

INTEGRATION OF TECHNOLOGY INTO THE TEACHING OF SOCIAL STUDIES
TO 11TH GRADE STUDENTS IN A MIDWESTERN URBAN HIGH SCHOOL.

A Thesis by

George Omondi Odongo

Bachelor of Education, University of Nairobi, 1996

Submitted to the Department of Curriculum and Instruction
and the faculty of the Graduate school of Wichita State University
in partial fulfillment of
the requirements for the degree of
Master of Education

May 2008

© Copyright 2008 by George Omondi Odongo,

All Rights Reserved

INTEGRATION OF TECHNOLOGY INTO THE TEACHING OF SOCIAL STUDIES
TO 11TH GRADE STUDENTS IN A MIDWESTERN URBAN HIGH SCHOOL.

The following faculty members have examined the final copy of this thesis for form and content, and recommend that it be accepted in partial fulfillment of the requirement for the degree of Master of Education with a major in Special Education- Gifted.

Kay L. Gibson, Committee Chair

Frances Clark, Committee Member

Randy Turk, Committee Member

Fuchang Liu, Committee Member

DEDICATION

To my wife Christine, for whom I would never have ventured down this path had she not encouraged me to pursue my greatest dreams. Without her constant patience and assistance in taking care of our two boys, I would never have fulfilled this dream.

To my two boys Dan and Don, to whom I owe much of who I am. Being your dad who has been away from you for three years has given me the fortitude, strength and determination to accomplish the task and get the job done. God has so many good things planned for you.

Finally, to my late parents, for passing on dreams and opportunities you never realized in your own lives. I am forever indebted to you for I know you have been cheering me on.

ACKNOWLEDGEMENTS

First, I would like to thank my advisor and committee chair, Kay L. Gibson for her continuous and consistent support during the Master's program. Kay was not only responsible for helping me complete the writing of this thesis but she has also been a mentor who introduced me to writing through the Action Research class.

Besides my advisor, I would like to thank the rest of my thesis committee; Randy Turk, Frances Clark and Fuchang Liu for giving thoughtful comments and for being meticulous readers.

Finally, I am greatly indebted to my many teachers in the past; Brad Uhing, Terry Graham, Judy Ruder and Linda Mitchell. Thank you all for helping me realize the dream.

ABSTRACT

This study gathered data on how teachers integrated instructional technology into the teaching of social studies to 11th grade students in a Midwestern urban high school. A questionnaire, interviews and observations were used to collect data for the study.

Findings indicated that technology integration is a factor in the teaching of social studies in the school. The study showed that Internet research, video tape, overhead projectors and online learning were the favored form of technology integrated into classroom instruction. The study showed a need to provide pre-service and classroom teachers with training opportunities which emphasize technology integration. Teachers' perceptions of technology integration and prior teaching experiences were two of the noted factors which influenced a teacher's decision to integrate technology.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
II. LITERATURE REVIEW	6
Definition of term	6
Education technology	6
Benefits of technology	7
Benefits of technology in social studies	8
Teachers' use of technology in teaching social studies	10
Role of teachers in integration of technology	11
III. METHODOLOGY	14
Participants	15
Data collection instrument	15
Analysis of data	17
Procedure	19
IV. RESULTS	21
Questionnaire	21
Teacher observation	25
Teacher interviews	39
V. DISCUSSION	46
Teacher technology integration	47
Teacher technology training	48
Influence of teacher belief on technology use	49
Implications and conclusions	53
Possible limitations	55
Suggestions for future research	56
REFERENCES	57
APPENDICES	60

LIST OF TABLES

TABLE	PAGE
1. Degree of teacher agreement with statements closest to their views on technology use.	23
2. Combined responses from table 1	24
3. Type of technology used by individual teachers during observation	26
4. Number of observations when teachers used technology for presentation	28
5. Number of observations when teachers used technology for demonstration	30
6. Frequency of teachers technology use related to lesson objectives	31
7. Frequency of teachers use of technology to augment lesson	31
8. Observations when teachers used technology with little or no management problems	32
9. When teachers used technology as tools for students to learn from	33
10. When teachers used technology to aid learning in their classrooms	34
11. When students used technology to engage in authentic tasks	34
12. When students had choices on technology use in the classroom	35
13. When students were using technology responsibly	36

CHAPTER I

INTRODUCTION

The purpose of this study was to investigate how teachers integrate technology into the teaching of social studies in a Midwestern urban high school. Learning and educational effectiveness at high school and other levels has become a national issue during the last decade. For example, national commissions and scholarly reports on the status of higher education have criticized the pedagogical approaches that focus on conveying fixed bodies of information and view students as recipients of knowledge, (Bork 1999). My experience as a teacher informed my decision to do an investigation into the role of technology in teaching social studies to 11th grade students. Schools and school districts are increasingly placing a great deal of emphasis on the integration of technology in the classroom. Classroom teachers are increasingly held accountable for the amount of learning and student achievement in their subject areas.

Professional learning groups are organized at department levels in high schools with the aim of ensuring that high learning and teaching standards are maintained. Subject specialists are continuously working on the “best practices” which are passed on to the classroom teachers for their implementation.

School administrators are concerned about meeting the goals of Adequate Yearly Progress (AYP) which is an important benchmark of the No Child Left Behind Act (NCLB). In line with this endeavor, subject specialists are busy defining standards and benchmarks which teachers and students have to measure up to.

I had a teaching experience in a school district in a Midwestern state, and during this period, the district organized many training programs, workshops, and in-service courses. In these courses, emphasis was put on the use of technology in teaching as a way of helping students to be in charge of their learning process. The departments of social studies in this school also brought in laptops for students' use, and teachers were greatly encouraged to use them in their classrooms to augment their efforts. I also remember taking part in two in- service courses organized by Holt Education services for social studies teachers district-wide.

My decision to investigate the impact of integration of technology into the teaching of social studies was informed by findings from my action research project last semester. My research investigated the impact of technology in learning/teaching of history and government from the students' perspective. A total of 21 students participated in the study (11th grade high school students). The study involved observing students using laptops in class and in the library. Students were each assigned a specific topic to research. Their products such as projects, essays and PowerPoint presentations were assessed. Students were allowed to use a variety of technological tools to present their work.

Finally, student grades were examined and compared to their performances and quality of products. The results of my study showed that students were more receptive when using technology aided learning. My findings showed that technology tools offer a range of possibilities to the students but at the same time place great demands on the teacher. I found that the teacher had to function as an advisor in the classroom by

organizing and structuring students' activities so as to realize the lesson objectives and to help students gain from their learning experiences.

I found that technology does not replace the teacher's role but complements his teaching activities. My study showed that student products, such as project work, are necessary to exploit the various possibilities of technology use in the classroom, however, the teacher must play a role in making this possible.

Johnson and Johnson (1999) in their research article titled "computer-mediated collaborative learning, an empirical evaluation" have stated that the often cited failure to actively engage students in the learning process has been attributed to an over reliance on the lecture method of instruction. "The lecture method, resulting in long periods of uninterrupted instruction-centered, expository discourse, relegates students to the role of passive spectators". (Johnson and Johnson, 1999, pp. 69). Thus the need for enhancing the learning process, effectiveness and efficiency is urgent in classroom teaching. Their argument is strongly in favor of using technology to facilitate instruction and augment the teacher's effort.

The purpose of this research was to investigate how teachers integrated technology into the teaching of social studies. It also investigated the problems/limitations which teachers experience as they integrate technology and how they overcome them. This research included 14 teachers in the department of social studies in a Midwestern urban high school. A questionnaire, classroom observations and interviews were employed in order to generate reliable results and information that may adequately answer the research question.

Darling-Hammond and Berry (2000) have stated in their research regarding the use of technology in teaching that “whether technology should be used in schools is no longer the issue in education. Instead, the current emphasis is ensuring that technology is used effectively to create new opportunities for learning and to promote students achievement” (Darling-Hammond & Berry 2000, p. 86). They further stated that educational technology is not and never will be transformative on its own however, it requires the assistance of educators who integrate technology into the curriculum, align it with student learning goals and use it for engaged learning activities.

The focus of this study closely related to the literature which presents arguments supporting the integration of technology into the teaching of social studies. I examined the literature to identify how technology has had a positive impact on teaching. The methodology for this study involved a content analysis of the literature surrounding the integration of technology into the teaching of social studies. The study used a questionnaire, teacher interviews and observations. These three instruments provided results on how teachers felt about the use of technology in their teaching.

Purpose of the Study

This study examined how teachers integrated technology into the teaching of social studies to 11th grade students in a Midwestern urban high school. It looked at the different types of technology used by the teachers and ways in which technology is used in the participants’ teaching. As such the study was be used to answer the study questions:

- How do teachers integrate technology into the teaching of social studies to the 11th grade students in a mid –western urban high school?

