THE INFLUENCE OF COMPUTER-SUPPORTED INSTRUCTION (CSI) ON THE PRINCIPLES OF CONSTRUCTIVIST PEDAGOGY IN THE SOCIAL STUDIES CURRICULUM

DISSERTATION

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By
Mehmet Acikalin, M. Ed.

* * * * *

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Dissertation Committee:
Professor Cynthia A. Tyson, Adviser
Professor Merry Merryfield
Professor Richard Voithofer

Approved By

____________________

Adviser
College of Education Graduate Program
ABSTRACT

Social studies educators increasingly support use of computer-supported instruction to transform social studies education from a traditional mode to a more constructivist, student-centered, and active mode. However, more detailed research analyzing the effectiveness of computer integration and investigating the extent to which computer-supported instruction can transform social studies instruction to a more constructivist and student-centered pedagogy is needed.

This study was therefore designed to examine the use of computer-supported instructional strategies and to investigate the influence of these strategies on the principles of constructivist pedagogy in social studies education. A qualitative case study approach was employed for this study to gain an in-depth description and understanding of this phenomenon. Four social studies teachers who use computer-supported instructional strategies in their teaching practices were selected for this study. The data were collected from interviews and classroom observations. The following themes emerged from the data analysis: (a) the Internet and software programs such as Microsoft Word, Excel, and PowerPoint were the most common uses of computer-supported instruction, while other software programs were rarely used in the observed classrooms; (b) the lack of computers and software, teachers’ lack of proficiency with various
software programs, and limits on the time available in the curriculum were the major problems that prevented the participant teachers from not using computer-supported instructional strategies more frequently; and (c) although computer technologies have the potential to support the principles of constructivist pedagogy in the social studies classroom, whether these technologies are used effectively depends entirely on the quality of the instructional design which is formed by the teacher.
Dedicated to my mother, Celile Zeynep Açıklın

Rest in peace
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VITA

March 01, 1975…………………………………Born-Antakya, Turkiye

1995……………………………………………. B. A. History, Istanbul University

1996-1999……………………………………… Social studies and history teacher
Istanbul, Turkey

2002……………………………………………. M. Ed. University of Missouri-Columbia

PUBLICATIONS


FIELDS OF STUDY

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CHAPTER 1

OVERVIEW

Introduction

Major developments in computer hardware and software in the last decades have increased computer integration in social studies education (Berson & Balyta, 2004; Nickell, Field, & Roach, 2001; Rose & Fernlund, 1997; VanHover, Berson, Mason-Bolick, & Owings-Swan, 2004; White, 1997; Whitworth & Berson, 2003). According to data from the National Center for Education Statistics (NCES, 2003), computers have been widely introduced into schools in recent years. In 2002, the average public school contained 131 instructional computers, and 99% of schools had access to the Internet.

These substantial developments in computer and Internet technologies and the growing availability of computer and Internet access in schools have brought such terms as “Computer-Based Training” (CBT), “Computer-Based Instruction” (CBI), and Computer-Assisted/Aided Instruction” (CAI) into the field of education. These terms are frequently used interchangeably to refer to virtually any kind of computer use for training and instruction (see Freedman, 2001, p. 116, 171; Margolis, 1999, p. 77-78). Nevertheless, there are important differences between these terms that should be maintained. The phrase “Computer-Based” refers to the computer as a central part of
instruction, which I believe is far beyond the utility of the computer in education. On the other hand, “Computer-Assisted/Aided Instruction (CAI)” is almost exclusively associated with computer programs such as drills and practice, tutorials, and simulations (see Jonassen, 2000, p. 4; Kleinedler et al., 2001, p. 39; Plaffengerber, 2001, p. 86) that limit the scope of computer utilization in education. I therefore have preferred to use the term “Computer-Supported Instruction (CSI)” as a reference to all aspects of computer use in the instructional context in order to help teach any kind of knowledge and skills to individuals.

Computer-supported instructional strategies are advocated by a number of scholars (see Bennett & Pye, 1999; Berson, 1996; Berson & Balyta, 2004; Cassutto, 2000; Dils, 2000; Fontana, 1997; Hicks, Tlou, Lee, Parry, & Doolittle, 2002; Larson, 1999; Lengel, 1987; March, 2003; Rice & Wilson, 1999; Saye & Brush, 1999; Shiveley & VanFossen, 1999; Whitworth & Berson, 2003; Zukas, 2000) in the field of social studies. Therefore, the purpose of this study is to examine the use of computer-supported instructional strategies in social studies education and to investigate the influence of these strategies on the principles of constructivist pedagogy in social studies curricula.

