Social Studies Teachers' Perspectives of Technology Integration

YALI ZHAO
Georgia State University
Atlanta, GA USA
yzhao@gsu.edu

This qualitative research investigated the perspectives and experiences of 17 social studies teachers following technology integration training. The research indicated that the teachers held a variety of views of technology integration. These views influenced their use of technology in the classroom. Four major categories of technology-related activities were observed among participants: (a) teacher-centered, (b) structured inquiry, (c) teacher-student negotiated, and (d) student-centered. Most teachers were willing to use technology, expressed positive experiences with technology integration training, increased their use of technology in the classroom, and used technology more creatively. Despite all the advantages provided by technology, the research found that willingness to use technology and positive experiences were related to teachers' increased use of technology and to more creative use of technology, but they did not ensure that teachers would replace their teaching with technology.

The recent National Education Technology Plan released by the U.S. Department of Education stated that over the past 10 years, 99% of American K-12 schools have been connected to the Internet with a 5:1 student to computer ratio. The technology that has tremendously changed the world outside schools is now changing schools and this change "is driven by an increasingly competitive global economy and the students themselves, who are born and comfortable in the age of the Internet" (U.S. Department of Education, January 7, 2005).
This trend increasingly drives teachers to incorporate advanced technology into their classrooms to accommodate student needs, promote student learning, and better prepare students for the digital society. However, national surveys revealed that technology was not efficiently used in core school subject areas such as science, social studies, mathematics, and English (Becker, 2001; National School Board Foundation, 2004). Further, Becker’s study reported social studies teachers were among the least likely to use technology in the classroom.

Technology Use in the Social Studies Classroom

Within social studies, technology has served dual roles, “as both important instructional tools and as objects that have had significant effect on the political, social, economic functioning of American society” (Berson, 1996, p. 486). In this sense, social studies teachers should be more aware of the changes technology has brought to modern society and try to reflect this change in their own classrooms. Unfortunately, social studies curricula has not been largely affected by this technology change and technology’s unique role in the enhancement of social studies education is not widely recognized (Martorella, 1997; White, 1997; Whitworth & Berson, 2003). Similar to Becker’s finding, other research has shown that social studies teachers lag behind other content area teachers in the adoption of innovative teaching methods provided by technology (Anderson & Becker, 2001; Atkins & Vasu, 2000; Anderson & Ronnkvist, 1999; Becker, 2001; Dawson, Bull, & Swain, 2000; Education Testing Service, 1997; Office of Technology Assessment, 1995). In recent years, there has been a slight emergence of new and innovative uses of technology in the social studies and more social studies teachers have started to use technology, especially the Internet; however, one literature review of computer technology in the social studies indicates that “computer continues to serve the primary function of facilitating students’ access to content and remain somewhat relegated to being an appendage to traditional classroom materials” (Whitworth & Berson, 2003, p. 483).

Barriers to Technology Integration

The reasons given for social studies teachers’ low level of technology use for instructional practice are numerous. The most common reasons cited included insufficient technology integration training, lack of experience in
technology use for instructional purposes, limited awareness of appropriate software, limited availability of computers and software, lack of planning time, and classroom management concerns (Becker, 2001; Berson, 1996; VanFossen, 2001; OTA, 1995). Among these, lack of technology integration training appears to be the main impediment to effective technology infusion into the curricula. More recent research reveals additional barriers to the effective use of technology in the classroom. These include barriers related to access to certain social studies websites due to school filtering systems, unreliable websites, technology ability imbalance among students and between students and teachers, network problems, and overwhelming amounts of social studies information on the Web (Ehman, 2002; Roberts, 2003; Zhao & Hoge, 2004).

Technology Integration Training

With technology integration increasingly advocated by government agencies, reformers, and educators, a large number of studies have explored teachers’ concerns, perceptions, and experiences of technology infusion into the classroom (Atkins & Vasu, 2000; Becker, 2001; Cummings, 1998; Keiper, Harwood, & Larson, 2000; Leh, 2000; Owens, Magoun, & Anyan, 2000; Roberts, 2003; Saye 1998). However, few studies have investigated how social studies teachers perceive and use technology in the classroom after they obtained intensive curriculum-based technology integration training. In the past few years, many states have initiated and mandated technology integration training and practice for K-12 teachers and among them are many social studies teachers. Given the acknowledged low rate of technology use in social studies curricula and a growing number of social studies teachers who have attended technology integration training and have various technology resources available to them, it is necessary to investigate how these teachers perceive technology integration and how they infuse technology in the social studies classroom (Whitworth & Berson, 2003). It is unlikely that we will be able to “measure” social studies teachers’ successful use of technology without qualitative studies of their experiences of using it.

