses, and had been teaching with GIS for three years. The student interviews took place during a Saturday class; a partnership project in which a local business representative interested in training and hiring young technology-proficient workers, collaborated in GIS instruction with the teacher. The class met in a nearby community college computer lab of perhaps thirty computers and a projection screen. The predominantly African American students volunteered randomly to be interviewed.

It is important to note here, that three of the five schools featured are 'magnet' schools. The integration of this technology in classroom settings in the technology's early years was far more complex than a "plug and play" software of application. Since the pioneering work of the teachers featured at Farr Tech and DaVinci, the software for GIS has become more accessible, simpler to operate, and more ubiquitous in both government and commercial settings. The students in the Saturday class came from 10th through 12th grades, and were interviewed during the weekly 3-hour session they attended voluntarily. The entire course extended over a 16-week semester, meeting every Saturday morning.

The problems being addressed were resource location problems; where to locate child care facilities, transportation routes for a food bank, redesigning school districts for equity and neighborhood integrity. The teacher has gone on to develop a city-wide system of school facilities management using student assessors and GIS data managers and mappers.

DaVinci High School for Science and Technology

DaVinci is one of the premier magnet high schools for science and technology in the nation. Located near the nation's capitol, the county is home to the US Geological Survey headquarters. If any school should pioneer GIS, DaVinci should, and has. Jan was one of the nation's first teachers to introduce GIS to the high school curriculum. She had been working to integrate the technology for going on four years. During that period, the software applications had undergone phenomenal change, and significant work has gone into developing more accessible software applications to attract teachers and school libraries to include GIS as an instructional technology.

Jan works with a partner teacher who conducts field studies in geology and hydrology. During my visit, which was year three for the teachers, Jan was feeling that this year had been the most successful. The course was a double major "capstone" senior course designed to integrate science and technology in an original research problem. The community partner was a GIS specialist from the USGS who was interested in partnering to have students solve a real problem looking at the relationship between impervious surfaces and drainage. Students compared maps and satellite images of their region over time. In the process, they provided a service of research by "ground truthing" the satellite image data.

Each pixel of the satellite image represents an actual area on the ground, but the satellite image is not photographic; it is generated in response to heat reflected at the earth's surface. Checking the value of specific pixels of the satellite image required that students "ground truth" its value by visiting the exact location on the ground and mapping whether there was tree cover, asphalt, open land, or what have you.. With their USGS partner, the teachers and students developed an error matrix to verify the predictive accuracy of the satellite image. Then their analysis of change in impervious surface (roads, parking lots, roogftops, etc.) could be conducted with greater confidence.

I visited the school near school year's end, while the seniors were scrambling to complete their components for an upcoming presentation at the county's impressive auditorium. Students were compiling data, refining reports, and constructing power point presentations. Jan and her partner, a Geology teaaher allowed some of the students to be interviewed even in this extremely busy time. Three weeks later, I returned to see their presentations where very knowledgeable audience members quizzed them on their procedures. The students reported that, among their other findings, of over fifty gauging stations positioned throughout the county's river basins, only three had reliable, consistent data usable for their study. This the students reported in a county that houses many of the nation's elected officials. With confidence, competence, assurance and candor, they responded to pointed questions from the audience. They were soundly applauded, and conversations ensued after the presentation much as in a professional scientific meeting or hearing.

The Starr School

Innovative teachers Frank and Max teach in a private boys' school in a Canadian city. I was fortunate to visit any school in a nation where geography is taught in equal amounts to history in the British tradition, and where GIS was first developed. I found the teachers utterly willing to experiment and to allow me full access to their classroom as they carried on with their lessons and their humor-filled school days during my visit.

In a corner of the classroom, I met with randomly available individual students who took time out from their team-mates (they were working in pairs on specific problems) to complete drawing tasks and answer questions. To a man, each student described GIS as a tool for "problem-solving." They weren't being coached to say this, but had apparently internalized the perspective. It was a refreshingly informal and friendly atmosphere; not stuffy in the least, but the teachers were quick to aside that "just because they're in private school doesn't mean that each boy is a genius; kids are kids."

The GIS classroom was equipped with perhaps twenty computers, most of which were working and networked to a single printer. Students were using GIS to address problems such as transportation for a bid to attract the Olympics, resource location problems to plan for equitable access by neighborhood

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groups, and developing maps for worldwide web access. The Geomatics course was a capstone course built upon a strong base of geography classes. The teachers had co-authored a workbook for the course (Taylor & Nicolucci 1999) and were developing standards for use by Canadian schools intending to offer such a course.

In all of these cases, the schools have developed products that have yielded benefit to their communities either through reports, maps, or worldwide web pages. Many of the students in these classes will move directly into summer employment where their newly acquired GIS skills are desperately needed. The potential for school/community partnership through collaborative GIS projects is perhaps the most promising direction for the next milennium.

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A Digital Humanities Resource and Website for Learning

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Abstract: This paper presents a discussion of the final component of the Learning with ISLA (Information System for Los Angeles) project, the development of a website. This website compliments the educational and teaching components of a larger project which is developing an advanced method of organizing and searching primary research materials in the humanities (photographs, manuscripts, records, texts, newspapers, documents, maps, etc.). The Learning with ISLA web-site supports the development of ISLA-based lesson plans, provides access to complimentary resources, provides links to actual ISLA resources, and provides a vehicle for dissemination of information about the project. Included in the paper is a discussion of the process used to develop the web-site, and the means by which students and teachers interactively submit materials to the site. Also provided is a description of other website characteristics.

Background

It is a generally held notion that it is the area of the humanities that is the least liable to provide students with Internet-based lessons and robust Internet materials. In an approach to address this situation a multidisciplinary team began work under a grant from the National Endowment for the Humanities (NEH) and other funding agencies to develop an advanced method of searching primary research materials in the humanities and incorporating them into teaching. ISLA, the Information System for Los Angeles, provides a "regional meta-collection" to digitally unite information by creating a "virtual library" of photographs, manuscripts, records, texts, newspapers, documents, maps, etc., from various partnering collections. The ISLA database is designed to facilitate teaching and research related to the development of the Southern California metropolitan area. ISLA is currently searched by keyword, time period, or format with an enhanced version of ISLA under development which is projected to support maps, spatial searching, along with the addition of time-keyword-format structured retrieval of information. The ISLA system has been described in previous reports, including the project overview (Kazlauskas, Ethington, Wegner, Hunt, 1997), the digitizing effort (Kazlauskas, 1999), and the general training effort (Kazlauskas, 1999). This paper will describe the final component of the project, the Learning with ISLA website, which provides access to the ongoing outcomes of this project.