- What problems /limitations do teachers encounter as they integrate technology?
- What are the noted benefits of integrating technology into the teaching of social studies to 11th grade students?

CHAPTER 2

Literature Review

The focus on technology in education mandates that teachers become computer literate. Recent developments in computer hardware, software and communication technologies create exciting new opportunities for the educational use of these technologies. Although increasing students' subject –matter understandings and competencies may be the most important goals of instruction, it is widely understood that students' attention, effort and engagement in academic tasks is a critical intervening variable in determining whether those outcomes are attained.

The focus of this study was to go beyond the traditional classroom instructional modes (e.g., lectures and class discussions) to study technology supported pedagogical approaches. In doing so, the study looked at how teachers integrated technology into their teaching, types of technology used and the factors that influenced their decisions in technology use.

Definition of Term

According to the Webster dictionary, technology generally refers to human innovation in action that involves the generation of knowledge and process to develop systems that solve problems and extend human capabilities.

Educational Technology

As used in the study, educational technology is the use of multi-media technologies or audio-visual aids as tools to enhance the teaching and learning process.

It is believed that student involvement in learning is enhanced with computers which give them the opportunity to explore new areas. Students are considered to be

more productive when using computers and other technology tools to access information (Budin, 2000, Dwyer, 2000 & Wade2000). The three have presented strong arguments in favor of using computers to augment the teacher's effort in the classroom. One such strong argument is that computers allow students to access information through their preferred learning styles.

The general consensus is that students' attention, effort and engagement in academic tasks is a critical factor in determining whether learning has been achieved. Roblyer (2002) and Cuban (2002) suggested that the widespread appeal of designing computer based activities for students is at least partly due to teachers' accumulating experience that students are generally more "on-task" and express more positive feelings when they use computers than when they are given other tasks to do.

Benefits of Technology in Teaching

The usability of technology has put a spin on education, redefining the role of educators and reshaping classroom learning experiences. Research investigating the effectiveness of technology assisted instruction suggests that integrating technology into the classroom creates a rich, effective and efficient learning environment which improves student performance and learning,(Chisholm, 1999). Indeed, Cronin, Meadows and Sinatra (2001) have argued that technology can play several, very different roles in the classroom especially creating materials and processes that attract students to spend more time in their studies.

Research suggests that technology can be used by teachers to enhance their teaching. Meadows and Sinatra, (2001) identified five specific ways in which teachers can effectively employ technological activities into their teaching. They suggested that

technology can be used in converting lectures to multi media presentations (e.g. PowerPoint), web enhanced courses (e.g. Web CT or Blackboard), drill and practice software, digital story telling and web quests and blogs. These uses have been shown to engage students to learn basic skills and to develop higher order thinking skills. These uses can also be applied to the teaching of social studies to high school students.

Benefits of Technology in Teaching Social Studies.

A growing body of research has suggested that technology can provide outstanding benefits when applied into the teaching of social studies. Mason & Berson (2000) conducted research concerning the use of technology in the classroom and its impact. Their studies focused specifically on technology and its impact on teaching social studies. They identified three ways in which teachers can use technology to teach social studies as:

- Students can use the internet to do project work in history and government.
- Overhead projectors and video shows help students to visualize historical events and to put them into perspective (e.g., World War I and II, the Gulf War and Vietnam War).
- Students can use multi-media presentations to display their work.

Similar research has identified benefits of integrating technology into teaching of social studies. Fulton and Torey-Purta (2002) found that teachers can use slides and PowerPoint presentations to foster understanding of key historical facts and events.

They further suggest that technological solutions can streamline homework submission and correction of students' work. The benefits of using technology in the teaching and learning of social studies have also been supported by research conducted by Darling-

Hammond (1999). She raised the proposition that active, self directed, inductive and exploratory computer activities might result in increased student learning, not just for the best students, but for a broad range of students.

Brand (2003) conducted research to specifically study teachers' view of technology in the classroom based on case studies from urban middle schools. His study compared student performance, attendance and satisfaction in history classes that were taught using technology assisted strategies (PowerPoint and Web CT) and those taught the traditional way using only chalkboard. His research showed that students tended to dig deeper when researching on their own from the internet. Again, he found out that students performed better on essay writing activities and project work involving technology use. To study the impact of the integration of technology into the teaching of social studies, Rovai and Kassop (2001) presented similar results to those of Brand. Their studies presented a number of positive arguments in favor of a technology oriented methodology.

They supported the idea that discussion boards are very informative and help students to be reflective in their learning styles. The discussion boards encourage students to read other people's perspectives, carefully consider a response and coherently present that response to the rest of the class who then have the opportunity to contemplate and respond to it. They further asserted that there is a greater propensity for students to interact with one another on discussion board than there is in face to face setting. In their conclusion, Rovai and Kassop (2001) argued that discussion boards provide students with the opportunity of having active engagement with course content which leads to an

enhanced sense of empowerment, ultimately leading to a more interested, motivated and participatory student.

Teachers' Use of Technology in Teaching Social Studies

There is a growing body of research investigating ways of integrating technology into the teaching of social studies. Tara Mussel White (2002) investigated the use of technology to motivate students and found that research is supportive of the use of technology integration into teaching methodologies. Her research suggested that as students are busy manipulating data and learning by doing, involvement in their own learning increases along with enthusiasm. Students are no longer passive recipients of knowledge; they become active participants in the learning process.

These studies are similar to those done by Gibson (1999) who identified four ways in which technology can be integrated into the teaching of social studies. First, web quests which are inquiry-based activities in which groups of students interact with knowledge acquired from resources on the Internet, this can greatly aid students in writing project papers on historical issues. Secondly, students can use digital portfolios which are creative ways of organizing and sharing collections of their work and ideas. Thirdly, history teachers can use E-Pals, global communication websites that allow students to correspond with other students in the United States and around the world. Finally, students and teachers can use e-mail exchange services which create cultural awareness, support communication skills and establish a collaborative learning environment.

Additional work in this area has been extended and expanded by Williams (2005) who focused specifically on the use of internet and e-mail in the teaching of history and

government. Williams' study showed that teaching which involves the use of the internet and e-mail can have profound effects on the learning outcomes of students. Williams used a sample of 300 high school students and found that based on pre and post testing, over all students' knowledge tend to increase after being exposed to social studies issues using the internet.

Similarly, using an interview and questionnaire tool to calculate correlation coefficients for associations, Williams (2005) found that students tend to appreciate issues dealing with history and government more after utilizing the information on the internet. Hence, the conclusion was drawn that the internet and other technological advances seem to provide the necessary positive impact on the learning of social studies. These studies support the current use of technology in the teaching of social studies and explain why schools are spending more money to purchase teaching equipment which promotes the use of technology.

The Role of Teachers in Integration of Technology

For successful integration of technology into the teaching of social studies, teachers need to be fully trained on how to appropriately apply this into their teaching. Teachers need to be able to integrate technology into the curriculum, align it with student learning goals and use it for engaging learning activities.

Research suggests that for successful integration of technology tools into the teaching of social studies, teachers should develop a personal approach to computer technology (Held, 2002). Teachers should become familiar with a variety of forms of electronic communication, web authoring and HyperCard programs, presentation software, marks programs and databases. The view that teachers need to be continually

trained on technology oriented teaching is supported by research done by Goss (2000) who suggested in his research that school administrators and governments should continue to put money into traditional professional development activities, after school seminars for teachers, weekend workshops and computer retreats, all of which are designed to train teachers in how to use the latest educational software.

The general consensus is that for the integration of technology into teaching to be successful, teacher education and training needs to be geared towards this line.

Whitworth (2001) who conducted research on how teachers use technology to aid their teaching, explained that technology can provide opportunities for empowering teachers by focusing on teacher education and training so that it serves as a useful support in the curriculum development and delivery. Budin (2003) suggested that professional development in computer technology which focuses on the training of teachers in the latest software is grounded in the belief that as teachers' confidence in their ability to use computers increases, so will their use of computers in a teaching context. Budin's work is consistent with the findings of Miller and Olsen (1999) who claim that it is the teachers' involvement with the technology that makes the technology valuable or not. They confirm the notion that teachers need in-servicing on teaching methods associated with the integration of computers in the classroom. The ability to see what resources may be useful to their students, to have a vision of how to group the resources effectively and choose when to integrate these into their classroom teaching are very important skills.

Problems Associated with Integration of Technology in Teaching

Bork (1999) reported in his research that because teaching today involves teaching with technology, it may be imperative that pre-service teachers engaging in field

experience not only be provided with opportunities to integrate technology into their teaching practice but that they be instructed in a manner that demonstrates the appropriate integration of technology into classroom practices. Teachers need to be comfortable in the use of technology in order to be effective in their methodology. Teachers also need to monitor how the students use technological tools in class because there is the tendency for some students to veer off from the learning objectives and to seek to use the internet for their other motives other than for purposes of learning.