Further support comes from The National Education Technology Plan (U.S. Department of Education, 2005), which claims lack of technology integration training and understanding of how to use computers to enhance students’ learning experience are major deterrents to teachers’ use of technology. To address these inadequacies, teachers need access to research, innovative examples of technology use, and staff development.
Zhao

The study described herein addressed such needs. This study investigated how a purposive sample of social studies teachers perceive technology integration and how they use technology in the social studies classrooms following technology integration training. In general, technology in this study refers to computer technology as well as computer-associated technology.

This research was guided by three exploratory questions: (a) how do social studies teachers with intensive technology integration training perceive technology integration? (b) how do these teachers integrate technology in social studies classrooms? and (c) how does technology affect teachers’ teaching practice?

RESEARCH METHODOLOGY

Research Context

Participants in this study were 17 social studies teachers (in grades 7-12) who successfully completed statewide curriculum-based technology integration training in the past three years at one of the major INtegrating TECHnology (InTech) training centers in a southeastern state. This state was one of the first states to initiate and mandate intensive curriculum-based technology integration training for teachers. The hands-on 50-hour semester-long training focused on building teachers’ technology integration skills and competency in five major areas: (a) the state’s core curriculum content standards, (b) use of a variety of modern technologies, (c) classroom management, (d) new design for instruction, and (e) creative pedagogical practices (State Data and Research Center, 2002-2003). Although the training aims at teachers of all disciplines, social studies content contextualizes most of the training, especially for middle and high school teachers. Thus, the focus on social studies content provides an appropriate context for this study.

Take InTech high school teacher training as an example. The 50-hour training covers skills such as PowerPoint presentation, PowerPoint storyboard, graphic organizers, Internet search and evaluation, web-based inquiry and simulation, Publisher, Excel, digital/video camera, use of scanner, and creation of a website. Most of these skills are presented in a way that relates to a certain area of social studies, mainly history, geography, economics, and government. A good example is the “Stock Market Simulation.” On day one, the teachers who participate in the training will learn to use Inspiration to brainstorm factors that affect a stock market. After the instructor introduces the online “Stock Market Simulation,” the teachers will practice and then
actually conduct the simulation with their fellow teachers for five weeks. Teachers are also encouraged and assisted in designing and integrating this simulation into their own economic classes at their schools. With the simulation, teachers will set up simulation rules using PowerPoint, create a simulation account using Excel and a calendar with Publisher. At the same time, teachers are introduced to one-computer and multi-computer classroom instructional strategies, management skills, collaborative projects, and implementation and assessment ideas. In general, InTech training focuses on moving teachers beyond the attainment of basic computer skills, to activities that teach them how to seamlessly integrate technology into curriculum. The instructors model technology integration in the content areas for teachers to practice. Collaborative work characterizes the InTech program.

Participants

More than 10,000 K-12 teachers in the state have attended InTech training since 2002. As teachers were enrolled in the training based on grade level rather than subject area, it is hard to know the exact number of social studies teachers who completed the training. Contacts were made to eight school districts within a 60 mile radius about the researcher’s institution and 23 teachers were identified as social studies teachers (7th-12th grade) and took InTech training in the past three years. The 17 participants in this study were drawn from eight public schools (four middle schools and four high schools) in six school districts and were selected on a voluntary basis. There were six middle school teachers and 11 high school teachers. The study sample was predominately white with the exception of two African Americans. The participants, six females and 11 males, ranged in teaching experience from 2 years to 24 years, with an average of 11 years. The participants taught a variety of social studies subjects including world history, geography, U.S. history, government, economics, psychology, sociology, and state studies. The schools where the participants worked ranged in size from 350 to 1200 students, and most were rural and suburban schools, varying from technology-rich environments to technology-poor environments. In the context of this study, if a school has been connected to the Internet with a 5:1 student to computer ratio or its classrooms have at least four Internet-connected computers, it is considered a technology-rich school. Otherwise, it is a technology-poor school. Two schools fell into the first category. One middle school provided a wireless laptop for all teachers and students. In another high school, each classroom was equipped with eight computers. All the other schools have two or three computers in each classroom and an approximately 7:1 student to computer ratio.
Data Collection and Data Analysis

A qualitative design guided data collection and analysis of this study. The primary methods for collecting data were document analysis, interviews, and observations. The documents included participants' lesson plans, instructional web pages, worksheets, handouts, slides from PowerPoint presentations, as well as students' technology-based projects and assignments, such as slides from student produced PowerPoint presentations, brochures, newsletters, and pictures of student projects. Two semi-structured interviews were conducted with each of the 17 participants. The initial interview explored participants' perceptions of integrating technology, their experiences of using technology in their classrooms, and how technology integration training affected their instructional practices. Follow-up interviews were conducted with the participants to clarify or confirm the interview transcripts and some tentative interpretations derived from different sources of data. All the interviews were audio taped and transcribed for data analysis. The researcher observed at least one technology-connected lesson conducted by each participant, and half of the participants were observed twice.