Statement of the Problem

According to the National Council for Social Studies (1994), social studies is the integrated study of the social sciences such as “anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences” (National Council for Social Studies, 1994, p. vii). Many scholars point out that the disciplines of social studies are intended to develop effective citizens who possess
critical thinking, problem-solving, and decision-making skills (Berson, 1996; Cornbleth, 1985; Engle, 1960; Engle & Ochoa, 1988; Newmann, 1990, 1991a, 1991b, 1991c; Parker, 1991; Patrick, 1986; VanSickle & Hoge, 1991). While critical thinking, problem-solving, and decision-making are considered to be essential aspects of social studies education, there is no consensus about the definitions of these terms (Beyer, 1985; Feely, 1976; Newmann, 1991c; Parker, 1991).

According to Newmann (1991c), categories of thinking including critical thinking, problem-solving, and decision-making can be subsumed under the idea of higher-order thinking. Higher-order thinking can be defined as a mental challenge, or an expanded use of mind, through non-routine organization, interpretation, analysis, and manipulation of information (Newmann, 1990, 1991c). According to Newmann (1991c), “Challenge or expanded use of mind occurs when a person must interpret, analyze, or manipulate information, because a question to be answered or a problem to be solved cannot be resolved through the routine application of previously learned knowledge” (p. 325).

Nevertheless, other scholars differentiate critical thinking from problem-solving and decision-making (McKee, 1988; Parker, 1991; Patrick, 1986). According to Patrick (1986), critical thinking is an essential element of general cognitive process such as problem-solving and decision-making but is not synonymous with them. McKee (1988) defines critical thinking “as a dynamic process of questioning and reasoning; active inquiry as opposed to passive accumulation of knowledge” (p. 444). Hence, critical thinking requires curiosity, skepticism, reflection, and rationality (Cornbleth, 1985; McKee, 1988; Patrick, 1986) so that an individual can assess and analyze the authenticity
and accuracy of any knowledge or set of beliefs (Beyer, 1985; Feely, 1976). Problem-solving, on the other hand, focuses on resolving a difficulty or problem rather than analyzing the validity of a claim or belief (Beyer, 1985). Finally, Parker (1991) suggests that decision-making should be distinguished from other forms of thinking because decision making, unlike critical thinking and problem-solving, involves the values, dispositions, and emotions of an individual.

Although debate about this issue still continues, many social studies scholars (see Berson, 1996; Cornbleth, 1985; Engle, 1960; Engle & Ochoa, 1988; Newmann, 1990, 1991a, 1991b, 1991c; Parker, 1991; Patrick, 1986; VanSickle & Hoge, 1991) recognize critical thinking, problem-solving, and decision-making as fundamental aspects of contemporary social studies education.

Many researchers in the field of social studies education highlight the role of computers in engaging students in critical thinking, problem-solving, and decision-making (see Bailey, 1987; Bennett & Pye, 1999; Berson, 1996, 2004; Berson & Balyta, 2004; Boyer & Semrau, 1995; Casutto, 2000; Dils, 2000; Fontana, 1997; Hicks et al., 2002; Larson, 1999; Marsh, 1986; Rice & Wilson, 1999; Rose & Ferlund, 1997; Saye & Brush, 1999; White, 1996; Whitworth & Berson, 2003; Zukas, 2000). According to Berson (1996), “Computer-based learning has the potential to facilitate development of students’ decision-making and problem-solving skills, data-processing skills, and communication capabilities. By using the computer, students can gain access to expansive knowledge links and broaden their exposure to diverse people and perspectives” (p. 486). Likewise, educational organizations such as the National Council for Social Studies, the College and University Faculty Assembly (CUFA), and the
International Society for Technology Information (ISTE) recognize the potential of computer integration to transform learning in social studies (Hicks, Doolittle, & Lee, 2004; NCSS, 1994; Mason et al., 2000; VanHover et al., 2004).