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The Education Component

Throughout the project there has been interest in the integration of ISLA into the classroom. ISLA is particularly suited to assist in developing information literacy skills and the fostering of participation and critical thinking skills. A faculty member and several doctoral students in Education provided training sessions for school administrators and teachers, for a group of local teachers involved in an in-service program, and for students in a pre-service course in computer competency and curriculum integration. Individuals and groups from these training sessions have developed lesson plans for their specific K-12 curriculum interest level. These lesson plans have become a part of the Learning with ISLA website. The Learning with ISLA web-site is broad in scope in that it supports the development of lesson plans, provides access to complimentary resources, as well as provides links to the actual ISLA resources. The following describes the process of developing this website, and the means by which students and teachers interactively submit materials to the site, and provides a description of other website characteristics.

Learning with ISLA Website Development

The ISLA website, which is a component of the grant "Learning With ISLA", was developed so that educators and students in K-12 and post-secondary classes can use the Internet to access an array of lesson plans which taps into the rich ISLA archival source of digital materials for teaching, learning, and research. The development of this website was also seen as the most efficient and cost effective method to allow for universal access for the submission of individual lesson plans by educators.

Two ideologies in our design, construction, and implementation of this web-site served as guidelines. First, we wanted to provide the viewing audience with clear, concise, and unambiguous categories of information to avoid overloading the site with extraneous and confusing information; secondly, we wanted the website to be user friendly and compatible with different browsers and Internet bandwidth connections.

In order to accomplish these goals, several website design principles were adhered to throughout the design process. We constructed the site to be a comprehensive resource of ISLA lesson plans and at the same time to provide accurate and up-to-date information. The simplicity of the website interface emphasized "clarity over coolness" where hyperlink pathways took precedence over superfluous images and animation. These concepts allow the users to easily navigate through the site and locate necessary information.

The length of time required to load useful information was another important design principle to consider. Page file size was kept to a minimum by using images and other web page enhancements sparingly; this had the effect of decreasing download time or "wait time" to the client's computer.

Multiple links to the same page increased the "discovery success" of visitors browsing for useful information. Text labels and anchors were kept consistent throughout the entire site to avoid misleading and confusing visitors. For example, clicking on the link "Lesson Plan" anywhere in the site would always take the visitor to that particular page. The same menus appear on all pages in the same locations to facilitate clear and logical navigability.

Website Layout and Components

The layout of the Learning with ISLA website is based on a simplified hierarchical arrangement of pages containing information. The first-tier or the Main Menu is comprised of six sections: Home, Lesson Plans, Supporting Links, About ISLA, Go to ISLA, and Contact Us. These six main sections may have a second-tier, or possibly a third-tier branching from them. The following provides a brief description of the contents for each of the six main sections as well as their corresponding sections, or tiers. The general physical layout of all pages within the website is consistent, with the Main Menu on the top of the page containing the six main sections and a corresponding navigation bar at the bottom of each page. Side menu bars were added to aid in browsing specific content within that particular page or linking to others pages within or outside the site.

Home

The Home page is the obvious initial starting point for visitors to the "Learning with ISLA" website, and it has four main headings. The first heading, Learning with ISLA, provides the reader with a description of the grant and its three principal components. The second heading, Introduction, gives an overview of the ISLA (Information System for Los Angeles), the digital research resource of Los Angeles materials held in a very large, University-based archive at USC. Heading three, Overview of Current System Under Development gives a description of the ISLA interface and how it is used to search and retrieve materials from the 5,000 items located in USC's Integrated Digital Archive (IDA) database. And lastly, heading four, Credits and Acknowledgements, acknowledges the generous support provided by various organizations and universities such as the U. S. National Endowment for the Humanities, the RCL Foundation, the USC Office of the University Provost, the Southern California Studies Center, and the USC University Library.

Lesson Plans

The Lesson Plans page is the main gateway or starting point for educators looking for ISLA lesson plans to use in classrooms. This section also contains instructions for educators on how to submit their own ISLA lesson plan for inclusion into the lesson plan archive. The Lesson Plan section consists of a secondary menu whose main headings are Overview, Lesson Plans' Archives, Submit a Lesson, and Lesson Plan Links.

The Overview page provides the visitor with information on how the individual lesson plans are categorized in the archive. These categorizations are based upon possible examples of how educators would use the ISLA site in the classroom. There are currently five categories of ISLA lesson plans: Art and Architecture, Ethnic Studies, Geography, History, and Social Studies.

Art and Architecture learning objectives include developing an understanding of historical architectural styles and their creators' intended meanings. Student learning tasks may include identifying a similar style in different types of constructions and determining a period of unidentified constructions based upon style of architecture. Additionally, students may be able to classify different architectural styles based upon common features that make a style unique to a particular culture, designer or era.

The Ethnic Studies category contains lesson plans which allow students to examine different ethnic groups during historical periods and gain insight into the modes of livelihood practiced by ethnic groups in various historical times. Other learning activities include having students search the ISLA database for selected neighborhoods and note evidence of ethnic settlement and ways of life as well as observe the impact a certain ethnic group has had on the development of Los Angeles and its surrounding areas.

Geography and map reading involve students in understanding and working with cardinal orientation, scale, proximity, and interpreting map symbols. The learning tasks required of the students include orientation of unmarked aerial photos, correlation of topography with cartography, and comparisons of regional maps in space, time, and by category.

The History category of ISLA lesson plans assists in guiding students to understand more about the nature of the changes within regions over time, and across regions, while offering pictorial clues which may be used to provide hypothetical explanations for those differences. ISLA also has a wealth of historical documents archived which students can examine for historical written data about a particular time period in the history of Los Angeles.

Social Studies' lesson plans have students working with the concepts of social categorization and elementary comparative statistics, which may provide an understanding of the settlement patterns of regions and ethnic groups in the Los Angeles area. Student learning activities may include having students investigate different regions of the city and construct a changing demographic profile of that neighborhood at different points in time through examination of different socioeconomic variables.

The Lesson Plans' Archives page is a listing of the unique lesson plans which have been submitted website by teachers. Lesson plans are listed under one of five general categories as described in Overview. The title for each lesson plan is a hyperlink and clicking on it will display that particular lesson for viewing or printing. All ISLA lesson plans are structured according to the

following main headings: title of lesson plan, author's name, email address of author, subject category, grade level, school site, duration, materials, a brief description of the lesson plan, learning objectives and goals, technology objectives, procedures and student assessment activities.