Data analysis included the following steps: (a) identifying participant and classroom characteristics related to technology use, (b) reading and re-reading interview transcripts, observation notes, and documents, (c) organizing data into retrievable sections, (d) coding the data and classifying the data into categories, and (e) connecting the categories and seeking relationships among them using constant comparative analysis method (Glazer & Strauss, 1967). Using the constant comparison technique, the researcher continually examined and compared themes generated from the various data (i.e., interviews, observation notes, documents from teachers and students) in this study.

The researcher served as the primary instrument for gathering and analyzing data. Two outside colleagues read all the transcripts and interview results to verify the coding process (Merriam, 1998). The researcher and colleagues discussed discrepancies and made a few adjustments to the coded excerpts and categories. The interview transcripts were shared with participants for review, clarification, or confirmation. The tentative interpretations were taken back to the participants to ask for the plausibility of the results. The coding process and the themes generated from the various data sets were then shared with five professors and colleagues. Suggestions were made as to how to integrate some of the categories. Modifications were made based on the comments.
FINDINGS AND DISCUSSION

To facilitate the discussion of the results of this study, the findings are displayed based on the three research questions: (a) how do social studies teachers who have had technology integration training perceive technology integration? (b) how do these teachers use computer technology in the classroom? and (c) how does technology affect social studies teachers' teaching practice?

Teachers' Perceptions of Technology Integration

Participants reported different views on using computer technology in the social studies classrooms. Three major views of technology integration emerged from analysis of the data: efficiency, enhancement, and relaxation.

Efficiency-oriented view. Participants were considered to have an efficiency-oriented view if advocated using technology mainly for the purpose of facilitating their paperwork and obtaining information in a more efficient way. Fourteen (14) of the 17 participants made references to this efficiency factor. Among them, nine considered it as their primary purpose of using technology. Teachers with easy classroom access to computers consider technology as an integral part of their daily planning and teaching. These participants believed that computer technology made it possible for them to create tests, design lesson plans and worksheets, and prepare research activities in more efficient and effective ways. As one participant claimed, "technology makes my job easier so that I spend less time on the paperwork, and more time on my kids' working."

Almost all participants with efficiency-oriented perspective identified the benefits of more time for instruction as well as more time to focus on their students. They believed they could cover more curricula content and provide students with more information in less time. A participant explained:

I love using technology, because I have very limited time in my life. I want to do so much for the very limited time I have, and technology allows me as well as my kids to have a quicker access to a lot of things. For example, we watch CNN and hear the speech, then I can get a transcript of the president's speech in 15 seconds. I could read it, edit it, and then handout it out in my class. It took only half an hour, but it used to take me hours and hours to do it. Because of that easy access, I like it. I feel like it gives the
kids a lot more access to a lot of more information around the world. Kind of like [at] their fingertips. (Roger)

Teachers with an efficiency perspective described how they could obtain more information in less time. To that end, participants regarded the use of the Internet as their primary way of using technology. Some participants even equaled integrating technology with “integrating Internet.” For these teachers, the Internet was a living library which they could easily access for up-to-date information. Consequently, searching the Internet for information was a common occurrence in their classrooms. Considering that social studies teachers typically experience the pressure of time constraints and excessive curricular coverage, it is understandable that the teachers in this study felt the same challenges and used technology to facilitate their paperwork and used the Internet for immediate information both by themselves and their students.

**Enhancement-oriented view.** The 10 participants identified with an enhancement-oriented view emphasized the use of technology to enhance classroom instruction and student learning. These participants saw technology as a way to supplement textbook information, diversify teachers’ instructional strategies, and meet students’ diverse needs. They also used technology to improve student learning, for example, to support students’ collaboration, life skills, in-depth knowledge, problem solving ability, and critical thinking skills.