However, despite the extensive support for integrating computers into the social studies curriculum, further research regarding the effectiveness of computer integration and its impact on student learning and classroom environment in social studies education is still needed (Berson & Balyta, 2004; Diem, 2000; Martorella, 1999; Nickell et al., 2001; Shaver, 1999; Whitworth & Berson, 2003). Furthermore, some scholars criticize computer technologies as unable to transform social studies learning from a traditional approach to a more constructivist and student-centered one (Diem, 2000; Martorella, 1999; Shaver, 1999). Diem (2000) points out that despite the current improvement in computer technologies, traditional teaching paradigms have not changed significantly in the last two decades. Likewise, Shaver (1999) does not view technology integration as a base for a reform movement, although he does not deny the potential for applications of electronic technology in social studies education.

It seems that while the possible influence of computer integration on social studies learning is recognized, some scholars are concerned about the lack of a theoretical base for guiding the integration of computers into social studies education (Crocco, 2001; Doolittle, 2001; Doolittle & Hicks, 2003). There have been discussions about the need for a theoretical base for the use of computers in social studies education (Crocco, 2001; Doolittle, 2001; Doolittle & Hicks, 2003; Mason et al., 2000). Doolittle and Hicks (2003) state that “…the majority of discussions relating technology integration, social studies, and constructivism manifest an incomplete view of constructivism and therefore an
incomplete view of technology integration” (p. 72). Additionally, Crocco (2001) highlights the importance of a constructivist pedagogy when integrating computers into social studies education. According to Crocco (2001),

The chief value of technology lies, therefore, in providing the leverage so urgently needed for moving social studies instruction away from passive, teacher-dominated approaches emphasizing recall and regurgitation toward active, student-centered forms of learning demanding critical and conceptual thinking from all students at all levels. (p. 387)

As the discussion indicates, establishing a theoretical base for integrating computers in social studies is necessary. The theoretical base should be guided by constructivist pedagogy in order to facilitate the essential aspects of social studies learning including critical thinking, problem-solving and decision-making. Therefore, this study will examine the use of computer-supported instructional strategies in social studies education and will investigate the influence of these strategies on the principles of constructivist pedagogy in social studies curricula.

Purpose of the Study and Research Questions

The purpose of this study is to examine the use of computer-supported instructional strategies in social studies education and to investigate the influence of these strategies on the principles of constructivist pedagogy in social studies curricula. In order to explore this phenomenon, it is essential to identify the current computer-supported instructional strategies used by social studies teachers. Exploring the use of computer-supported instructional strategies in the social studies classroom and the compatibility of
these strategies with the principles of constructivist pedagogy is also crucial to this research topic. Therefore, the following research questions were generated:

1. What are the current computer-supported instructional strategies used in social studies classrooms? How do social studies teachers use computer-supported instruction in their classrooms?

2. What factors are influencing social studies teachers’ use of computer-supported instruction in their classrooms?

3. How does computer-supported instruction in social studies curricula influence the principles of constructivist pedagogy?

Significance of the Study

Despite increasing research on the use of computer-supported instructional strategies in social studies education, there is no clear theoretical base that guides the integration of computers into social studies education (Crocco, 2001; Doolittle, 2001; Doolittle & Hick, 2003; Mason et al., 2000). I believe that this study has significance because it is one of the first studies to focus on how computer-supported instruction facilitates the principles of constructivist pedagogy in the social studies curriculum. The goal of this study is to reveal the relationship between computer integration and constructivist pedagogy and thereby provide a clearer understanding of and guidance for applying computer-supported instructional strategies in the social studies classroom.

The research design of this study is also significant because it is exploratory. This research design will provide an overview of the use of computer-supported instructional strategies in social studies education and may reveal evidence about the effectiveness, strengths, and weakness of these strategies. Additionally, the findings of this study may
provide guidance for further research to investigate particular aspects of specific instructional strategies more deeply.

Limitations of the Study

This study was designed with the intention of observing the use of several types of computer-supported instructional strategies, in other words, most of the commonly used strategies in social studies education that were introduced in the literature review section. However, I was not able to observe all types of computer-supported instructional strategies during the classroom observations. One reason is that the strategies observed were limited to those that the participant teachers preferred to employ. As a result, I was not able obtain ideas about how every computer-supported instructional strategy was used in the social studies classroom. Of the strategies preferred by the teachers, my analysis was limited to the subset of strategies employed during the classroom observation period. The participant teachers could potentially employ strategies that were omitted from this study because they were not used during my visits.

Another limitation was the unequal number of classroom observations to each participant. Although I had initially planned to have an equal number classroom observations of each participant teacher, a lack of computer availability in some of the observed classrooms meant that I was not able to observe all the classrooms for the same length of time.