In summary, the available literature discussed how teachers integrate technology into their teaching, the benefits that this can bring, and the problems that teachers face as they integrated technology. The literature supported the use of teaching methodologies which integrated technology. It also identified the different ways in which technology can be integrated into teaching and specifically how it can be used to teach history and government. Finally, the literature has identified possible shortcomings which may come with the integration of technology into the teaching and learning.

CHAPTER 3

Method

This study investigated how teachers integrated technology into the teaching of social studies specifically to 11th grade students in a Midwestern urban high school. The department of social studies has 12 teachers, 8 males and 4 females. Only one of the 12 teachers had a teaching experience of 1 year with the rest of the teachers having taught for a period between 3 to over ten years. Half of the 12 social studies classrooms are fitted with overhead projectors. The department has a laptop cart which teachers can always arrange to bring into their rooms for use by students. Teachers were also able to take their students to the technology room for those lessons which required video conferencing.

A mixed method approach in which both qualitative and quantitative methods were used to analyze data collected. “Both modes provide ways of discerning, examining, comparing and contrasting, and interpreting meaningful patterns or themes” (Green, Caracelli and Graham, 2000, pp. 116). Creswell (2003) describes this method as a research strategy integrating different methods and which is likely to produce better results in terms of quality and scope. The data collection instruments used in the study included a questionnaire, classroom observations and teacher interviews. Information was gathered related to the following key areas which were important to the purpose of the research:

- How teachers integrated technology in their classrooms.
- Different types of technology used in the classroom.
- Problems/limitations teachers experience as they integrated technology.

Participants

This study used a sample of convenience drawn from the participants who were teachers in the social studies department in a Midwestern urban high school (12 teachers). Kalton, (1999) describes a convenience sample as “a sample where the participants are selected, in part or in whole at the convenience of the researcher” (Kalton, p.114). The teachers who returned the consent forms constituted the sample in the study. The potential participants were high school teachers with qualifications ranging from bachelors degree to a masters qualification and who possessed varied years of teaching experiences. The potential participants regularly attended professional development courses and workshops specifically tailored to develop their information technology skills. These professional development programs are planned and tied to the schools curriculum goals and are specifically given to teachers to help satisfy The Elementary and Secondary Education Act (2001) also known as the No Child Left behind Act (2002). This act places great emphasis on closing the achievement gap and requires that teachers use the best practices in their teaching.

Data Collection Instrument

Questionnaire.

A questionnaire sought to establish a number of factors such as the participants’ feelings towards the use of technology in their classrooms to teach and assign work to students. The questionnaire also sought to explore areas related to the use of technology by the teachers when teaching social studies (History and Government to 11th grade students). Five questions in the questionnaire sought to establish the participants’ level of competence or confidence in so far as technology use is concerned. Another ten items in

the questionnaire sought to determine how the participants use technology in their teaching (see Appendix A).

Classroom observation.

Participants were observed individually as they taught history and government to the 11th grade students. I designed an observation form (see Appendix B) to be used in the classroom during teacher observations. The form was divided into three sections to collect data on the type of technology used in the classroom, the teacher's use of technology during teaching time and the students' use of technology as assigned by the teacher. The key elements observed were:

- Different kinds of technology used in class.
- How did the participants use technology in their teaching?
- Any problems /limitations in the use of technology that could be observed during the teaching time

Interviews.

The study also used interviews (see Appendix C) to clarify issues observed in the classroom or reported by the participants in the interviews. The interviews sought to find out if teachers subscribed to the belief that technology mediated instruction in the classroom is pedagogically superior to alternative modes of communication. The interviews also aimed at identifying instances and frequency with which the participants used creative methods and strategies using technology in their classrooms. The interviews with individual participants sought to get their opinion on teacher education programs especially those providing pre-service teachers with technology related courses, methods

related courses, demonstrated instruction and the history and philosophy of technology in teaching.

Analysis of Data

This study used a mixed method approach to analyze the data collected. “The main advantage of using this method is that a mix of qualitative and quantitative data gathering enriches evaluation and the open ended comments provide away to elaborate and contextualize statistical facts” (Patton, 2002). Another reason for the suitability of this method is that the research used different methods to collect data to answer the research question thus requiring methodological triangulation. Both qualitative and quantitative methods were used. Data collected from observation was analyzed by a method known as constant comparison method. According to Goetz and Le Compte (2000) this method combines inductive category coding with a simultaneous comparison of all social incidents observed, and as social phenomena are recorded and classified, they are also compared across categories.

Descriptive statistics were used to report trends in the interview and observation results. “Descriptive statistics are used to present quantitative descriptions in a manageable form and helps to simplify large amounts of data in a sensible way” (Patton, 2002). Numerical counts or frequencies and percentages were used. Qualitative methods were also used to analyze data where appropriate. Patton (2002) states that “ the strength of qualitative research is that it is best for exploratory and descriptive analyses which stress the importance of context, setting and subjective frames of reference.” This may include writing short summaries that reduce the original ideas of participants into fewer words or grouping the core ideas into categories based on similarities.

Questionnaire.

Questionnaires are versatile, allowing the collection of both subjective and objective data through the use of open or closed formal questions (Patten, 2001, p.5). Questions were designed to gather either qualitative or quantitative data. I organized this data by rank ordering the items by the percent of responses. In this way information about a number of items was presented in a single table or figure.

The participants were given a questionnaire regarding their use of technology in the classroom. The results from the questionnaire were used in describing the participant's responses. The data was analyzed using a frequency table of counts or by calculating percentages.

Observations.

Classroom procedures were observed in order to collect data on how teachers use technology to teach. I used the information gathered through observations to describe the participants' activities in the classroom in terms of technology use. I also gathered information on how frequently they used technology, how they used it and the problems they encountered. Descriptive statistics were used to analyze data from observations made. Data from observation was also analyzed using qualitative methods for example grouping the core ideas into categories based on similarities before making generalizations.

Interviews.

Interviews can be used to collect data about phenomena that is not directly observable such as inner experiences, opinions, values and interests. The interviews were face to face and were structured with a set of eight standard questions which the

participants answered. Qualitative methods including tables and percentages were used to report and present data collected from the interviews.

Procedure

Data was collected from the 12 participants over a period of six weeks. Participants were encouraged to adhere to their usual or regular classroom protocols and procedures in their teaching activities. Data was collected from all the 11th grade classes in order to find patterns and variations in how teachers used technology in their classrooms using the constant comparison method. The participants were given consent forms one week in advance; these were returned duly signed before the study commenced. The following procedure was used for the study.

Week 1

I issued the questionnaires to the participants and allowed for a period of one week for them to work on them.

Week 2

I collected the questionnaires from the participants and started analyzing them. I used an interview schedule form to set up specific dates and times to interview participants using the school's block schedule. An interview schedule form was designed for this purpose (see Appendix D).

Week 3 and 4

I visited the participants in their classrooms to observe how they teach their lessons using technology and how students use the available technology to learn. My classroom visits followed the school's block schedule which meant that I had between

two to three visits in a week. Each day, I observed 3 different lessons lasting 90 minutes each. The observation form was used to record information.

Week 5 and 6

After one of the classroom observations, I interviewed each individual participant. My interview questions were based primarily on the observations and the participants' responses in the questionnaire. The interview sessions helped clarify the participants' questionnaire responses and it also gave me the opportunity to view some of the students' work in class.

At the end of this I started the process of doing a final analysis of data and reporting my findings.

CHAPTER 4

RESULTS

The purpose of this research was to investigate how teachers integrate technology into the teaching of social studies in a mid-western urban high school. The research involved 12 teachers in the department of social studies in the school. A questionnaire, classroom observation of teachers and interviews were used in order to generate results and information that would be useful in answering the research question: How teachers integrate technology into the teaching of social studies to 11th grade students in a Midwestern urban high school.

Questionnaire

A questionnaire was given to the 12 teachers in the department of social studies during the week of November 12, 2007 (see Appendix A). The questionnaire was comprised of five questions that sought to provide information on the participants' feelings towards the use of technology in the classroom and five questions to determine the participants' level of competence or confidence in using technology in the classroom. Another 10 items in the questionnaire asked the participants how they use technology in the classroom to teach and assign work to students. Descriptive statistics were used to analyze data from the questionnaire.

Results of the questionnaire items related to the teacher's use of technology in the teaching of history and government to high school students indicated that all of the 12 used technology to teach history and government. Six of the teachers have used technology for more than six years of their teaching career. A further 4 of the 12 teachers (33%) have used technology for a period ranging between 4 and 6 years. One teacher has

used technology for 1 to 3 years while another one teacher has used technology for only one year.