Social studies textbooks were considered by most participants as boring, irrelevant, and out of date. In contrast, the information on the Internet was considered more current, interesting, and more concise and easier for the students. This was perhaps the most important reason why these participants used the Internet to supplement or even replace textbooks. The following response was echoed by many participants in this study:

Textbooks are so boring, so vague and general, and they put everybody to sleep. They never say the truth about anything...So I see the technology as a chance for kids to get out there and to get more perspectives on the world than just what some textbook tells them. Some may be way over some students’ heads, but most maybe more gear towards the students and in the language they would better understand. (Daniel)

Use of technology enabled participants to diversify their instructional strategies and reach more students with different learning styles and academic levels. Eight participants reported using technology to diversify their
teaching strategies as their primary focus. A typical response was from Mark:

Technology is going to make your work easier. Because if I stood here for an hour and was still talking and lecturing I’ll go crazy, and they’ll go crazy. It gives you a different resource to teach the same materials in a different manner, to engage the students a little more than just directly out of the textbook, and to give them a little bit more power to do things. They pay attention a little bit more... I’m one teacher, I’ve got anywhere from 20 to 35 kids in the classroom. It’s very difficult to make sure every single [one] of them to be engaged the whole time. I know they are all engaged and did learn something when technology is involved.

This comment indicates that these teachers realized that the traditional classroom, dominated by textbooks, worksheets, and teacher lectures, no longer satisfied the students who grew up with technology. These students are more motivated to learn from a variety of instructional strategies, especially when technology is involved.

Besides using technology to diversify their instruction, these participants also made references to their desire to use technology to help students become more collaborative, learn knowledge in more depth, improve their critical thinking skills, and enhance their research ability. These ideas were conveyed in many participants’ responses. For example, one participant said, “To me, technology integration is just seeing them discover information on their own rather than me telling them, have them use higher order thinking, become accessible with the computer, and ponder their thoughts and come to their own conclusion.” These responses suggest that technology was positively seen as an avenue to help improve many aspects of student learning. These participants felt an obligation to prepare their students for entry into a society that demands critical thinking skills as well as to ensure they were familiar with how to use technology to accomplish these skills.

“Relaxation” or “win-win” view. Most high school teachers in this study taught in a 90-minute block schedule and oftentimes both teachers and students became tired and bored. Fridays were especially challenging. Two thirds of these high school teachers reported that they tended to engage students in computer related activities on Fridays. Incorporating activities with computers on Fridays, as one participant stated, was a “win-win strategy,” and “it makes the day go much better, and students learn that way.”

Participants observed that their students worked best when stimulated and technology was the instructional tool that provided them stimulation.
Students were more motivated to explore information or complete assignments using computers on their own or with a group than they would be to sit and listen to a lecture and take notes. Technology gave their students a fun way to learn knowledge. Besides, it provides an opportunity for both the teacher and students to learn technology skills from each other as many high school students are competent technology users.

The participants consented that the use of technology gave them not only a break from lecturing all the time but also much fun when “watching students do things and discover information there on the computer.” They enjoyed facilitating the students and letting the technology take over part of their work.

Relaxation, in this category, does not in any way suggests that teachers relaxed their demands; rather it implies that both teachers and students get a break from lectures and an opportunity to use technology. None of the middle school teachers in this study mentioned using technology to relax. Perhaps their 50-minute schedule made lengthy use of technology difficult or they believed their middle school students required more management when using technology than older students.

**Overlapping views.** More than half of the 17 participants described using technology for all the goals and purposes described previously: efficiency, enhancement of classroom instruction and student learning, and relaxation. This suggests that for these teachers technology was a way to help them become more capable teachers. At the same time, they hoped that technology would help their students learn more knowledge and develop the necessary skills to function in a technology-oriented society. One participant’s comment reflects this view:

I do a technology-related lesson at least once or twice a week. I try to integrate it in most of my lessons, because the students are much more interested, and it’s very important for them to know how to use technology to be able to compete with other students... To me, technology integration means allowing the students to broaden their learning and doing whatever it’s going to take to help them to be interested in learning. Often times the students aren’t interested in social studies, and using technology will spark their interests. It doesn’t mean to limit the content, but being able to do different things with technology with that content, to learn the content in depth. It also means that the students are aware that the best resources are out there and know ways to tap into those resources, that they know how to deal with difficulties and realize that there aren’t always going to be answers on the Internet, and even answers you find require
thought and knowledge to interpret them. That's how I see technology integrated into the students, into the classroom. That's the automatic goal for me to use technology. (Tonya)

These teachers viewed technology as another avenue to open up more opportunities for their students as well as a way to engage students in more meaningful learning. As defined by Reeves (1998) and Dockstader (1999), technology integration involves students using technology as a resource to help them develop higher order thinking skills, more creative responses to assignments, and enhanced research skills. Further, technology allows students to learn to apply computer skills in meaningful ways. Many participants in this study seemed to possess these views for using technology in the social studies classroom.

Having explored the participants' perspectives on technology integration, the following section focuses on the many and varied ways that these participants were using technology in their social studies classes following their InTech training.