Being an international student, as a researcher, could be another limitation of this study. My cultural and educational background is very different from an individual who grew up and was educated in the United States. While my cultural and educational background could be a strength of the study in terms of analyzing the data from a
different perspective, this could also be a weakness. As an international student, I had limited knowledge and experiences about K-12 schools in the United States. Having limited knowledge about schools in the United States might have affected the way I evaluated the data and the judgments I made throughout the data collection process.

Finally, the issue of generalizability of the qualitative research is another limitation of this study and should be taken under consideration by the researcher. The findings of this study are not generalizable; they only represent this group of teachers. Yet, as Lincoln and Guba (1985) point out, the term generalizability can be associated with the concept of transferability, and the researcher’s responsibility is to provide thick description or “…the data base that makes transferability judgments possible on the part of potential appliers” (p. 316). Thus, I have presented information about each case—such as the descriptions of the school and classroom contexts, and the backgrounds of the participant teachers—in as much detail as possible to ensure that sufficient information was provided for potential appliers who will use the findings of this study in similar contexts. I hope the findings of the study will be useful for researchers who study the use of computer-supported instruction in the social studies classroom and could be transferred to a similar context.

Delimitations of the Study

Plans for the study included interviews with exemplary social studies teachers who are known to integrate computer-supported instruction in their teaching and observations of their teaching practices. I believe that the classroom observations and the interview sessions may reveal significant results about constructivist pedagogy and computer integration in social studies education. However, student interviews or surveys
were not part of the study. Therefore, student views about computer-supported instruction are the missing facet of this research. Students’ attitudes toward computer-supported instructional strategies and their opinions about the effectiveness of these strategies would have provided stronger findings for this research.

One of the other delimitations was also related to the research design. The study design was exploratory, rather than focusing on a specific computer-supported instructional strategy. While the exploratory approach provided a general view about the use of computers in the social studies classroom, it could not give the researcher control over the settings and the participants. Controlling the classroom settings and instructional designs might have given more valuable insights into the effectiveness of computer integration. A comparison between traditional social studies instruction and computer-supported instruction could be an ideal example for a study that required the researcher’s manipulation. In that case, as the researcher, I would be able to control two different learning environments, and thus would find more evidence about whether computer-supported instruction made a difference.

Summary

In this chapter, I presented the problem statement related to a lack of research about the use of computer-supported instructional strategies in social studies education. In addition, I pointed out a gap in the literature focused on the role of these strategies in transforming social studies learning to a more constructivist and student-centered mode. I also presented the purpose of this research, my research questions, their significance, and the limitations and delimitations of the study. In the next chapter, I will review the
literature about the use of computer-supported instructional strategies and introduce the most commonly used strategies in current social studies education.
CHAPTER 2

LITERATURE REVIEW

Computer-Supported Instruction in Social Studies Education

In recent years, there have been dramatic changes in computer-supported educational technology. More powerful computers and sophisticated programs are used in the schools. According to White (1997), these changes in technology have increased the capability of using more visual aids in the classroom that attracts young users. These developments in computer and telecommunications technologies provide an environment to nurture computer- and Internet-supported instructional strategies. Like other disciplines, in social studies a number of computer-supported instructional strategies are applied. In this chapter, I will introduce the most commonly used computer-supported instructional strategies in the social studies classroom.

Drill and Practice, and Tutorial

Drill and practice, tutorial, and study guides have been among the most frequently used programs in the social studies classroom and dominated software programs (Berson, 1996; Budin, Taylor, & Kendall, 1987; Rice & Wilson, 1999). These programs are
designed based on question-and-answer format (Braun, Fernlund, & White, 1998b; Flouris, 1987). On the other hand, “The tutorial program is constructed to present information to the student, to pose questions about information, and provide feedback as to the correctness of response(s)” (Flouris, 1987, p.17).

According to Ehman and Glenn (1991), “The findings from several studies support the claim that drill and practice computer applications and tutorials can have an impact on student outcomes in social studies” (p.516). Similar results were reported by Higgins and Boone (as cited in Berson, 1996) and Roedding (as cited in Berson, 1996) who found small, but positive gains in secondary students' performance and attitudes toward the subject matter when computer drill and practice programs were implemented. It seems that data on the effectiveness of drill and practice and tutorial showed positive effects on students’ outcomes. According to Berson (1996), however, there is need for further research to address questions regarding the effects of these applications on the taxonomic level of students.