Eleven of the 12 teachers who responded to the questionnaire reported having taken a formal computer course of some sort. Four teachers out of 12 had taken three courses related to excel, web design and programming. Two teachers reported having taken courses in basic computer skills and another two teachers have taken courses about the use of PowerPoint, clickers and the Internet. Two more teachers have taken courses on introduction to computers and the worldwide web in the classroom. One teacher had taken a course on technology in the classroom and one teacher did not respond to this question.

A majority (11 of 12) of the teachers indicated that their level of ease in using technology for teaching history and government is “somewhat easy”. Only one teacher had a response of “very easy”.

Teachers were asked to identify their five most important objectives for student use of technology in the social studies classroom. Ten teacher objectives found during the literature review were listed on the questionnaire. Teachers chose five of the listed objectives which they considered as most important to their teaching.

All 12 teachers indicated that they use technology to find out about ideas and information. The two objectives (a) analyzing information from the Internet and (b) presenting the results to an audience were both chosen by 10 of the 12 teachers. Less than half of the twelve teachers indicated that six of the listed objectives were important to them. Those objectives were expressing themselves in writing (5), mastering skills just taught (4), improving computer skills (3), communicating electronically with other

people (2), learning to work independently (1), and learning to work collaboratively (1). Teachers were also given an option of identifying any other objective for technology use which was not included in the list; none responded in this manner.

The last item on the questionnaire was a rating scale on which the teachers were to select a response for each statement that was closest or represented their position on the use of technology. Five statements were given in the questionnaire which required the teachers to respond. The teachers were to use the raters: strongly agree (SA), agree (A), neutral (N), disagree (D), and strongly disagree (SD).

Table 1

Degree of teacher agreement with statements closest to their view on technology use.

(N=3)

	SA	A	N	D	SD
I have sufficient technology resources at my disposal for my students to use.	2	8	1	1	0
My technology literacy is adequate for performing my teaching duties.	2	8	1	1	0
Using technology tools in the classroom keeps the interest of the students engaged in the subject.	4	6	2	0	0
Using technology with the students helps them to learn the subject more quickly.	2	4	4	2	0
Being able to connect students to websites that provide information helps they learn material better.	2	8	2	0	0

SA=strongly agree, A=Agree, N=Neutral=Disagree, SD=strongly disagree.

For ease of viewing the questionnaire results, Table 2 was constructed which combined strongly agree and agree (SA and A) into one category and disagree and strongly disagree (D and SD) into another category.

Table 2

Degree of teacher agreement with the statements closest to their view on technology use.

(Combined responses from Table 1.)

	SA or A	N	D or SD
I have sufficient technology resources at my disposal for my students to use.	10	1	1
My technology literacy is adequate for performing my teaching duties.	10	1	1
Using technology tools in the classroom keeps the students engaged in learning.	10	2	0
Using technology with the students helps them to learn the subject more quickly.	6	4	2
Being able to connect students to websites that provide information helps them learn material better.	10	2	0

From Table 2, it can be seen that 10 out of 12 teachers (83%) believed that they had sufficient technology resources at their disposal for their students to use (agree and strongly agree). One teacher was neutral on this question while another one teacher disagreed. Again, 10 out of 12 teachers (83%) believed that their level of technology literacy was adequate for performing their teaching duties; only 1 teacher disagreed while the other one was neutral. The majority of teachers (10 out of 12) believed that using

technology tools in the classroom kept the interest of their students engaged in the subject. Two teachers were neutral about this while two teachers disagreed.

Half of the 12 teachers believed that using technology with the students helped them to learn the subject more quickly. Four teachers (33%) were neutral while the other two did not think so. Finally, the majority of the teachers, 10 out of 12, (83%) believed that connecting students to websites that provide information helps them learn material better. Two teachers were neutral on this.

Observation of teachers

Observation was used as a source of data. A technology use observation sheet was developed for this purpose (see Appendix B). The observations focused on three areas namely the technology types used by the teachers (technology data), how teachers use technology in the classroom (instructional data) and the role that technology plays in student assignments (students' involvement with technology).

A table was constructed to show the results of the observations. Twelve teachers were each observed three times and a record of the number of times each one of them used a particular type of technology was made.

Table 3

Type of technology used by individual teachers during observation (N=12)

Technology type/data	No. of teachers using technology type/data			
	3 times	2 times	1 time	Not at all
Presentation system/projector	9	2	1	0
Internet research	9	1	1	0
Video tape	8	3	1	0
Online learning	6	1	5	0
Email	2	4	1	0
Digital camera	0	2	3	7
Web quest	0	1	3	8
Video conferencing	0	3	1	8
Software application.	0	1	2	9
Webpage design	0	1	1	10
Other type (specify)	0	0	0	0

The purpose of this observation was to identify the types of technologies utilized by the teachers during the teaching of social studies. A list of ten (10) types of technologies (technology data) was identified and the observation was to select those utilized by teachers during the observations. From Table 3 it can be observed that the most frequently used type of technology was the presentation system (overhead projector). Nine of the 12 teachers used the presentation system during all three

observations. Two teachers out of the 12 used it during two observations and one teacher used it once in the three observations made.

The next common types of technology used by the teachers were Internet research using laptops, video tape and online learning respectively. From Table 3 it can be observed that these types of technology were used by the teachers during all three observations. Thus it can be concluded that these four types of technology were the most popular in the Social Studies Department. It should be noted that Internet research and online learning were easily used by teachers because of the availability of the laptop carts in the department.

From Table 3 it can also be noticed that the least preferred use of technology by the teachers was webpage design. It was only used twice by one out of 12 teachers while another 1 teacher used it once during three observations. Ten of the 12 teachers did not use webpage design during any of the observations made. The other types of technology which were not popular were software applications (e.g. spreadsheets), (9 teachers), video conferencing (8 teachers), and digital cameras (7 teachers) respectively.

The study results show that the majority of the teachers did not use these technologies to teach. A possible conclusion from this observation is that the teachers tended to use more frequently those technology types which were readily available in the school/department. In this case the most common types were the laptop computers and overhead projectors for presentations. Finally, there was no other type of technology used by the teachers other than those specified in the observation list of technology types/data.

Instructional use of technology

Teachers were observed to determine how they incorporate technology into the teaching of social studies to high school students in a Midwestern urban high school. Seven (7) key areas regarding the use of technology were recorded during the three observations made for each teacher.

One of the areas to be observed related to how frequently the teachers used technology for presentation. This involved using technology by the teacher to introduce content to the students in a way that was relevant to their daily experiences. For example, one teacher used a computer program to graphically display information to the students using graphic organizers. This organization helped the students to better comprehend or recall concepts, categories and facts.

Table 4

Number of observations when teachers used technology for presentation (N=12)

No. of Teachers	Never	Some	Often
5	0	1	2
3	1	2	0
1	0	0	3
1	0	2	1
1	2	1	0
1	3	0	0

Three words were used to describe the amount and frequency of technology use for instruction. Never: Not used technology during the entire lesson time. Some: Teacher used technology for part of the lesson. Often: Teacher used technology throughout the lesson.

It can be seen from the table that the majority of the teachers, 11 out of 12 (92%) used technology for presentation of their lessons. Only 1 out of 12 teachers consistently

did not use technology for presentation. The 11 teachers used technology for part of their lesson (some) or used technology throughout the lesson (often). This finding is consistent with the department’s policy of requiring teachers to use technology tools to facilitate learning of social studies.

Another area of technology use to be observed was how teachers used technology for demonstration purposes such as modeling the writing process in history and using a PowerPoint to help students organize their ideas. The students were then directed to transfer their ideas to paragraph form using Microsoft word. The teacher used a computer and projector to demonstrate this process to the students.

Table 5

Number of observations teachers were observed using technology for demonstration purposes (N=12)

No. of teachers	Never	Some	Often
6	0	2	0
3	0	3	0
2	1	2	0
1	0	1	2

From the table it can be observed that using technology for demonstration purposes by teachers was not a popular activity. However, all 12 of the teachers used technology for at least part (some) of the lesson. Eleven (11) out of the 12 teachers (92%) used technology for part of the lesson (some) and throughout the lesson (often). One teacher was observed using technology two times for demonstration purposes during a single lesson.

The reason for the less engagement of technology for demonstration is due to the nature of the subject (history and government). Unlike the practical subjects like the physical sciences, most of the topics in history and government do not lend themselves to demonstrations that would be common in other subject areas.

Another purpose of the observation was to establish if teachers selected and used technology which was clearly related to the lesson objectives for the day. As an example teachers used a variety of technology tools to teach World War 2. One teacher played History's Impact video to his students, another teacher used PowerPoint on graphs to show when the defense spending was at its peak during the war, while another teacher had a PowerPoint presentation showing Japanese American internment during the war period.