**Technology Integration Into the Social Studies Classroom**

Previous research proposed that teachers' use of technology falls along a continuum, which extends from teacher-centered methods to student-centered methods (Ertmer, Gopalakrishnan, & Ross, 2001; Roberts, 2003; Saye, 1998). The analysis of the data of this study came to a similar conclusion. While the previous research focused on how teachers used technology in general, this current study attempted to explore how social studies teachers used technology following InTech integration training and what technology tools they used for teaching. Table 1 shows the four major instructional methods emerged from the analysis of the data: teacher-centered methods, structured inquiry, teacher-student negotiated methods, and student-centered methods. This table is similar to that of Roberts in that the instructional methods were placed on the continuum and were grouped based on the categories identified about the interaction among the teacher, the student, and the technology. Additionally related issues such as technology tools used and social organization were included.
Table 1
Continuum of Technology Use in the Social Studies Classroom

<table>
<thead>
<tr>
<th></th>
<th>Teacher-Centered</th>
<th>Structured Inquiry</th>
<th>Teacher-Student Negotiated</th>
<th>Student-centered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher Role</strong></td>
<td>Use technology to present information &amp; lecture</td>
<td>Create worksheets and research activities using computers and teach prepackaged materials</td>
<td>Set specific requirements and assign topics</td>
<td>Facilitator &amp; collaborator</td>
</tr>
<tr>
<td><strong>Student Role</strong></td>
<td>Store information, complete worksheets</td>
<td>Use technology to obtain information or do research</td>
<td>Explore a variety of information using teacher-provided resources</td>
<td>Student led instruction and self-decided Inquiry</td>
</tr>
<tr>
<td><strong>Technology Role</strong></td>
<td>Facilitate presentation</td>
<td>Provide content knowledge in place of or supplemental to textbook materials</td>
<td>Provide tool for accessing content information, organizing information and for presenting findings</td>
<td>Provide tools for inquiry and presentation</td>
</tr>
<tr>
<td><strong>Technology Tools Used</strong></td>
<td>PowerPoint</td>
<td>Word Processor, Excel, WebQuests, games, Internet resources</td>
<td>Internet &amp; web-based resources, PowerPoint, Timeline</td>
<td>Combination of tools: Internet, overhead projector, PowerPoint, Microsoft Publisher, Inspiration, Timeline, digital/video camera</td>
</tr>
<tr>
<td><strong>Classroom Organization</strong></td>
<td>Independent work</td>
<td>Individual learning</td>
<td>Individual or collaborative learning</td>
<td>Individual or collaborative learning and teaching</td>
</tr>
</tbody>
</table>

Moving through the continuum, it is noticeable that the teachers’ role as a dispenser of knowledge is gradually weakened while the students’ roles as active learners and inquirers are strengthened. Technology’s role as a facilitator for teachers’ lectures changed to a facilitator for student-oriented inquiry and presentations. Accompanying this shift are changes (a) in curricular focus from information retention to the development of higher order thinking skills, (b) from teachers’ use of a single technology tool to present information to students’ use of a variety of technology tools to conduct and present research, and (c) from individual work to more collaborative work.

**Teacher-centered methods.** Teacher-centered methods in this study refer to methods typically used by traditional classroom teachers to manipulate classroom instruction and student learning, even if technology is involved. On the far end of the continuum, the teacher remains the holder and
dispenser of knowledge while students are passive learners. The curricular focus is on content coverage and fact retention. Nine of 17 participants in this study noted that they regularly used computers to support their lectures. While most participants used PowerPoint presentation software to enhance their lectures, others used Microsoft Word and then transferred information from the computer onto a TV screen. The participants believed technology enabled them to present information in more visually appealing forms and to accommodate their students’ different learning styles. One participant said:

I would use technology to start the morning. When the kids come in, there will be some questions on overhead projector that I made on computer, which is to settle them down, get ready to study. They got to answer these questions to get graded. Then I do a lot of PowerPoint. A lot of my lectures are on PowerPoint because they can hear me, they can see it, and they have to write it down. So we get into the visual, the auditory learner, and they kind of study from that. (David)

Structured inquiry. The second category on the continuum is structured inquiry. In this category, the teacher shifts her role as a knowledge dispenser to that of a guide. Rather than directly giving lectures or presentations using technology, the teacher engaged their students by using computer-based structured materials for teaching, such as WebQuests, review games, stock market games, and computer-based software programs. Many of these were introduced and practiced during their InTech training. Two examples illustrated this shift.