Software/CD-ROMs, Games, and Simulations

Many software/CD-ROM and simulations programs are now available to support teaching strategies in the social studies classroom (Berson & Balyta, 2004; Rose & Fernlund, 1997; White, 1996, 1997; Whitworth & Berson, 2003). Simulation programs present situations (stimulus) where students are asked how they might change or modify the situation posed; thus, let the student interact by playing a role and solving problems (Bailey, 1987; Braun, Fernlund, & White, 1998a; Braun et al., 1998b; Budin et al., 1987; Clegg, 1991; Flouris, 1987). Braun et al. (1998b) state that
Whether contrived by a teacher or driven by a computer, a simulation is a controllable world that is particularly motivating for students because of the inherent level of involvements in the experience. In other words, students are engaged in situations based on construct representations of reality that are designed to replicate real-life phenomena. (p.5)

Oregon Trail (Holt, 1998), SimCity (Electronic Art Inc., 2006), and Decisions, Decisions (Dockterman, 1997-2001) are some of the simulation software programs which are used in social studies education (White, 1996). Oregon Trail is an interactive CD constructed by Wyoming high school students with the collaboration of University of Wyoming (Holt, 1998). The CD, designed for the use of fourth graders, provide them with opportunities to follow the trial through challenging experiences which require learners to test hypotheses based on the evidences in the CD (Holt, 1998). SimCity (Electronic Art Inc., 2006), is another popular simulation in which the user creates, runs and maintains a city (Frye & Frager, 1996; Rice & Wilson, 1999; Teague & Teague, 1995). The user may assume various roles in the program in order to determine whether the city flourishes or fails (Rice & Wilson, 1999). Decision, Decision software series (Dockterman, 1997-2001) are 17 kits which focus on several topics including AIDS, prejudice, and the Cold War. Students analyze the situation, determine goals, consider various options, make decisions and explore the consequences of his/her decisions (Braun, et al., 1998a; Rice & Wilson, 1999).

There are an increasing number of scholars who recognize the benefits of computer simulations for they provide a context in which the learner must deal with real-life problems and situations that require critical thinking and decision-making skills (see
Berson, 1996; Ehman & Glenn, 1991; Flouris, 1987; Lengel, 1987; Marsh, 1986; Rice & Wilson, 1999; Teague & Tegaue, 1995; Whitworth & Berson, 2003). Rice and Wilson (1999) state that “those programs allow students to engage in activities, such as simulations and problem-solving, that encourage them to construct their own knowledge and conduct their own research” (p. 2).

Likewise, computer simulations may foster principles of constructivist pedagogy (Whitworth & Berson, 2003). According to Whitworth and Berson “simulation exercises provide opportunities for real-world decision making and allow students to experience the consequences of their decisions as the exercise unfolds, thereby increasing strategy building and critical thinking skills” (p. 482).

In simulation experiences students are actively engaged in the process and they think, analyze, and construct based on the evidences provided in the programs. The experiences are the imitation of real-life context which makes them authentic to the learner. Also computer simulations are very practical because they allow students to engage in activities that would otherwise be too expensive, dangerous, or impractical to conduct in the classroom (Berson, 1996).

**Databases**

Another common instructional strategy used among social studies teachers is database development. Databases are computerized record-keeping systems designed to replace paper-based information retrieval systems (Jonassen, 2000). In essence, they are electronic filling cabinets that allow users to store information (Jonassen, 2000). Database management systems (DBMS) consist of several components such as the database, a file management system, database organization tools, and reporting (printing)
functions so that the user can record, retrieve, reorganize and print data when it is necessary (Braun et al., 1998b; Braun, Fernlund, & White, 1998d; Budin et al., 1987; Jonassen, 2000).

Since the content of social studies education involves learning information such as events, important historical dates, and geographic names, database software can be a very valuable tool in the social studies classroom. According to Jonassen (2000), “…a database management system helps students integrate and interrelate content ideas, which in turn takes the ideas more meaningful and more memorable” (p.38). Similarly, Berson (1996) points out that databases are especially useful for managing the extensive knowledge base in the social studies while fostering students’ development of inquiry strategies through the manipulation and analysis of information.

Foyle and Yates (1993) stress the importance of students’ involvement in developing databases. According to them, students developing their own databases can learn to segregate and classify information and develop social skills in group working. In addition, Foyle and Yates (1993) point out that database use can help students to develop their critical thinking skills. Likewise, Rice and Wilson (1999) state that “Database development aids constructivism by encouraging collaboration in problem solving, the use of higher-order thinking skills to develop and test hypotheses, the construction of knowledge by the students who relate learning to their own experiences” (p.31).