Table 6
Frequency of teachers' technology use related to lesson objectives (N=12)

No. of teachers	Never	Some	Often
7	0	0	3
2	0	1	2
1	0	2	1
1	0	2	1
1	1	2	0

From Table 6, it can be observed that 11 out of 12 (92%) of the teachers were using technology which was related to the lesson objectives. Only one teacher did not use technology that was related to his stated objectives for the observed lesson. But it is worth noting that in the next two observations made; this teacher used technology for at least part of the lesson. It can also be observed that 11 out of 12 teachers who used technology for part of their lessons also used it often, that is, to teach throughout the lesson.

Observations also provided information on how teachers used technology to support their teaching. One teacher who was keen on teaching creative thinking to his students used online research to help students analyze the impact of the World War 2. The teacher provided his students with a website (go.hrw.com) from which they were to use the information to make a judgment.

Table 7

Frequency of teachers' use of technology to augment their lesson. (N=12)

No. of teachers	Never	Some	Often
5	0	0	3
3	0	1	2
2	1	2	0
1	0	3	0
1	2	2	0

Observations were also used to determine how teachers use technology to supplement their teaching activities. Teachers provided Internet websites for students to search for supplementary information related to topics discussed in class. Five out of 12 teachers (41%) consistently used technology for this purpose throughout their lessons. Another 7 out of 12 (58%) used technology for part of the lesson. Three out of 12 (25%) did not use technology at all throughout their lessons. It was also observed that 7 of the 12 teachers were using only “some” technology during their lessons. Overall technology was widely used during part of the lessons to augment the teacher’s work.

The observations identified some problems teachers experienced as they integrated technology into their teaching. The majority of the teachers were comfortable using technology in their classrooms for example one teacher used computers and LCD projectors in her classroom. The teacher opened a document and typed on it. The students saw how the teacher used the software and after repeated modeling by the teacher the students were confident to repeat the process.

Table 8

Observations when teachers used technology with little or no management problems

(N=12)

No. of teachers	Never	Some	Often
7	2	1	0
3	3	0	0
1	0	2	1
1	1	2	0
1	0	2	0

One item on the observation guide focused on the teachers' ability to manipulate technology tools without experiencing management problems. All of the 12 teachers observed did not show any notable problems in manipulation of technology tools. This could be attributed to the fact that the teachers had been exposed to an ongoing training in the use of technology.

Secondly, the technologies used by the teachers were the more common ones (video tape, overhead projector and Internet research) that do not pose serious management problems. Only 1 teacher was seen to experience a management problem for the entire lesson during one observation. Three out of 12 teachers (25%) never experienced any management problems during the three observation times.

The observations provided data related to how teachers used technology to create new learning opportunities and challenges for their students. For example one teacher was observed using computer generated graphic organizers to guide students through class discussions. After the students had generated the needed information, the teacher used a computer program to help students create, organize and write their own essays.

Table 9

Observations when teachers used technology as tools for students to learn from. (N=12)

No. of teachers	Never	Some	Often
5	2	1	2
3	2	1	0
2	3	0	0
1	0	2	1
1	3	0	0

The observations focused on how teachers used technology tools for students to learn from (e.g. drill and practice tutorials). From the observations it can be seen that this use was not so popular with the teachers. Two out of 12 teachers consistently did not use technology for this purpose. Ten teachers out of 12 (83%) used technology for this purpose for at least part of their lessons and in some cases throughout their lessons. On the average, teachers used technology for this purpose for only part of their lessons.

Data concerned with how teachers used technology tools to promote learning outcomes in their classrooms was gathered also from the observations. Teachers were observed using technology to introduce their lessons, during lesson development, and during lesson conclusion. For this purpose, a majority of the teachers (11) provided students with the relevant web pages that had appropriate links to government websites, on-line newspapers and historical maps. One teacher was observed working with the students to create a webpage.

Table 10

Observations when teachers used technology to aid learning in their classrooms. (N=12)

No. of teachers	Never	Some	Often
5	0	1	2
3	0	1	2
2	2	1	1
1	1	2	1
1	3	0	0

The data obtained from this observation did not yield a clear pattern. Generally it can be seen from the table that teachers were using technology to aid learning in their classrooms. Eleven out of 12 teachers (92%) used technology to aid learning in the classrooms during the observations. One teacher did not use technology at all for this purpose. The majority of teachers used technology for part of the lesson or used it for the entire lesson period.

Classroom observations where students' were involved with technology.

Four types of observation data were recorded about students using technology in the classroom. Observations yielded information on what students were able to do after receiving instructions from their teachers. The first type of observation data determined if students used technology to engage in authentic tasks such as using technology to present, display and demonstrate their ideas. For instance students chose to use a PowerPoint to compare the effects of World War 2 and the Iraq war after being shown a video on members of the US Air Force in Iraq during operation Iraq Freedom.

Table 11

Observations made when students (under the guidance of the teacher) used technology to engage in authentic tasks (N=12)

No. of teachers	Never	Some	Often
5	0	2	1
3	3	0	0
2	1	2	1
1	0	1	2
1	1	0	2

This observation focused on how teachers organized their students to engage in authentic tasks using technology in the classroom. Observations made in the classrooms of 3 out of 12 teachers showed that students were not using technology to engage in authentic tasks. This means that the students were using technology (usually laptop computers) for activities other than those in the lesson objectives. Seven out of 12 teachers had their students engage in some authentic tasks, at least for part of the lesson. Two teachers often had their students using technology to engage in authentic tasks. A reasonable conclusion that can be made from these observations is that the teachers did not succeed in making the students to use technology for this purpose.

Another aim of the observations was to find out if teachers allowed students to use the technology tools on their own during class time. The majority of the teachers observed did not allow the students to use technology tools on their own without teacher control and direction (see Table 12)

Table 12

Observations when students had choices on technology use in the classroom (N=12)

No. of teachers	Never	Some	Often
6	3	0	0
2	2	1	0
2	1	2	0
1	0	2	1
1	0	3	0

From the observations made, the trend is clear that the majority of the teachers did not allow their students to have much choice in technology use. In the observations made, 6 of the 12 teachers never allowed students to have choices about technology use.

Another 4 of the 12 teachers only allowed the students to have choices regarding technology use for part of the class period, mostly after the students had completed the assigned tasks. One teacher gave his students choices on technology use during part of the lesson at least twice during observations. The same teacher allowed his students to have choices on technology use during the entire class period during another observation. Students who had completed their project work in the previous class were allowed to browse the Internet.

Table 13 shows data related to whether the students used technology tools only for purposes set out by the teacher. One teacher gave very specific instructions to students on the use of laptops for online activities and applied specific consequences to students who did not follow the instructions.

Table 13

Observations when students were using technology responsibly (N=12)

No of teachers	Never	Some	Often
4	0	1	2
3	3	0	0
2	2	1	0
1	1	2	1
1	3	0	0
1	2	1	0

From the Table 13, it can be observed that 5 out of 12 teachers often had their students use technology responsibly throughout the entire class period, using technology for doing work assigned by the teacher. Four out of 12 teachers were observed three times with students not using technology responsibly. The teacher had little control of what the students were doing with technology in the classroom, particularly related to the laptops. Three out of 12 teachers had students using technology responsibly for only part of the lesson. It is clear from the table that having students use technology responsibly posed a challenge to the teachers.

Table 14

Observations of students using technology to demonstrate their learning (N=12)

No. of Teachers.	Never	Some	Often
4	2	1	0
3	0	2	1
3	0	1	1
2	0	1	2

Part of the purpose of the observations was to find out if students were using technology to demonstrate their learning. This included such things as brochure design and getting pictures from the internet for project work, using word processing to write essays and making PowerPoint presentations depicting major themes of the World War 2. Table 14 shows that four out of 12 teachers during two of the three observations did not have their students use technology to demonstrate their learning. The majority of the teachers, 8 out of 12 (67%) had students using technology to demonstrate their learning for part of the lesson time (some) and also during the entire lesson period (often). It is also important to note that 4 out of 12 teachers had their students using technology to demonstrate their learning for only part of the lesson period in one observation

Interview of teachers

Following are the results from the interviews conducted with teachers of social studies in a Midwestern urban high school. The purpose of the interviews was to find out how teachers integrated technology into the teaching of social studies and to confirm my interpretation of survey responses and observations. The interviews sought to get the teachers' feelings and opinion about technology use in their classrooms. There were 8 interview questions to be answered by the teachers (see Appendix C). A total of 12 teachers were interviewed across a four week period. Teachers were individually asked to comment on how they incorporated technology in their classrooms.