WebQuest developed by Bernie Dodge and Tom March at San Diego State University in 1995 is an inquiry-oriented activity in which most of the information that learners interact with comes from resources on the Internet (Dodge, 1995). Since then it has become the most popular form of a structured inquiry using Internet resources. WebQuest attracted participants in this study. They considered WebQuest as an effective inquiry tool and believed that WebQuests enabled students to investigate a problem more effectively. More than half of the participants used WebQuests for social studies instruction. However, since WebQuest inquiry often required availability of sufficient computers, only three participants regularly used WebQuests.

In this category, a more commonly used method was games, among them was the web-based “Stock Market Simulation.” Six participants who taught high school economics reported using this game in their classes for at least five weeks or even a full semester. This activity was considered one
of the most successful lessons conducted with technology. In playing this
game, participants were able to learn basic concepts of stocks following the
procedures and connect many social studies topics, including government,
global affairs, the current Iraq war, and of course, economics. Moreover, the
game made economics more relevant and meaningful to students. This is il-
lustrated in one participant’s comment:

While we are still playing the game, we’ll be moving on to gross national
product. So we are not on the stock market itself 10 weeks. It yields some
pretty good global ideas, economy, things like that. I made them read stuff
about market reports. We talked about how government affects stock mar-
ket, how the war on Iraq affected the world economy or economics in the
United States. When we go to war, what prices are going to rise, what
companies are going to drop. And it really works out good. (Luke)

Structured inquiry gave students the opportunity to gain appropriate in-
formation from more focused web resources. It allowed the teacher and stu-
dents to use time wisely when students were engaged in the Internet explor-
atory activities. The availability of the Internet enabled students to conduct a
“free search” of information, and it also allowed the teacher to monitor stu-
dent learning easily. Almost all the participants recognized the great impact
the Internet had on their social studies teaching and their students’ learning.
They reported students were more engaged when using the Internet to obtain
information.

Generally, students moved away from being passive listeners as they
were in a teacher-centered classroom. They had opportunities to manipulate
the computer, explore the materials and reflect upon the information. In
these uses, technology assumed a teacher role by providing content informa-
tion and guiding students in their research activity. The instruction was often
organized around the individual, but cooperative work occasionally oc-
curred. Teachers used technology to motivate students and engage the stu-
dents in activities that enhanced their students’ understanding of informa-
tion as well as created opportunities to develop higher levels of learning.

**Student-teacher negotiated methods.** The third category drawn from
the data is student-teacher negotiated methods. In this category, both the
teacher and students have some control of student learning. More emphasis
is placed on students’ indepth knowledge comprehension and application.
Technology serves as a tool for accessing content information and for orga-
nizing and presenting information. The Internet was a primary way teachers
gathered information, and a primary way to engage students to explore in-
formation and complete projects. The teacher still guided student learning
by setting specific requirements, assigning research topics, and identifying websites. Students, however, had opportunity to use technology independently or with groups, and present information with PowerPoint or Timeliner software.

In a teacher-student negotiated classroom, participants stressed the importance of identifying websites for students to use to research information. These participants also offered students opportunities to do research on their own. Participants believed that giving students the opportunity to explore information themselves improved their students’ research ability, an important goal of social studies learning. Almost every participant used this method to engage students in doing research.

**Student-centered methods.** At the other end of the continuum is the student-centered method. In this category, the student’s role shifted from a passive listener to an active researcher and presenter. Within this category, the teacher guides, facilitates, and provides students the tools needed to research, explore, and create meaning (Baylor & Ritchie, 2002; Diem, 1999; Ferguson, 1997; Hope, 1998; Kook, 1997; OTA, 1995; Wenglinsky, 2001). Technology, for these participants, served as tools for student inquiry and presentation.

In the present study, student-centered activities referred primarily to student-led presentations, student-directed inquiries, and students’ demonstration of research projects in which they used a variety of technology tools, such as PowerPoint, Microsoft Publisher, Inspiration, Timeliner, and digital/video cameras. All these tools were ones the participants practiced during InTech training.

In the social studies, time and curricular coverage are often considered as barriers to effective technology use. However, eight participants in this study indicated they covered more in less time and the students were engaged by the technology activities. One example was teaching world history. A participant intended to teach a variety of world revolutions beginning with the English Civil War up to the Industrial Revolution. Four chapters in their world history textbook were devoted to this area. Instead of lecturing, the participant divided students into small groups. Each group explored a different revolution, created a PowerPoint presentation with pictures from the Internet, and then taught the class about their topic. Then, each group created test questions using Word Processor and the teacher drew from their test questions to create a “revolution” test for the class to take. Further, all the students used Inspiration to create a web of the wars and Timeliner program to make a timeline of the major war events. Typically, this
amount of work would take three to four weeks to cover, however, with the help of technology, they were able to complete the work in one week. The participant reported that compared with his former classes that were dominated with teacher-centered textbook-oriented lectures, students in current classes obtained more knowledge not only about the revolution they studied but also other revolutions because they were more engaged and involved throughout the learning process. Test results of the chapters indicated a very positive performance by the students. What is more, behavior management was no longer an issue when students were involved in technology-related learning activity.