While many scholars (see Berson, 1996; Braun et al., 1998b; Braun et al., 1998d; Foyle & Yates, 1993; Rawitsch, 1988; Rice & Wilson, 1999) suggest that database development can promote critical thinking and problem-solving in social studies education, Ehman, Glenn, Johnson, and White, (1992) point out the significance of well
structured database activity for effective learning. The authors examined database activities of eight social studies teachers from four different states. The participant teachers were not able to provide clear instruction for students, as a result students were confused and overwhelmed. According to Ehman et al. (1992), structure is an essential part of problem-solving; thus, the sequences in the activity such as unit introduction, presentation of the problems should be very well-structured and planned.

It can be concluded that as number of scholars suggest (see Berson, 1996; Braun et al., 1998b; Braun et al., 1998d; Foyle & Yates, 1993; Rawitsch, 1988; Rice & Wilson, 1999), databases can promote critical thinking, problem-solving, and decision-making when employed in a well-structured format. Databases require active involvement of the learner which is considered as an essential aspect of constructivist pedagogy. Using databases, the learner can create CD-ROM encyclopedias or PowerPoint presentation in which students construct their knowledge, truths, or understandings on a particular issue (Foyle & Yates, 1993).

Multimedia/Hypermedia

Multimedia/hypermedia refers to the combination of sounds, graphics, texts, and images with a single information delivery system (Olwell, 1999; Rose & Fernlund, 1997). The origin of the word “hypermedia” comes from the term “hypertext” which was used first by Ted Nelson in the early 1960s (Braun et al., 1998b). Nelson, later, defined the term and began using the word “hypermedia” (Braun et al., 1998b). With multimedia/hypermedia, students can create individual or group presentations to develop skills in information retrieval and communication, or they can create presentations that promote evidence of understanding of social studies content and their own perspectives
(Rice & Wilson, 1999). There are a number of multimedia software programs such as HyperCard, (Apple Computer Inc., 1996), Hyperstudio (Sunburst Technology, 2003), and Linkway (IBM, 1989-2006) which help students to create productions that include video and audio clips of various social studies topics.

Although much has been written about multimedia/hypermedia based learning, only a small portion of it has been research based (Ayersman, 1998; Saye & Brush, 1999). Yet, the research results appear very promising (Ayersman, 1998) and the benefits of multimedia, such as creating an interactive, collaborative, and situated learning environment, have been recognized by a number of scholars (see Ayersman, 1998; Fitch, 1997; McMahon, Carr, Fishman, 1998; Rice & Wilson, 1999; Saye & Brush, 1999).

According to Fitch (1997), students’ higher-order thinking is enhanced by making connection between links in a history hypermedia unit. Likewise, Saye and Brush (1999) emphasize the role of multimedia-supported teaching strategies in social studies as a contributing factor on students’ higher-order thinking. Saye and Brush (1999) conducted a study on 45 eleventh-grade students about a multimedia application in a history class. Their findings support the concept that students who received instruction in a multimedia-supported environment demonstrated more complex content knowledge and dialectic reasoning than those who received traditional instruction. According to study, most students indicated that the experiences with multimedia environment provided a more authentic learning environment with a deeper engagement with the historical issues. Also most students claimed that the collaborative learning environment in this study helped them to construct more complex knowledge (Saye & Brush, 1999).

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In conclusion, hypermedia can promote collaborative, active, and authentic learning in history and social studies classrooms (Fitch, 1997; Saye & Brush, 1999) as “hypermedia is an ideal working tool in constructivist learning environments” (McMahon et al., 1998, p. 275). In multimedia/hypermedia-supported learning environment students are actively engaged in the learning task either individually or as groups. As Fitch (1997) suggests, multimedia-supported teaching can be used in many ways in which collaborative learning is reinforced. Students can be divided into groups to discuss specific question related to material in the hypermedia, reach conclusion, and create a presentation together.

**PowerPoint**

Although Microsoft PowerPoint is the most popular software of its kind (Creed, 1997), there are very few studies about the use of PowerPoint in K-12 education. In one of the early articles, Van Horn (1998) reviewed the 1998 version of PowerPoint and introduced the new features of this software program. According to Hlynka and Mason (1998) PowerPoint helps structure both the content and the process of a lesson or lecture and also helps prevent it from rambling. On the other hand, Creed (1997) describes PowerPoint as a teacher-centered instructional tool that nourishes teacher-controlled lectures.