All 12 teachers reported that they incorporate technology into their teaching of social studies. The teachers said they used technology in the classroom to (a) store information and create visual presentations for the students; (b) create visual displays of data/information and (c) create electronic portfolios and multimedia presentations. All of

the teachers also believed that technology especially the Internet is useful in providing articles and documents for both teachers and students. Teachers were again unanimous on the fact that they use Internet resources to access documents, reports, lesson plans, schools on the Internet, and grant information.

In response to the same question, one teacher reported that technology has enabled her to post the course syllabus and class assignments on the web for students to download, complete and send back for grading. Another teacher reported that she recently introduced the use of computers for word processing. This teacher said that she has encouraged her students to turn in their homework electronically and found that this goes much faster and provides more manageable revision tools than pencil and paper. The teacher concluded that "...students have to be introduced to technology oriented learning at an early stage to be able to fit into the society after school".

Two teachers emphasized that they use technology often in terms of communicating with the teachers in their department, and with teachers in other schools who teach the same subject. The same two teachers reported that they use technology to communicate with other teachers through listservs and discussion groups.

The next question sought to find out teachers' opinions about the emphasis of school districts on technology integration. Overall the teachers agreed that the school district is doing a commendable job in this respect. A teacher remarked that "... the school district has set very high standards on technology oriented learning."

Eight of the 12 teachers said that the training provided by the district to teachers is useful especially for new teachers. They further contended that it is a positive development because eventually all learning in schools will be technology based.

However, one teacher cautioned that "... there should be a system of checking if teachers are doing what they have been taught."

Four other teachers identified possible problems associated with how school districts promote teachers' technology use. One teacher said that it is a question of choice. "Even with a high computer self efficacy score, teachers may not necessarily be inclined to implement computers into their teaching." One other teacher felt that levels of technology expertise do not have a significant impact on its implementation into classroom teaching and that there should be less focus on in-service for teachers in software packages that have limited usefulness in the classrooms. One teacher reported that ... "I am only a facilitator of technology in the social studies classroom; I do not intend to become a technology teacher in the social studies classroom." Another teacher said that the emphasis on technology should not be too excessive because teachers do not necessarily need high levels of technology self-efficacy to implement the technology. Only 4 of the 12 teachers believed that less emphasis should be placed on technology training and use.

The third question sought the teachers' opinion regarding conditions in the classroom which inhibited their ability to integrate technology in the classroom. The teachers believed that the greatest challenge comes from the students especially when they are having difficulties in manipulating technology tools, "...it is so frustrating when you can not handle these tools in front of your class." Teachers also believed that interruptions by students who are not willing to follow the teacher's instructions and instead engage in other activities, especially on the laptops, create a big challenge for teachers.

One teacher singled out his unique problem as his inability to competently handle certain technology tools. This teacher reported that his greatest challenge was his inability to use a variety of technology tools especially those that require experience and skill to handle.

There was also a common response from all the 12 teachers regarding school, classroom and district factors enhancing teachers' ability to integrate technology. The teachers reported that the district, the school and the department of social studies have all worked collaboratively to ensure that teachers are encouraged and assisted in order to realize the full potential of using technology in teaching. The responses from the teachers were (a) technology use is encouraged by the department of social studies in the school, (b) the school has a technology support person to help with technology integration, and (c) the school district has been organizing seminars, in-service courses and workshops to help social studies teachers to integrate technology. All the teachers individually pointed out that other teachers are always willing to help those colleagues who are struggling to use technology in their teaching.

Question 5 sought to find out how the participants' teaching experience has impacted on their ability and attitude towards technology use. Teachers believed that their previous teaching background and experience had a direct impact on their ability and attitude towards technology use. Their varied responses appear related to their prior teaching experience. That is, the teachers using more traditional methods were less inclined to integrate technology into their teaching. One of the 12 teachers reported that his teaching experience of 3 years has been beneficial to him because he has sound knowledge of which technologies are more effective for teaching particular social studies topics. The

same teacher reported that "...each year I get better in terms of technology use, I also try new things in my classroom." One teacher reported that his prior practices are more influential in determining how technology will be used in his classroom than the technology itself.

Two of the 12 teachers who had transferred from another school district reported that their previous schools emphasized technology use and based employment decisions on a teacher's prior knowledge of technology use. The final response to this question, from a teacher in his first year of teaching reported that he had no prior teaching experience but at least he had used some technology during his student teaching.

Question six asked the participants how they model safe and responsible use of technology and develop classroom procedures for technology use. Only 4 out of the 12 teachers interviewed responded to this question and gave specific responses. The other 8 of the 12 teachers reported that they depend on their classroom management strategies to manage students when using technology. The four teachers identified different strategies to promote responsible use of technology. The responses were (a) enforcing consequences such as loss of computer privileges, (b) giving incentives such as extra credit for following directions, (c) using teacher proximity to monitor student technology use, and (d) reminding students to keep to the assigned tasks. One of the four teachers added "...I am very specific when it comes to technology use, if a student fails to follow instructions consequences follow."

When teachers were asked how the use of technology added to the lesson, they were unanimous in their belief that technology contributes to positive learning outcomes. All 12 teachers reported that technology helps students develop positive learning

relationships, enabling them to work together while researching topics and creating presentations. Students help each other to learn. Teachers were also of the opinion that technology can play several, very different roles such as creating materials and processes that attract students to spend more time on their studies.

The teachers gave additional reasons to support the integration of technology into the teaching of social studies. The number of teachers who gave the response is in parentheses. It leads to visual learning (5), Some texts explain what they see on the computers (3), Interactive programs allow the student opportunity to manipulate variables and see what happens visually (2), encourages cooperation and team work in learning among students (4), is good for learning via problem solving (3), hot links to articles and other readings means less time searching for materials in the library (3), It saves students time compared with the days when they might have to wait for another student to finish using a reserved material (2), trains students to develop improved design skills/attention to audience and experiences in developing the kinds of rich multimedia products that can be produced with technology and (1), it helps students in the accomplishment of more complex tasks (2) .Overall teachers were agreed on the fact that technology integration is a positive development in the social studies department.

Finally, teachers were asked about their future plans for technology use in their social studies classrooms. Nine teachers reported that they wanted to become more efficient in technology use and be able to provide a variety to the students. One of the 11 teachers who responded to this question said she wanted to continue using technology. She said she needed to have a variety of technology tools in her classroom, because students love variety. Finally, one teacher contended that his students remark that they

spend a lot more time researching web quest topics because it is fun. They enjoy technology and many students are amazed to discover how creative they can be when presenting historical subjects in the form of web quests.

CHAPTER 5

Discussion

The purpose of the research was to investigate how teachers integrate technology into the teaching of social studies to students in a Midwestern urban high school. The study used a mixed method approach in which both qualitative and quantitative methods were used to analyze data collected. The perspectives and experiences of 12 social studies teachers in a Midwestern urban high school were studied to answer the questions:

- How do teachers integrate technology into the teaching of social studies to the 11th grade students in a Midwestern urban high school?
- What problems /limitations do teachers encounter as they integrate technology?
- What are the noted benefits of integrating technology into the teaching of social studies to 11th grade students?

The data collection instruments used in the study, were a questionnaire, teacher observation and interviews. The study found consistent evidence that technology plays an essential role in facilitating the teaching of social studies. The study identified four findings which were closely related to the research questions. These findings were:

1. Eleven of the 12 teachers in the study integrated technology into their classroom practice.
2. Results from the questionnaire, teacher observation and interviews concur that using technology successfully in teaching social studies requires a constant and consistent training program that should begin as part of a pre-service training program and continue throughout a teacher's instructional career.

3. This study found that the teacher's beliefs and prior teaching background and experience had a direct impact on their attitude towards technology use.
4. A majority of the teachers (9 of the 12), believed that using technology to teach social studies yielded positive student outcomes

Teacher technology integration

The study provided evidence that the teachers often used technology tools to teach social studies to 11th grade students. Both teacher surveys and observations showed that technology tools such as presentation system, Internet research, video tape and online learning were used often by the teachers to teach social studies. Further, the study provided evidence that the teachers in this particular study seldom integrated video conferencing, digital cameras, web page design and software applications such as spreadsheets (Table 3). During teacher observations and interviews, major categories of technology related activities were identified, these were, technology types, teachers' use of technology to give instruction and students' involvement with technology (see Appendix B).

The study showed that most of the teachers were willing to use technology. The teachers also expressed positive experiences with technology during the interviews with a majority reporting that using technology with the students helped them to learn the subject more quickly. Teacher observations revealed that they were integrating technology which was adequate and appropriate to their teaching needs when it did not require specialized training (Table 3).

Teacher technology training

The teachers indicated in the interviews that both pre-service and ongoing technology training are important for them. All the 12 teachers reported in the survey that their level of technology literacy is adequate in performing their duties. During teacher interviews, 8 of the 12 teachers reported that in-service training provided by the school district on technology integration is more than adequate. Teachers also reported that they were receiving adequate support from the school's technology expert regarding the integration of technology into their classroom practice.