The Submit a Lesson page gives information to authors interested in submitting a lesson plan based on the ISLA system to the collection. Potential authors are reminded that all submissions will be subjected to an evaluation process and, if accepted, will be published in the collection under one of five main categories. Authors are also presented with a USC/ISLA rights statement explaining that authors must grant USC/ISLA the unreserved right to edit lessons as necessary. If authors agree they click on the "I Agree!" link which takes them to the ISLA Lesson Plan Submission Form. The ISLA Lesson Plan Submission Form page is designed to allow for easy submission of lesson plans by authors. Form fields are used which correspond to the lesson plans main headings such as title, authors name, subject category, grade level, learning objectives and so on. All submitting authors need to do is type in the requested information in each field. Once all requested information has been entered into the lesson plan form, the button "Submit Your Lesson Plan" is then clicked, sending it to the ISLA website team for review, editing and posting to the website.

The last link on the Lesson Plans secondary menu is Lesson Plans Links. The Lesson Plans Links page is a listing of useful and interesting links to other lesson plan resources. Links are listed under one of the five main lesson plan categories. For example, Art and Architecture has links to the ERIC Art and Architecture and Education World Art and Architecture Lessons websites. Current links are routinely checked by the ISLA webmaster for accuracy; in addition, new lesson plan links are continually being added to the page.

Supporting Links

The Supporting Links page provides links to learning and educational resources that complement and enhance the ISLA lesson plans. This page categorizes resources under one of five main headings: NEH, California, Los Angeles, Curriculum Guidelines, and Other Resources.

The NEH-National Endowment for the Humanities heading has a link to EDSITEment; this site brings together the best of the humanities on the web. The EDSITEment page is continually growing with a collection of the most valuable online resources for teaching English, history, art history, and foreign languages. EDSITEment is a joint project of the National Endowment for the Humanities (NEH), the Council of the Great City Schools, MCI WorldCom, and the National Trust for the Humanities.

The California heading has a link to "The Challenge: A Standards-Based School District Reform Initiative" website. This site contains California school curriculum standards and frameworks for the language arts, mathematics, history-social science, science, health education, physical education, visual and performing arts, foreign language, applied learning, service learning, and career preparation.

Other useful resources on the Supporting Links page include links to public art, history, and geography of the Greater Los Angeles region. The "Public Art in Downtown LA" is a website that documents public and civic art works and monuments, as well as some turn of the century architectural buildings. "History-LA" is a site containing numerous links related to the history of Los Angeles and the website uses animations to illustrate the physical processes of rivers where students can explore case studies and trail a river from source to ocean to differentiate patterns, features, and landforms.

About ISLA

The About ISLA page provides links to and overviews of ISLA and the IDA, USC's Integrated Digital Archive. ISLA is the current time-space-time-keyword structured digital database. It is provided free-of-charge for the purpose of unrestricted public access, research, and teaching. ISLA is a "regional meta-collection," which means that it is composed of collections owned and housed by many different regional institutions. ISLA will be available soon over the Internet using the IDA interface and database system. Using the Internet maximizes exposure of and access to the many collections integrated by the ISLA system. IDA is a software system conceived, designed and written at the University of Southern California for the purpose of creating and managing very large digital library collections of primary

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research materials in heterogeneous formats. IDA is a space-time-keyword-format structured search-and-retrieval system, with special value to regional archival collections. Through it, users will be able to search and retrieve different collections of archival objects (photographs, texts, quantitative data, or audio-visual files), plus the authoritative cataloging "metadata," by searching specific space, times, or keywords.

Go to ISLA

The Go to ISLA page provides information about, and instructions on how, to access both IDA-LA and ISLA digital archives. The IDA-LA database is currently available on the web-based Homer, which is one of USC's online catalogs. The database includes 3,990 photographs from the California Historical Society, Dunbar, Hearst, and Whittington collections; 88 historic documents, including ordinances and petitions, from the City Archives' Untitled Record Series; and the full text of 33 USC theses on Los Angeles. The Go to ISLA page provides a direct link to USC's Homer online catalogs and the Digital Media page with a link to IDA-LA.

ISLA will provide a "regional meta-collection" intended to digitally unite and provide public access to information owned and housed by many different regional institutions. ISLA will be a "virtual library" of photographs, manuscripts, records, texts, newspapers, documents, maps, etc., from various partnering collections. The ISLA database is designed to facilitate teaching and research related to the development of the Southern California metropolitan area. The ISLA site is still in development, but a link to a description of the prototype and "screen shots" is provided on the Go to ISLA page.

Contact Us

The Contact Us page provides email links to, and information about key people involved in the ISLA Lesson Plans project and ISLA. This page also has email links to the website development team for help questions, comments, and feedback about the ISLA Lesson Plans website.

Conclusion

In essence, ISLA/IDA is an ambitious project that is still under development. There are some current technical obstacles that when solved, will set a precedent in technology and revolutionize the way documents and images are stored and retrieved for public use. As a teaching tool, no doubt, ISLA currently offers the basis for a lesson in computer use and technology as well as extremely interesting and valuable content for lessons in a variety of settings. When it is offered in its full version, it will offer an unparalleled Internet application for use in schools globally.

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INTEGRATING COMPUTER TECHNOLOGY INTO SOCIAL STUDIES CLASSROOM

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Abstract: One effective way to actively involve students in the activities of problem solving, critical thinking and decision making is to incorporate technology into social studies classroom. The technology does offer teachers the opportunity to place children in open ended student centered investigations, and to shift from their traditional instructor role to mentor and co-learner.

This study describes the computer software that is developed in social studies curriculum for second grade primary school students and highlights some principles of behavioral, cognitive and constructivist theory that are applied into the design of the courseware

Introduction

As we move into the 21 St century, technology has grown in schools so much that is now a vital part of our children s education. Technology is very important to our students and teachers. Integrating technology into the teaching activities is the most productive way for teachers to expand the learning levels of students. Teachers at all grade levels should keep up with the expanding technology while maintaining a learning environment for the students.

Social studies education remains dominated by tradition and instruction remains primarily teacher centered, with lecturing, reading text, completing questions, and taking tests. Reform efforts in the social studies have stressed a need to change the manner in which social studies has been taught and learned. One effective way to actively involve students in the activities of problem solving, critical thinking and decision-making is to incorporate technology into social classroom.

Computer technology has not been in wide use in social studies classrooms in Turkey. There is also a shortage of computer software in this field. We need software programs to teach study skills, to organize information, to arrange and graph the knowledge. Recently there is an ongoing funded project in the Department of Computer and Instructional Technology at College of Education, Karadeniz Technical University, Trabzon, Turkey about developing courseware in social studies field. The aim of the project is to increase the teacher knowledge about technology and its use in K-12 schools.

This paper describes the completed part of the software developed and highlights some principles of behavioral, cognitive and constructivist theory that are applied into the design of the courseware.