Five participants conducted similar activities to teach world or U.S. history events. Some participants combined inquiry and presentation strategies with actual interviews conducted by students. These participants indicated that while the students worked on these projects, they learned more history in a shorter period of time. Furthermore, the students learned (a) to use various technology tools and research skills to present their information, (b) to collaborate with students, (c) to produce a higher quality product, and (d) they developed a sense of pride in their work. In addition, these activities made social studies learning, especially history, more relevant and meaningful to the students, and enabled the students to gain multiple perspectives about history. The students also learned to deal with current and controversial issues in a critical manner, and they improved their civic involvement. For example, several participants encouraged their students to use technology to explore human rights issues and to develop an action plan to improve human rights condition around the world. Three participants engaged their students in “doing history” using digital camera, the camcorder, and other technology tools. Others had students create world-wide newscasts and newsletters using Publisher, Inspiration, digital camera, and Timeliner. The participants had practiced these technology tools for similar purposes during their InTech training.

These student-centered activities suggest that social studies teachers are able to make good use of technology to engage students in inquiry learning and thoughtful activities. They also demonstrate how technology can be integrated into the social studies classrooms to facilitate the development of their students’ higher level learning, problem-solving skills, and research ability.

It is obvious that in conducting student-centered activities, participants assumed new roles. These new roles encouraged students to pursue their own inquiries, to make use of different technology tools to gather, organize, and interpret information, and to become reflective and critical about information. In the process of integrating technology, the teachers’ traditional
role as a dispenser of information shifted to one of a facilitator. This change in role offered students more autonomy and allowed rich opportunities for both teachers and students to engage in high quality learning experiences.

**Impact of Technology Use on Teachers’ Teaching Practice**

Participants in this study varied in age, gender, teaching experience, and technology history as well as classroom setting. Fourteen (14) out of the 17 participants indicated that participation in InTech training positively changed their attitudes toward technology. The training not only improved their confidence and skills in using a variety of technology tools but also helped them develop new insights and new ways for teaching social studies. Before the InTech training, the majority limited their use of technology in the classroom to basic use of Microsoft Word, e-mail, internet research, and occasionally lectures with PowerPoint. The participants attributed this positive change to InTech’s focus on modeling technology integration ideas, having teachers design and implement technology-connected lessons, especially in social studies content areas. This was evidenced in one participant’s comment:

I enjoyed my InTech class to the extent that a lot of the examples are social studies examples. Most what we did in class I could bring back and almost apply immediately with my students. I probably would not have attempted some of those lesson plans, even really taking the time to design them had I not been in the InTech class. Now I have the lesson plan designed and I’ve been able to easily modify it to fit different subjects, to put it in when I could use it. (Mary)

Despite the positive impact of InTech training, most participants with successful technology integration experiences claimed they used technology when and where it fit. They used more technology but not necessarily on a daily basis even if the technology resources were available. To them, the student-centered activity was the most desirable because it enabled students to obtain in-depth knowledge and it motivated students to learn social studies. However, almost all participants agreed that it often took time to do a student-centered activity well. Therefore, whether or not to use technology to engage students in such student/project-centered activities often depended on the content they were teaching, how much time they had, and what was the priority at the moment.

No matter how experienced they were in using technology, many participants had concerns about time constraints, curricular coverage, and testing
requirements. They accepted technology and enjoyed using technology, but for most of them, technology was still something extra, something they could live without. This is reflected in one participant’s comment:

We have so much pulling away from our curricula and time. Somewhere you got to make up for all that time, and a lot of times you got to dump something. When it gets dumped off, it’s technology. So for me to make up for the time I’ve lost with these things that turn my class time, I have no control over it, I have to drop something off. And sometimes it’s the videos, sometimes it’s our computer day, but usually whatever it is, it is related to the technology, because that’s an extra...not necessarily for their survival.

Because of these practical concerns about curricula, time, and testing, participants felt limited in using technology, especially to conduct student-centered activities on a regular basis. Many participants tended to add technology to their typical lessons; they did not intend to change every lesson into a technology-connected one.