The majority of the teachers indicated that integrating technology into social studies teaching required suitable and adequate training. During teacher interviews, 9 of the 12 teachers reported that they wanted to become more efficient in technology use through regular and ongoing training. The teachers recognized the importance of technical and administrative support from the department of social studies, the school and the district. The teachers reported that integration training increased the use of technology in the classroom and also contributed to more creative use of technology in the social studies classroom. Other researchers supported the idea that teachers need to be fully trained on how to appropriately apply technology into their teaching (Held, 2002; Miller & Olsen, 2000).

Results from teacher observation (Table 8) shows that there was a relationship between teachers' skills levels and their level of technology integration. Three of the 12 teachers were observed using technology tools without experiencing management problems during the entire three observations. The other 9 of the 12 teachers experienced some amount of management problems.

The study found that teachers experience varying degrees of difficulties when integrating technology into their teaching. Four of the 12 teachers reported in the interviews that some of the noted problems included interruptions from students who were not willing to follow teacher instructions. The teachers also reported that on occasion students experienced problems in manipulating technology tools.

Influence of teacher belief and experience on technology use

The study indicated that the teachers held a variety of views on technology integration. These views and prior experiences influenced their use of technology in the social studies classrooms. According to recent research, (Brand, 2003) teacher's attitudes or concerns have a significant influence on their adoption of technology. It can be inferred that one's attitude is a critical factor in terms of how often or how successfully one integrates technology into teaching.

The two teachers who were observed using more traditional teaching methods such as the chalkboard and worksheets were less inclined to integrate technology into their teaching. They reported that their prior practices were more influential in determining how technology would be used in the classroom than the technology itself. It can be inferred that as they become comfortable using technology over time, they will naturally begin to integrate more of it into their classroom practice.

All of the 12 teachers interviewed shared the common belief that technology contributes to positive learning outcomes. The study data (Table 7) support the position that a majority of the teachers at least used some form of technology to augment their lessons. The teachers reported during interviews that as new technologies emerge and

develop the use of technology will become more a part of everyday teaching and learning.

Despite all the advantages provided by technology, this study found that the willingness to use technology and the positive experiences were related to the teacher's beliefs and increased use of technology tools over time. The teachers reported during interviews that various personal issues such as their ability to overcome possible technical problems and to handle technology effectively have an impact on their intentions of integrating technology into the teaching of social studies.

Four of the 12 teachers indicated that they would not replace their teaching with technology until they were personally convinced of its benefits in the classroom. The interview responses showed that the teachers' personal needs and perceptions have a potential impact on their approach to technology integration.

All the teachers believed that their previous teaching experience had an impact on their ability and attitude towards technology use. Five of the 12 teachers reported during interviews that their prior teaching experience had prepared them to integrate technology into their teaching efficiently. Further, the teachers reported that their technology integration skills improved with their years of teaching experience. Finally 1 of the 12 teachers who was in his first year of teaching at the school reported that his technology integration skills were inadequate because of his few years of teaching experience. This finding suggests that for these teachers there was a close relationship between their prior teaching experience and technology integration.

Student's use of technology

This study found that teachers held positive views about technology integration and how it influenced teaching and learning of social studies. Ten of the 12 teachers reported in the questionnaire that using technology tools in the classroom kept the interest of the students engaged in the subject. Half of the teachers also reported that using technology with the students helped them to learn the subject more quickly (Table 2). This finding is consistent with the research on the benefits of integrating technology into social studies teaching (Mason & Berson, 2000; Cronin, Meadows & Sinatra, 2001; Fulton & Torey Purta, 2002).

Five of the 12 teachers reported during interviews that technology helps students develop positive learning relationships by enabling them to work together while researching topics and creating presentations, also students help each other to learn via group problem solving. One teacher reported that students remark that they spend a lot more time researching web quest topics because it is enjoyable. The teacher further reported that students find technology interesting, and many of them are amazed to discover how creative they can be when presenting historical subjects in the form of web quests.

The data showed that students were well motivated to use technology tools to accomplish tasks assigned by the teachers. All the teachers reported during interviews that they believed that technology integration into their teaching was significant in bringing about positive learning outcomes among students.

The data showed that for technology integration to be successful in the social studies classroom, teachers need to use effective classroom management strategies to

ensure that their students use technology tools responsibly. Results from teacher observations showed that when students' use of technology was not monitored, they did not use technology tools responsibly (Table 13). Teachers also reported that it is important for them to develop safe and responsible classroom procedures to manage technology use by their students.

Although not part of the initial research questions, this study indicated that an examination of the teachers' perceived importance of educational technology is necessary in exploring teachers' decisions about integrating technology into the teaching of social studies. Five of the 12 teachers reported during interviews that teacher interest and experience are critical to technology integration in the classrooms.

In conclusion, this study provided evidence that the social studies teachers integrated technology into their teaching. The study identified the most commonly used technology types and those that were infrequently used. The findings revealed that before teachers integrate technology into their teaching, they must be personally convinced of its benefits. Teachers' personal need and personal world (perceptions and prior experiences) had potential impact on their approach to technology integration.

Secondly, this study found that the teachers experienced some problems as they integrated technology into their teaching. Some of these problems related to the difficulties teachers' experience when manipulating technology tools. A challenge for teachers noted in this study was how to ensure that the students use technology tools responsibly.

Finally, results from the three data collection instruments revealed that the integration of technology into the teaching of social studies had some noteworthy

benefits. Although the study did not use empirical evidence to quantify the perceived benefits of technology integration, the study concluded that there was observable evidence of the benefits based on the teachers' self reports. The teachers reported the benefits of technology integration and also gave evidence of their students' feelings towards technology use in the classroom.

Implications

The results of this study have several implications for classroom practice. Using technology successfully in teaching social studies requires a constant and consistent training program that should begin as part of a pre-service training program and continue throughout a teacher's instructional career. The challenge then will be to provide quality training to all social studies teachers.

Again, an understanding of teachers' perceptions of technology integration and its impact on their instructional practice will help both the technology training programs and social studies programs to improve the technology use of in-service and pre-service teachers to better serve the students in their classrooms. For schools and departments expecting to integrate technology into teaching, teachers' concerns about technology integration must be considered.

With a constantly changing technological environment, teachers will need to review their teaching practices and use professional development funds and programs to explore possibilities for improving their teaching with technologies. Equally as important is the need for more research centering on the effects of technology in the social studies classrooms.

Another important factor to consider is the relevance of the technology tool to the curriculum needs of both teacher and students. Teachers need to integrate only the technology that is relevant in supporting student learning. Also, knowledge of how follow-up mentoring systems will help teachers better integrate technology may also inform school administrators and policy makers with regard to providing more effective instructional and technical support.

Conclusions

Technology like any educational tool cannot exist in isolation, but must be made an integral part of the instructional process. For social studies teachers, many topics in the content area lend themselves to technology integration. Whether it be researching and creating spreadsheets with data, generating graphs and charts, or creating web scavenger hunts, technology can be positively integrated into social studies. Results from this study have indicated technology tools can offer a variety of teaching and learning opportunities for teachers and students of social studies.

The results from this study indicated that the teachers were concerned with curriculum issues related to student learning objectives and achievements. A majority of the teachers were observed integrating technology tools which were clearly related to lesson objectives (Table 6). Results from this study suggest that when the use of technology did not closely match the required social studies curriculum, teachers might be reluctant to integrate technology into their teaching. Curriculum issues related to skills that students are measured by and how technology can be adopted in existing teaching were both important considerations among the teachers of social studies.

Finally, traditional educational practices no longer provide students with the 21st century skills necessary for survival in today's digital world. Students must possess problem solving strategies and use appropriate technology tools for learning, collaborating and communicating. The results of this study are similar to the previous findings of Rovai & Kassop (2001) and also suggest that the integration of technology into teaching of social studies needs to be made broader based and must include to a large extent issues related to teachers' competence, experience and student learning objectives. Technology integration into social studies classroom requires the development of appropriate practice in planning and the use of a variety of technology tools. Teachers' interest and previously developed field based experiences are critical to successful technology integration.

Possible limitations of the study.

The study attempted to understand how teachers of social studies in a Midwestern urban high school integrated technology into their teaching. However, the study did not systematically review the progressive impact of the technology over an extended period of time. Since the study was conducted over a relatively shorter period of time span (snap shot); it is possible that a longitudinal study may have produced different results.

The study did not attempt to explain the impact of technology integration on the teachers' ability to teach social studies effectively.

Secondly, this study was designed to focus on the integration of technology into the teaching of social studies to 11th grade students in a Midwestern urban high school.

Because of the small sample size used in the study, the results of the study are specific to this school and cannot be generalized to other similar institutions.