Multimedia Courseware

The History of Turkish Republic and Ataturk was chosen as a subject for this multimedia courseware. The courseware has been prepared by using Macromedia s authorware 4.0 and can be used both as a Windows.EXE file or a shockwave file for distribution over the Internet.

After interviewing teachers about History of Turkish Republic and Ataturk subject some learning problems were identified. According to teachers, this subject contains a lot of information about historical events and dates. Students are having difficulty remembering those events by chronicle order and they often get confused about dates. To overcome these problems, some learning activities were planed. Principals of

behaviorism, human information processing theory, and constructivism were applied to instructional design of this courseware.

What makes good instruction is not the medium. It is the instructional method that guides the way the medium is used. In order to produce effective courseware, the author must be aware of the techniques of instructional design and learning theories (Clark, 1995). In keeping with the theories, the way that Behaviorists, Cognitivists, and Constructivists are depicted by each other tends toward the extremes. The three are not mutually exclusive. However, there are certainly more and less appropriate times to apply the ideas from each camp. What is important is that, whatever theories or ideas we apply that they do the most to enhance the learning possibilities in the given environment and particular domain. Also, there are more and less appropriate uses for Behaviorist, Cognitivist, and Constructivist theories of learning. People are not machines and do not live isolation from the real world. Neither can students be left entirely on their own to haphazardly find/not find what is important to grasp in a particular learning situation. Guidance is still needed.

Applying Behaviorist Theory

Performance objectives can be attributed directly to operant conditioning that has probably had a great impact on educational practice within the past thirty years than any other single model of human learning (Ormrod, 1990). At the beginning of the courseware s design, important knowledge for elementary third level students is identified and goals of the instruction are translated into performance objectives that are sufficiently specific and detailed to show progress toward the goals. The reason for eventually stating all objectives in terms of performance is to be able to measure student performance to determine when the objectives have been reached. To check the results of student learning during the progress of a lesson multiple of choice-test items have been prepared and placed after every information screen. Such a check made it possible to detect any misunderstandings the student may have and to remediate them before continuing. After two incorrect attempts the programs took the students back to the related information screen.

According to behavioral psychology what ever the fundamental nature of the learning process, experience or practice in a new situation has no effect- learning will not occur- unless practice is reinforced (Clark, 1995). Reinforces are messages or other actions that encourage a response to be repeated. In the present software the two types of reinforce, positive and negative are used to inform students about the correctness of the answer. When response is correct, a short statement affirming this is made. This is done with a single word, such as good or correct and with encouraging words, such as you are doing great job! and with an interesting picture or animation and sound. To incorrect responses, simple and direct answers are used. Fig. 1 is an example for question screens.
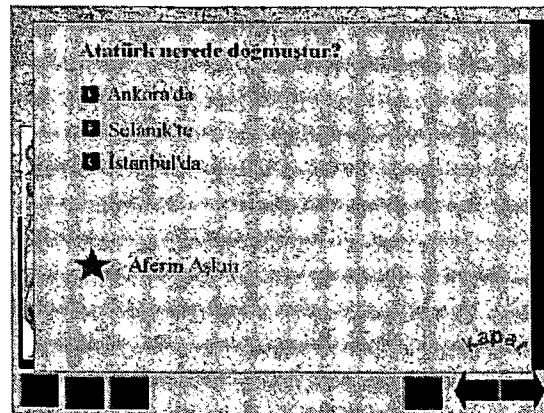

Figure 1. Question Screen

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Applying Cognitivist Theory

In Cognitivist theory, learning a piece of information does not guarantee that the information will be remembered later on. Retrieving information from long-term memory is sometimes easy and automatic, at other times slow and strenuous, and at still other times virtually impossible. Frequently used information tents to be remembered without conscious effort. Things are more easily retrieved when long-term memory is organized (Ormrod, 1990).

The information that is presented in the courseware organized and overlapped with what students already know. The following is the table of contents in its main menu:
1- Ataturk s Life
2- Turkish Republic and Social Reforms
3- Our National Festivals
4- Games

The courseware contains text, animation, scanned pictures, audio and video files all of which of course help to clarify the knowledge and to direct the attention of students to the lesson.

According to cognitive psychology working memory is the main work area for though, the conscious center of the brain. But its storage capacity is limited. Because the limited capacity of working memory is rapidly overwhelmed when lots of new information is presented, it s crucial to provide frequent opportunities to use or practice the information in working memory. More frequently rehearsal items are better remembered than less frequently rehearsed ones. Rehearsal through which the information better understand and made more meaningful does facilitate storage in long-term memory (Clark, 1995). In the present software, after the presentation of each new idea or chunk of information too many practicing opportunities are provided. Three different games are included into the courseware and placed in its main menu. Games are designed to teach important dates in the history of Turkish Republic and Ataturk. The first game includes some dates and pictures. Here students are allowed to drag dates to the related pictures. After dragging the date to the right picture, dates snap on the center of the pictures. In the case of incorrect trails, dates go back to its first initial position. Students receive feedback after every attempt that they made. The second game included pictures of some important historical events between 1880 and 1940 and history band. Pictures of events are displayed on the screen by chronicle order and students click on the history band to mark its occurrence date. The third game is about completing an incomplete sentence. Students are allowed to complete sentences about historical events by putting the right date in an appropriate place. Fig. 2 shows the first game s screen.

To reinforce a message dual encoding through the use of concrete words, text, graphics and sound was added to courseware. Visual images can be stored quickly and retained over long periods of time. For this reason, visual aids were used to provide beneficial supplement to verbally presented information. Color, arrows, shading and sound were used to direct learner s attention to important parts of the message.
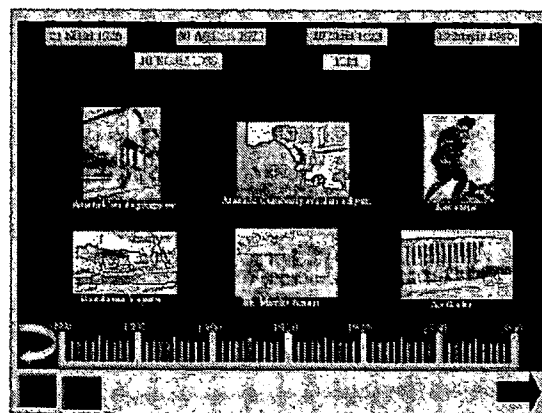

Figure 2. A screen from the first game

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Applying Constructivist Theory

According to constructivism, students come into a classroom with their own experiences and a cognitive structure based on those experiences. These preconceived structures are valid, invalid or incomplete. The learner will reformulate his/her existing structures only if new information or experiences are connected to knowledge already in memory. Inferences, elaborations and relationships between old perceptions and new ideas must be personally drawn by the student in order for the new idea to become an integrated, useful part of his/her memory (Caprio, 1994).