Participants who conducted many student-centered activities claimed their teaching practices changed after the InTech training, but they also acknowledged that what changed was the addition of the technology. Many used technology to do better what they already were doing and gave students more opportunities to use technology. They did not, however, think their teaching practice changed dramatically, as evidenced in one participant’s comment:

I’m pretty much an Interactive lecturer. I try to incorporate many different areas, for the visual learner, for the hands-on learner, for the group worker, for the book worker, the one that wants to work on the book. I try to be varied. I try to use as many various techniques as I can. My teaching style is changed, just the technology portion. I think I’ve always been the same kind of teacher in the last 10 years in regard to varied activities, and in changing things up to meet my kids’ needs. But I think with technology, when you have more opportunities and more availability, I have changed into the more technology definitely, but I think I just use the technology to better do what I was already doing.

Acceptance of technology and using technology do not result in a radical change in teacher’s instructional practices. Teachers’ positive attitudes toward technology and successful experiences with technology use encouraged them to use technology more frequently and creatively, but this did not ensure that these teachers would substantively change their teaching practices. Time, curricula, and testing were important factors that affected how
Social Studies Teachers' Perspectives of Technology Integration

much they used technology and whether they would design and develop student-centered technology-connected social studies lessons.

CONCLUSION

As an interdisciplinary subject, social studies draws upon multiple curricular contents related to the social sciences. There are numerous ways social studies teachers can make social studies enjoyable and meaningful to students. For most of the participants in this study, computer technology has become an important part of their teaching. Technology integration strategies can be plotted on a continuum from teacher-centered on one end to student-centered on the other (Ertmer, Gopalakrishnan, & Ross, 2001; Roberts, 2003). The findings demonstrate that with appropriate curriculum-based technology integration training and classroom practice, social studies teachers are able to use technology creatively to facilitate their work, diversify their instructional strategies, and improve social studies teaching.

The participants in this study reported a variety of views of technology integration in the classroom. Some used technology for its efficiency, some embraced it for the enhancement of their instructional practice and student enhanced learning, still others used it for relaxation and considered the use of technology as a win-win situation for themselves and their students. The data indicate that these teachers willingly used technology to motivate this "'com generation" (participant’s words) and give them an enjoyable and meaningful social studies learning experience.

It is worth noting that although most teachers referred to the student-centered activities as the most successful lessons they implemented with technology they did not intend to dramatically change their teaching practices. In making decisions on technology use, especially technology-related student-centered activities, they considered practical factors such as time, curricula, testing, and the priority at the moment. This is consistent with what Ehman (2002) found when explaining why social studies teachers are not using technology. Willingness to use technology and positive experiences with technology were related to participants’ increased use of technology and to more creative use of technology. This, however, did not ensure that teachers would replace their teaching with technology.

This study suggests that computer technology indeed offered social studies teachers a unique opportunity to enhance social studies instruction. Further, many teachers incorporated technology into the social studies curricula in many and varied ways. Use of technology made it possible for
Zhao

teachers to conduct learning activities that both increased students' interest in social studies and improved their problem solving ability and higher order thinking skills (Braun & Risinger, 1999; Molebash & Dodge, 2003; Coleman, King, Ruth, & Stary, 2001; Hopson, Simms, & Knezek, 2002; Roberts, 2003). As the teachers in this study demonstrated, effective use of technology can change the role of teachers and students. However, as the pivotal person in determining the quality of student learning, the teacher should be cautious when engaging students in technology research activity on their own. The teacher should remain active and serve as a facilitator and enabler of student learning to ensure a productive learning experience.

Teachers' technical expertise and professional experience in using technology is critical for students' successful learning experiences with technology. Teachers need to receive intensive training that focuses on demonstration of technology integration strategies and application of those strategies in the curriculum. Similarly, preservice teachers who are entering the teaching profession need to have this training. Teacher educators play the most important role in preparing these prospective teachers and ought to be equipped with technology themselves. However, the majority of social studies faculty members are not using technology regularly for instructional purposes (Mason, Berson, Coutts, & Heinecke, 2003). Given that social studies has lagged behind other disciplines in using technology, social studies professors should make efforts to learn, explore, and model how to integrate technology effectively into the social studies classroom. As is revealed in the present study, effective modeling of technology integration strategies can help social studies teachers develop positive attitudes towards technology and incorporate technology into social studies classrooms creatively and meaningfully.

References


Leh, A. (2000). Teachers’ comfort level, confidence, and attitude toward technology at a technology course. (ERIC Document Reproduction Service No. ED444492)


Zhao, Y., & Hoge, J. (2004). Barriers and challenges encountered by teachers in infusing technology into social studies classrooms after technology integration training. In R. Ferdig & C. Crawford (Eds.), *Proceedings of the Society of Information Technology and Teacher Education 15th International Conference* (pp. 4862-4866), Atlanta, GA. Norfolk, VA: Association for the Advancement of Computing in Education.