Thirdly, this study did not identify specific topics in social studies (history and government) to be taught using technology. Some of the teachers reported that not all the topics in social studies would lend themselves to technology integration.

Finally, the study used a questionnaire which is limited in nature by the accuracy of the participants' subjective responses. Despite this limitation, a self report measure such as a questionnaire is a strong method to provide great insight on the individual's perception (Pattern, 2001). Again, most of the information was triangulated through observation.

Suggestions for future research.

I found that technology gave the teacher participants and their students a variety in their teaching and learning. Teachers reported that an array of strategies is critical to effective instruction because it ensures that the learning styles and needs of all students can be met. However, more research should be done to assess this important function of technology.

Secondly a similar study should be conducted purposely to find out if there is empirical evidence to suggest that integrating technology into the teaching of social studies would yield better learning outcomes when compared to traditional teaching. Such a kind of study should compare traditional approaches of teaching social studies and a technology oriented instruction especially when teachers are teaching for content.

REFERENCES

List of References

- Becker, H.J. (1999). *Internet use by teachers*. Retrieved May 2007 from <http://www.critico.uci.edu/TLC/findings/internet-use/startpage.html>
- Bork, A. (1999) Advantages of computer based learning. *Journal of Structural Learning*. 2 (23) 63-76
- Brand, G.A. (2003). What research says: Training teachers for using technology. *Journal of Staff Development*, 19(1), 34-59.
- Boding, H. (2000). Technology and the teacher's role: *Computers in the Schools* 8(1/2/3), 10-26
- Chisholm, I. M. (1999). Equity and diversity in classroom computer use: A case study. *Journal of Computing In Childhood Education*. 16(1) 59-80.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed method approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Cuban, L. (2002). *Teachers and Machines: The classroom use of technology since 1920*. New York, Teachers College Press.
- Darling, H., & Berry L. (1999). Teacher quality and student learning: *Journal of staff Development*, 19(1), 36-41.
- Dwyer, D. (2001). Apple classrooms of tomorrow, what we have learned. *Educational Leadership*, 51(7), 4-10.
- Fulton, K., & Torney-Purta J. (2000). *How teachers beliefs about teaching and learning are reflected in their use of technology: Case studies from urban Middle schools*. Unpublished master's thesis, University of Maryland, College Park. Maryland.
- Gibson, S. (2001). *Integrating computer technology in social studies: Possibilities and Pitfalls*. The Canadian Anthology of social studies. R. Case & P. Clark (Eds.) Burnaby, BC: Field Relations and Teacher In-service Education, Faculty of Education, Simon Fraser University.
- Greene, J. C., Caracelli, V., & Graham, W. F. (2000). Toward a conceptual frame work for mixed method evaluation design. *Educational Evaluation and Policy Analysis*, 11, (3) 255-274.
- Johnson, D. W. & Johnson, R.T. (1999). *Learning together and alone: Cooperation, Competition and individualization*. Upper Saddle River, NJ: Prentice Hall.

- Kalton, G. (2002). *Introduction to Survey Sampling*. Thousand Oaks, CA: Sage Publications.
- Mason, C., Berson, M., Diem, R., Hicks, D., Lee, J., & Dralle T. (2000). Guidelines for using technology to prepare social studies teachers. *Contemporary issues in Technology and Teacher education*, 1 (1) 107-116. Retrieved July 3 2007 from http://www.citejournal.org/vol1/issue1/currentissues/social_studies/article/PDF
- Miller, L., & Olsen, J. (1999). In Canada: How computers live in schools. *Educational Leadership*, 3(2), 74-77.
- Merriam, W., (2003). *Webster's Collegiate Dictionary*, (11th ed.).
- Patten, M. L. (2003). *Questionnaire Research, A practical guide*. Los Angeles, CA: Pyrczak Publishing.
- Roblyer, M. D., & Edwards, J. (2001). *Integrating Educational Technology into Teaching*. Upper Saddle River, NJ: Prentice Hall.
- Patton, M.Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Wade, R. (2002). Redefining Instructional Materials. *Social Studies and the Young Learner*. 2(1) 24-31.
- Whitworth, S., & Berson, M. (2003). Computer Technology in the Social Studies: An examination of the effectiveness of literature (1996-2000). *Contemporary Issues in Technology and Teacher education*, 2, (4), 472-509.
- Williams, E. (2005). *Teaching Liberian history and culture appreciation utilizing the Internet in an inner city high school*. Unpublished master's thesis, Wayne State University, Detroit , Michigan.

APPENDICES

APPENDIX A

QUESTIONNAIRE FOR TEACHERS

Please respond honestly and carefully to the questions below.

1. Number of years you have been using technology to teach.

- A. Less than 3 months.
- B 6 months.
- C 1 year.
- D 1-3 years.
- E. 4-6 years
- F More than 6 years.

2. Have you ever taken a formal computer course? A Yes B No.

If yes describe: _____

3. Your level of ease in using technology for teaching is

- A. Very easy. B Somewhat easy C. Somewhat difficult D. Very difficult.

4. Objectives for technology use.

The following are among the objectives teachers have for student use of technology in the classroom. Which five objectives from the list have been your most important ones? (Put a check mark.)

- _ Mastering skills just taught.
- _ Remediation of skills not learned well.
- _ expressing themselves in writing.
- _ communicating electronically with other people.

_ finding out about ideas and information.

_ Analyzing information.

_ Presenting information to an audience.

_ improving computer skills.

_ Learning to work collaboratively.

_ Learning to work independently.

_ other (describe) _____

5. Where appropriate, use the rating scale below to select the one response for each statement that is closest to your view.

SA=Strongly agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly disagree,

	SA	A	N	DA	SD
I have sufficient technology resources at my disposal for my students to use.					
My technology literacy is adequate for performing my teaching duties.					
Using technology tools in the classroom keeps the interest of the students engaged in the subject.					
Using technology with the students helps them to learn the subject more quickly.					
Being able to connect students to websites that provide information helps they learn material better.					

APPENDIX B

TECHNOLOGY USE OBSERVATION SHEET

NAME OF TEACHER TIME DATE NO.OF STUDENTS

1. Technology Data/Types:

Select the technologies being utilized by teachers and students at any point during the observation.

Internet Research	
Online Learning	
Web Quest	
Webpage Design	
E-mail	
Video Conferencing	
Video Tape	
Digital Camera	
Presentation System Overhead Projector	
Software Applications (e.g. Spreadsheets)	
Other	

2. INSTRUCTIONAL DATA

TECHNOLOGY USE BY THE TEACHER	NEVER	SOME	OFTEN
1. Technology used for presentation			
2. Technology used for demonstration			
3. Technology use is clearly related to lesson objectives			
4. Technology tools are used to augment the lesson			
5. Technology is used with little or no management problems			
6. Technology is used as a tool to learn from (i.e. drill and practice tutorials)			
7. Technology is			

used as a tool to learn with (i.e. communication)			
---	--	--	--

3. STUDENTS INVOLVEMENT WITH TECHNOLOGY:

	NEVER	SOME	OFTEN
1. Students use technology to engage in authentic tasks.			
2. Students are given choices on technology use.			
3. Students use technology responsibly.			

COMMENTS:

APPENDIX C

TEACHER'S INTERVIEW FORM

NAME OF TEACHER

DATE:

TIME:

1. How else do you incorporate technology in your classroom for teacher and student use?

2. School districts have been placing a much greater emphasis on the integration of technology into the curriculum. What is your opinion on this?

3. Were/are there conditions in the classroom during your teaching which inhibited your ability to integrate technology? If so what are they?

4. What conditions in the classroom, school and school district enhance your ability integrate technology?

5. How have your previous teaching experience influenced you to integrate technology into your current teaching practice?

6. I saw you giving specific and firm instructions to the students on computer use.

How else do you model safe and responsible use of technology and develop classroom procedures for technology use?

7. In what ways does the use of technology add to the lesson?

8. What are your next steps in terms of using technology in your classroom?

APPENDIX D.

TEACHER'S OBSERVATION SCHEDULE FORM:

WEEK 3 NOVEMBER 2007

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:00am-9:34am Teacher Name	8:00am-9:34am	8:00am-9:34am	8:00am-9:34am	8:00am-9:34am
Date				
Room.				
9.40am-11:11am Teacher's name:	9:40am-11:11am	9:40am-11:11am	9:40am-11:11am	9:40am-11:11am
TIME 11:20am-1:30pm Teacher's name	11:20am-1:30pm	11:20am-1:30pm	11:20am-1:30pm	11:20am-1:30pm
TIME 1:40pm-3:10pm Teacher's name:	1:40pm-3:10pm	1:40pm-3:10pm	1:40pm-3:10pm	1:40pm-3:10pm