Model of constructivist teaching (Wheatley, 1991) have three components: tasks, groups, and sharing. The model is a simple one to follow. In preparation for a class a teacher selects a tasks which have a high probability of being problematical for students-tasks which may cause students to find a problem. Secondly, the students work on these tasks in small groups. During the time the teacher attempts to convey collaborative work as a goal. Finally, the class is convened as a whole for a time of sharing.

To implement a constructivist format into developed courseware some procedures for teachers are organized in teachers handbook. Teacher s handbook that is accompanied by courseware includes guidelines for teacher and methodologies for creating a constructivist classroom. Teacher s handbook has been based on projects, authentic tasks, and real world contexts. Classroom projects are designed with a shift from whole-class to small-group instruction, from individual to tutorial instruction, from lecture to coaching, from summative tests to performance assessment and from isolation to cooperative learning. One of the classroom activities was to select a task that is problematical for students and breaking students into small groups to work on this task. Teacher is suggested to structure a lesson in the following format:

1- Engage student interest on a topic that has a broad concept.
2- Ask open-ended questions that probe the students preconceptions on the topic.
3- Present some information or data that does not fit with their existing understanding.
4- Have students break into small groups to formulate their own hypotheses and experiments that will reconcile their previous understanding with the discrepant information. (The role of the teacher during the small group interaction time was to circulate around the classroom to be a resource or to ask probing questions that aid the students in coming to an understanding of the principle being studied.)
5- Let students work on developed courseware and take tests to determine learning difficulties.
6- Encourage the use of alternative sources for information while doing their projects.

Developed courseware has been suggested to be a learning material for students while working on problematical tasks. Tools button has been created into courseware to help students in their projects. By pressing Tools button students are allowed to select some pictures and write what they know about this picture. After reflecting their ideas on the computer screen students are allowed to print their work. By doing this, the students have an active participation in the shaping and augmenting of their learning.

After sufficient time for experimentation, the small groups share their ideas, conclusions and projects with the rest of class.

Conclusions

Social studies teachers are slow to integrate computers into their teaching. This is partially due to the limited amount of social studies software. However, the most meaningful learning takes place when students interact with concrete materials. Students have greater understanding when experiences are meaningful and manipulable. The computer environment offers equal, perhaps even greater control and flexibility to students.

As a developers of computer courseware, we need to be aware of our beliefs about how people learn and we need to select method consistent with those beliefs, fit the needs of the learner, and match the purpose of the learning. Because what makes good instruction is not the medium. It is the instructional method that guides the way the medium is used. In order to produce effective courseware, the author must be aware of the learning theories and their instructional applications.

This study describes the computer software that is developed in social studies curriculum for second grade primary school students and highlights some principles of behavioral, cognitive and constructivist theory that are applied into the design of the courseware

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Hypergroups for Social Studies Teachers:
A Critical Issues Dialog for Technology Integration

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Abstract: This paper provides a case study of the use of online discussion in the social studies program area at the University of Houston. Online discussion was integrated as a tool for reflection, continued dialog, and to facilitate the development of a community of learners. The goal is to model a constructivist focus for transforming social education to include powerful approaches that are meaningful, integrative, value-based, challenging, and active.

Introduction

Successfully integrating technology in social studies classrooms is a vital issue facing social studies educators. Unfortunately and all too often, problems occur when social studies teachers are presented the new technology, expected to implement it, then left to battle alone with their own issues regarding effective integration. Nevertheless, technology skills are now essential for social studies teachers and students.

This article provides a case study of social studies pre-service and in-service teachers' conversations via on-line web discussion groups called hypergroups. The conversations began in Spring 1999 when hypergroups were established as part of the Social Studies program area at the University of Houston. Although the hypergroups were established as part of course work in Social Studies Methods, Current Literature in Social Studies, and Technology in Social Studies, social studies teachers who have engaged in social studies education at the university over the past two years were also made aware of the on-line discussion group. Topics and themes ran the entire spectrum within social studies education, although technology issues definitely emerged as one priority theme during discussions. This article provides an overview of the project and summary, analysis and implications of the discussion responses.

In social studies, technology is often used as an add-on, available when the "real work" is finished, or as a reward for good behavior. These occurrences are due in part to the assumption by administrators and teachers that the training needed to implement technology effectively is too extensive and too technological or, on the other end of the spectrum, that the training can be done with one long and usually unproductive in-service session quickly forgotten as the year progresses. A false over-reliance or even blind acceptance of technology in schools also causes these issues.

Education has become a massive process for producing passive minds (Sizer, 1992). This is especially true historically in social studies education due in part to the use of teacher-dominated curriculum and instruction, textbooks, worksheets, and tests (NCSS, 1994). Another contributor to the problem is the tendency to focus on coverage of content over quality of learning, which has often pushed teachers to utilize the more traditional methods of teaching. Thankfully there are educators who go beyond traditional strategies and try to make social studies powerful and meaningful by embracing new and innovative ways of teaching.

Many well established teachers ask why they should use technology in social studies when there are successful methods already being used within their classroom? The issues presented in this paper focus on making social studies a more powerful and meaningful experience through technology integration in hopes of meeting students learning goals and meeting the needs of facilitating a critical and active citizenry. What society demands our children be able to do when they leave the educational system is much different from what it was as few as ten years ago. They must be proficient in using technology and understand the implications of its use in the future as well as how it has effected us in the past. Social studies teachers must modify the old style of teaching to fit the

new way of learning. Social studies is not just about covering content; it is about analyzing content and developing social skills and attitudes, all with a critical thinking and problem solving focus.

Technology also has the ability to make learning exciting and worthwhile, allowing students to interact with the computer as well as other students while observing and acquiring the most current information on places they would otherwise never experience. We, as educators sometimes fall into a trap of anesthetizing the students...[There's] not enough stimulus (Sizer, 1992). Implementing technology can wake up those sleeping students as well as promote a motivation to learn independently. We focus too much on extrinsic motivation to ensure learning; perhaps technology integration can facilitate a movement toward more intrinsic motivation. This should be the goal of every social studies teacher and can be developed and fostered quite effortlessly in a technological classroom.

The role of technology in social studies teaching and learning can be much more meaningful and powerful. If we are truly interested in promoting a social studies that goes beyond traditional transmission to a more transformative knowledge, skills, and attitude development that facilitates an informed and active citizenry, then technology must play a more central role. Many of the excuses that pervade successful social studies technology application including content coverage, time, availability, training, and traditional praxis should be addressed. There really is no excuse if we keep in mind the ultimate goals of social studies education.

Theory and Foundations

Online discussion is relatively new in pedagogical praxis. Only in the last few years has there been even minimal research and literature regarding issues, trends and effective learning in online discussion. There is even less research in the merging of online discussion and social studies education. Perhaps a key issue is ensuring effective learning through online discussion. Jonassen states that there are four paramount attributes of constructivism that facilitate an effective learning environment including: (1) providing opportunities to foster personal construction of knowledge; (2) setting an appropriate context for learning; (3) facilitating collaboration amongst learners; and (4) facilitating learning and collaboration through conversation (1995).

Savery and Duffey (1995) suggest the integration of problem-based learning (PBL) in order to encourage collaboration. This strategy, whether integrated in technology or more traditional learning environments, necessitates active engagement, metacognition, and social negotiation. Tied to these essential components is the integration of democratic and critical approaches to learning (Weisser, 1997).

Issues dealing with learning via technology (online discussion) suggest developing a constant awareness regarding dialog, discussion, and discourse as we hope to establish collaborative learning communities. Research suggests that online discussion can encourage otherwise silent students to participate, can promote the ideal of serious dialog regarding comments, can facilitate discussion on issues and themes that are unlikely to be approached effectively in classrooms, and can facilitate the development of collaborative learning community (Weisser, 1997; Parkyn, 1999; Swartz and Hatcher, 1996). Parkyn (1999) suggests specific pragmatic details vital for effective online discussion including detailed instructions and expectations, monitoring, etiquette, and equal involvement of all (including the instructor).

Within a social studies framework, an online discussion must focus on knowledge, skills, and attitudes related to social education. It must also address the components of powerful social studies teaching and learning including approaches that are meaningful, integrative, value-based, challenging, and active. The ultimate goal might be the transformation of social education to a student-centered, problem-based, critical analysis focus (White, 1999).

Hypergroups

Hypergroups are a web-based discussion tool established at the University of Houston for any professor wanting to facilitate online discussion outside of class. While the great majority of hypergroups are extensions of in-class activities, many were also established as central components to online specific courses.

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The design for hypergroups lists courses alphabetically. Once students enter the site, they can scroll to the appropriate course number. Many of the specific hypergroups are password protected. The interface lists the course title, options for interacting, description of the course, and owner (professor). Options for engaging in hypergroup discussion include posting new threads or topics, replying to previously posted comments, joining the discussion, looking through the listings of postings, and viewing the names of the members of the specific hypergroup. Other options include viewing the postings by thread, names, or chronology.

A limitation to hypergroups has been its administration and coordination as a doctoral student who has left the university developed hypergroups. Informational technology faculty and support staff have made an attempt to continue the implementation and administering, although it was recently decided to purchase a packaged program called Web Boards to take the place of hypergroups.

The Project

The social studies program area at the University of Houston has meaningful technology integration as a primary goal. Most students enter the professional development component of their program having either life-experience and / or at least one course in informational technology. The courses that encompass this project include Elementary Social Studies Methods, Secondary Social Studies Methods, Current Literature in Social Studies, and Integrating Technology in Social Studies.

In all of the courses hypergroups were used for a variety of applications. The instructor introduced hypergroups toward the end of the first class meeting in conjunction with a technology in social studies project suggested as a project for each course. Negotiated technology assignments for each course included readings on integrating technology, problem-solving scenarios, software evaluations and applications, web quests and web site evaluations, course-specific technology applications, and hypergroups.

Hypergroups were introduced in a lab situation whereby all students could access the site. The instructor then demonstrated the organization and potential applications for hypergroups with each class then negotiating expectations for their application. Generally agreed upon expectations include a minimum number of postings and / or replies to postings, hypergroup etiquette, reflections on class projects, issues, and discussions, sharing of resources and completed projects, and facilitating the development, rights and responsibilities of a community of learners. The instructor generally stresses that the course hypergroup discussions be restricted to themes and issues (and their application) related to social studies education and schooling in general.

Once the expectations are agreed upon, the instructor posts a message to initiate discussion. The instructor participates equally in the discussions although makes a general posting approximately every other week to facilitate the flow. Students are given the option to respond. Students seem to do well in participating in their own threaded discussions, however. There is a synthesis posting required after the last class meeting. In the synthesis students are encouraged to comment on highlights from the course (both in class and online), suggest additional issues and themes, and offer final ideas for application.

Postings

Initial Posting from Instructor (titled Hello and Introduction)
"Hello Folks! The purpose of this group is to facilitate discussion outside of class. Themes and topics might include issues and trends in social studies, transformative curriculum, instruction, and assessment in social studies, sharing of ideas and posting questions, and general reflection on class activities. Please take some time each week to post to this discussion group and be sure to use the exact (same) name each time you post. Here's fodder for our first comments and reflection: What are the most vital issues and concerns in social studies today - what are possible solutions? How can the use of meaningful literature address these issues?A primary goal is to enable meaningful dialog outside of our class, so let's make this a priority when responding."

Sample Replies from Students

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"One of the most important issues in SS today is the idea of getting students to understand that history is not a puzzle to be solved, that what is a "right" answer today may be disproved tomorrow. Students should be more concerned with thinking about history as opposed to wondering if they have the answer "right." I think standardized testing is particularly crippling to the idea that students need to think about historical events and make their own connections and decide for themselves if a "factoid" is indeed correct or just an idea twisted to fit a particular
ideology. End of sermon."

"I think the first issue we should address in social studies is the issue of relevance. Students are not interested in social studies because they do not see any relevant connection to their own experiences. I'm worried about kids not learning their connections to the past and to each other. I guess that pertains to the tenet that SS instruction should be meaningful. If the curriculum doesn't show us our connectedness - how our actions affect and influence each other now and in the future - how can we think that we're preparing our kids to succeed?"

"I guess I believe that SS is a part of our everyday lives. I'm assuming we have all felt like we have been left out or treated rudely/unfairly at some point in our lives. This all comes back to how and when people were taught proper and meaningful social skills. I feel that one of the most important things we can model and get through to our students is the courtesy and compassion for each and every person we come into contact with on a daily basis. It shouldn't matter who is around or how busy you are, there should always be that gesture of courtesy to each individual. From this frame of thinking, you can expand on it in almost any direction. It ties into anything you want to discuss such as emotions, reactions
to these emotions, whether they are appropriate or inappropriate, taking into consideration differences between all of us and how important those differences are, etc. This list could go on for awhile. But my point is that if there is something we really need and want to get through to our students, there are fun and successful ways of doing it so that they benefit the most."

Second Posting (titled new comments and issues)
I am very impressed with the comments and issues presented here and in class...lots of thoughtful ideas...Let's keep this going by commenting on each others postings, reflections on class activities and themes, elementary social studies, etc... Perhaps we can share issues/ideas with planning for the theme
presentations, other projects, and discussions in class. Please discuss, comment, ask, challenge regarding schooling, k - 12 social studies, curriculum issues, instruction issues...themes and topics in class, etc... What about a thematic, in-depth, and issues-centered approach to k - 12 social studies???

Sample Student Replies
"Obviously motivation and inspiration dies in many people, or we wouldn't be talking about it. I think it's hard to pinpoint specific reasons for this. It happens the same way a lawyer suddenly finds himself practicing the kind of law he said he would never do when he was 25. The important thing is that we can talk about it; we know it's happening and even more important we know that it can and will happen to many of us. We all say it won't, but just look around, there are teachers in every school, down every hall that have lost the inspiration and probably couldn't tell you why they still do what they do. They are the ones that teach by the text, follow the norms of the administration, never rock the boat. What is so frightening is that there are no easy answers, each one of us is different. I think we have to find our own answer within ourselves."

"I think that one of our main jobs as educators is to teach students how to think and how to problem solve. Children of all ages need to be taught these skills. Far too many times, children are told rather than asked how to solve a problem. I think we would be surprised with their responses as well as who responded. For me, the key is to present interesting problems with multiple solutions. Allow the students to investigate and communicate their solution. If we give them more space to explore and to solve problems, they will learn how to do it and do it well. Every student needs to feel that they are thinkers and that their minds are powerful tools that only they can use. It is our job to stimulate and motivate them to use them!"

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"I always was interested in the topic of Social Studies, but was never taught in a way that really allowed me to think. We were always given the facts, situations and problems and then tested on them. I was never asked to think in depth about the issues or to try and come up with solutions. I really believe that it is important to involve students and help them understand the situation at hand. Ultimately they should be asked to think of possible solutions. This allows children to relate to the problems and see the critical importance to the issues by learning how these problems can be solved. If we want to have an impact on children, we have to involve them in engaging activities that allow them to discover the importance of what is being taught. Ultimately, we have to teach them these skills to be successful in the real world."

Third Posting (titled additional big issues and questions)
Additional Issues/Questions to ponder perhaps:
- Despite passion, excitement, and creativity often demonstrated in pre-service teacher education, the great majority of social studies teachers eventually buy into the system and become much like their elementary social studies teachers. Why is this? Is there anything we can do to counter this?
- We constantly state that social studies is more than coverage of information (skills and values development for example), yet content for the sake of content (and very basic low level knowledge) remains the very dominant focus in social studies. why is this? Is there anything we can do to counter this? Should we?
- We preach citizenship and democracy, yet schools and classrooms are among the most autocratic and often disempowering places. Why is this? Is there anything we can do to counter this?
- With the increasing focus on accountability, efficiency, and essentialism, where is the focus on the children? Shouldn't his be what we are all about? Shouldn't we be outraged at the idea that all children should fit a certain mold?
- Other possibilities…Is the real purpose of social studies education in this country the perpetuation of the status quo and inculcation of "the American way?" We can talk about the hard issues in forums like this, but can we really make a difference "in the trenches?" What are specific ideas that can help us all continue/maintain the passion and idealism day to day throughout our teaching careers? Why shouldn't social studies be about social reconstruction and transformation?

Sample Student Replies
"I think you are asking the tough questions that no one really wants to answer, that is those that have lost what first inspired them. And that I think is the answer. Even though countless hours of hard work and preparation are put forth to enter the classroom what happens then? I think that so many teachers enter with high expectations and eager hearts, but find that what awaits them is a brick wall. After pounding away at it alone for a while they forget the reason they started to tear it down in the first place. With no support for their efforts they become persuaded by those on the sideline to put their "weapons" away and follow the mass. Why not? It's easier this way, it's just a job- and the administration wants test scores, content, so why not give it to them. If it makes my life easier and my superiors happy then it must be the right way. But it's not, we all know that. But the big question is this- Most teachers felt it wasn't the right way to go when they started or they wouldn't have entered this profession to begin with. This is a profession about making an
impact, not following the middle road. So what do we do about the loss of heart and soul in our work? We all say it won't happen to us, but it's happening everyday to teachers around us, the question is what makes us different? I think we know that in our hearts. We must surround ourselves with people who have that inspiration also(even if it's just one person that we see in class on Tuesday night), we have to remind ourselves daily that the struggle is so hard because it's worth it. When we realize that nothing else matters and suddenly doing what you know is right in the classroom isn't so difficult after all."

"All of these questions are inter - related. The all- encompassing answer could be summed up in one word: TRADITION. Most teachers buy into the old system of teaching because it is what most of their peers do in the schools. Let's face it, it is the easiest way to teach also. There is no challenge to cracking the book open and lecturing…Countering this will take a lot of dedicated, caring teachers to set a new norm- a norm that involves imaginative, creative lesson plans and implementation. I would say that a school board could reprimand and remove any teachers that are too "old school", but that would lead to way too much controversy. So, the answer is to set a new precedent as new educators. Again, the reason social studies is basically taught at a lower level is

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because it has been the easiest thing to do in the classroom over the years. As long as kids scrape by and pass the exam, administrators could care less that social studies may not promote critical thinking. I think that social studies should be presented at a higher level, one that not only tells the students who, what, when, where, why and how, but also promotes them to ask: "So what is the importance and relevance to toady?" As educators, we can only go one step at a time and offer lessons to our classes that go beyond just mundane details. Schools are autocratic and disempowering because administrators may be afraid that offering the students too much freedom of expression or leeway will lead to undesirable results. The thinking is that if the "automatons" gain freedom, that chaos and anarchy will occur. In some cases it is hard to let every student speak his mind, and in some cases, certain freedoms should limited, such as being able to wear clothing with references to alcohol, drugs and sex. That is not to say these things cannot be discussed, because they should be. There is not enough focus on the children because the focus is on the paycheck. Most teachers I know live only for that special day every two weeks that swells their bank accounts. That is wrong. It

is also absurd to think that all children fit one mold. As educators, we need to see that every student is different and have something to offer each and every one of them. In physical education, we are taught to make lesson plans that include students of all levels simultaneously. I believe academic classes should follow this approach as well. Of course with every suggestion made on this board, it will not be easy and it will take time, but it can be done."

Final Instructor Posting (titled final thoughts / synthesis)
How about some synthesis and final reflections regarding issues and ideas discussed via this hypergroup/listserv... Perhaps we could also suggest web sites, books, lesson ideas, and other resources that "really make a difference" and that might push us toward a more "enlightened" approach to social education.

Students generally revisited issues that had been discussed in class or via hypergroups during the synthesis. The threads that received the most postings / replies surfaced (as indicated earlier) again in the synthesis component. Particular final issues include the need for continued support once they are "real" social studies teachers, how to survive in schools that have an essentialist focus and stress accountability, access to technology, and transformative issues for social education. Students also used the synthesis for posting additional references, resources, and web sites.

Student Initiated Threads / Postings

Students were strongly encouraged to post their own topics, themes and issues as the semester progressed and not to rely on replying to the instructor's comments. A variety of comments, issues, and themes emerged as students posted their own topics and themes. These generally initiated a much richer ongoing discussion, but were often linked with other postings. Considerable dialog emerged with various student-initiated postings. Examples of themes, topics and issues follow:

Approaching controversial issues	Classroom management
Standardized testing	Traditional approaches
Indoctrination	Pop culture
Diversity / Culture	Gender
School violence	Values education
Status of social studies	Public vs private
Elementary social studies issues	Teacher education
Lack of social studies knowledge	Censorship
Technology issues	Rights / responsibilities
Social studies curriculum	Social studies instruction

The threads that received the most comments dealt with the status of social studies, public vs private schools, culture and diversity, controversy, pop culture, and indoctrination and values. At a few points students ignored the issue of etiquette and engaged in very heated discussions on these very powerful and controversial themes and topics. Participants did an excellent job in managing their colleagues and redirecting to the purpose of the hypergroups.

Conclusions

Students generally were very positive regarding the use of hypergroups and the actual discussions in the hypergroups. The hypergroups were enhanced as a result of traditional class discussion and projects although many additional issues, themes, and comments were provided via hypergroups that only received lip service (if that) in class activities and discussions. Student replies to instructor postings seemed very frank and actually very challenging to traditional thought. Students in fact, often stated that the questions posed, format itself, and general classroom environment welcomed critical analysis and challenging commentary. Students also indicated in the synthesis that hypergroups facilitated the development of a community of learners.

As a result of the project, the social studies program area will continue with online discussion integration in courses through the new format entitled Web Board. Other developments include offering online courses for social education and providing opportunities for real time chat. Issues that must be addressed regarding hypergroups and other online discussion activities include access to and troubleshooting regarding technology issues, appropriate online discussion etiquette, and facilitating the components of powerful social studies teaching and learning. Other issues include constant monitoring and involvement by the entire learning community (instructor and students), encouragement regarding individual postings and replies to postings, including controversial, challenging, and open-ended questions by all, and encouragement regarding postings of references and resources and developing opportunities for real time chats.

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Methods Course Connections:
Transforming Social Studies via Technology Integration

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As the new Millennium dawns, opportunities abound for the inclusion of meaningful technology use in elementary schools. Modern computers are less expensive, more powerful, and have more versatility than those that were available a decade ago. Current technology allows the contemporary computer user to interact with software and to engage in information retrieval on the World Wide Web (Harris, 1998).

At the same time, many Internet locations allow the social studies educator to access web sites that bring history to life through the use of primary sources and "virtual" visits to historic locations. Now students can go online to collect current data from the United States Census Bureau (1999) or follow the activities of the106[th] Congress or the passage of a bill through the legislative process at the Thomas (1999) web address. The National Council of Social Studies (NCSS, 1999) web location allows teachers to access the NCSS Standards(1994) and to link with Internet locations to access supporting information for each standard.

Until recently, traditional elementary social studies instruction focused on facts and the transmittal of information by teachers to students with the aid of resources such as a textbook, map, and globe. The power of today's technology provides the opportunity to shift social studies instruction to allow the student to capture, manipulate, and retrieve information in new ways (Rose & Fernlund, 1997; White, 1997). This contemporary revision of social studies instruction definition would have to include the addition of software, video, and Internet access.

As we enter the new millennium, shifting social studies instruction from teacher talk, memorization of facts, and textbooks to a social constructivist approach with the teacher as a facilitator encourages students to process multiple data sources as they utilize the power of technology and the resources of the Internet to construct their own knowledge (Rice & Wilson, 1999). Preservice teachers can plan and develop social studies units of instruction that include exploration of primary resources, comparison of cultures with international pen pals, and virtual field trips to locations far from the elementary classroom.

In the fall semester 1999, two social studies methods professors conducted a survey to determine the technology use of preservice teachers in four sections of social studies for the elementary child. One section of the course was taught concurrently with an instructional technology for teaching course; the other three sections were taught prior to taking the instructional technology for teaching course in the curriculum. As a course requirement, each methods professor required students to utilize the Internet for resources for an integrated unit of elementary social studies instruction.

Study

The purpose of the study was to examine the level of technology integration in the student's development of a social studies unit of instruction. In addition the study examined the effect of whether being enrolled in the technology class at the same time as the social studies class had any effect on the degree of technology integration in the unit of instruction.

The sample population consisted of 89 students at a major southeastern university, accepted into upper division status in elementary education, who were enrolled in an elementary social studies methods course. Section I was concurrently enrolled in a technology class in addition to the elementary social studies methods. Sections II, III, and IV were enrolled in elementary social studies methods and are not enrolled in the technology course until the following semester.

The survey instrument [Appendix I] asked students to self-report their class rank, previous/present enrollment in a technology course required by the major, and the degree of technology use they employed to complete a class project in the elementary social studies methods course.

Results

All students indicated the use of the Internet for resources for the unit. As assignments are required to be word processed, all students indicated use of word processing. As Email is advocated as a

means of communication with professors at this institution, Email received high utilization in the survey. It is likely that the first three items received higher use due to the requirements of the course.

Current Use of Technology

	Section I	Section II	Section III	Section IV
1. Internet Resources for Unit	22	25	17	25
2. Email	21	22	11	21
3. Word processing	22	25	17	25
4. Creating worksheets	11	23	14	24
5. Computer assisted instruction	4	3	2	4
6. Chat Rooms	11	4	3	5
7. International pen pals	1	0	0	5
8. Problem Solving Software	0	0	0	0
9. Simulations	5	3	3	5
10. Source for Primary Sources	7	12	4	5
11. Databases				
12. PowerPoint				
13. HyperStudio				

Conclusion

Students incorporated technology as required but rarely went beyond course requirements in the elementary social studies methods course. The section concurrently enrolled in the technology and elementary social studies methods showed no greater integration of technology in their units of instruction than students who had not taken the course.

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Appendix I

Survey

- I am currently enrolled in Senior I.   Yes   No
- I am currently enrolled in EDTC 4001.   Yes   No
- I use technology in the following ways. Circle the appropriate items:
1. Internet Resources for Unit
2. Email

3. Word processing
4. Creating worksheets
5. Computer assisted instruction
6. Chat Rooms
7. International pen pals
8. Problem Solving Software
9. Simulations
10. Source for Primary Sources
11. Databases
12. PowerPoint
13. HyperStudio
14. Other

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