The most current studies focus on the effectiveness of PowerPoint presentations because this program has become one of the standard tools in undergraduate courses (DenBeste, 2003). Frey and Birnbaum (2002) studied the effects of PowerPoint on undergraduate students. Their study, conducted on 160 undergraduate students in a large Midwestern university, showed that the majority of the students agreed that PowerPoint...
had positive effects on lectures, especially in helping them take notes and study for exams. Likewise, another survey conducted on 33 Psychology students in a Midwestern university showed that students had more positive attitudes and greater self-efficacy toward the course when PowerPoint-supported lectures were used (Susskind, 2005). Bartsch and Cobern (2003) also found similar results in a study conducted on 39 college students in a large Southwestern university. The study showed that although PowerPoint-supported lectures did not affect students' grades in a positive way, students still preferred PowerPoint lectures over transparencies.

In conclusion, the focus of the current literature is on the effectiveness of PowerPoint presentations in undergraduate courses. The literature indicates that students have positive attitudes toward PowerPoint-supported lectures.

The Internet

The Internet, which is used by millions around the world, has technological roots that extend back to early 1960s (Braun, Fernlund, & White, 1998c; Van Houweling, 2000; Zakon, 2005). The technology of the Internet was originally designed by Rand Corporation for exclusive use of U. S. Department of Defense (Braun & Risinger, 1999). The actual idea behind the Internet was to provide a communication system to control nuclear warfare and to be able to rapidly respond to any possible nuclear attack against the Unites States (Braun & Risinger, 1999).

In 1964, Paul Barand, one of the Rand Corporation researchers, point out that maintaining communication at central and local levels are imperative during a thermonuclear attack (Braun et al., 1998c; Braun & Risinger, 1999). What Barand actually proposed was a computer-managed conferencing (CMC) system in which
communications were not located primarily in one physical place (Braun & Risinger, 1999). According to this system, messages be broken to equal units and transferred through computers to their destination where they recombined into whole units (Braun et al., 1998c; Braun & Risinger, 1999).

This idea was brought to U.S. Department of Defense’s Advanced Research Projects Agency (ARPANET) and it was initiated as a computer networking project in 1969 (Braun et al., 1998c, Braun & Risinger, 1999; Karran, Berson, & Mason, 2001). ARPANET was the first computer-managed conferencing system in operation (Braun et al., 1998c; Braun & Risinger, 1999). Although initially the system only was able to transfer content of computer data, in short time electronic mail capabilities was added which allow person to person messages (Braun et al., 1998c; Braun & Risinger, 1999).

Meanwhile, by the mid-1970s, big corporations such as Xerox initiated CMC projects. Also, in 1979, an imitation of the ARPANET mailing list was created between Duke University and the University of North Carolina at Chapel Hill and called “Usenet” (Braun et al., 1998c; Braun & Risinger, 1999; Zakon, 2005). On January 1, 1983 ARPANET was split into two networks: one military and one public (Braun et al., 1998c, Braun & Risinger, 1999; Zakon, 2005). At the same year National Science Foundation (NSF) established five supercomputer centers and two dozen regional networks which was called NSFNET (Braun et al., 1998c; Braun & Risinger, 1999). NSFNET became a major network following year and established BITNET which widespread rapidly among higher education institutions (Braun et al., 1998c; Braun & Risinger, 1999). In 1993, National Center for Supercomputing Applications at the University of Illinois created user-friendly graphic interface called “Mosaic” which allow millions of people to browse,
search and retrieve text, sound, and graphic (Braun et al., 1998c; Braun & Risinger, 1999). Later in 1990s, more evolved and powerful browsers created such as “Netscape” and “Internet Explorer” by private corporations for the use of people around the world (Braun et al., 1998c; Braun & Risinger, 1999). Then, it became, what is known now, as the public Internet (Karran, et al., 2001).

The tremendous growth in Internet technologies has brought online services, specialized electronic networks, WebPages, e-mail, software and global information resources to our homes as well as to schools (Rice & Wilson, 1999; Rose & Fernlund, 1997). Accordingly, Internet access in schools has increased greatly over the last ten years (Becker, 1999; NCES, 2003). According to a national survey, conducted in the United States, over about 99% of schools had access to the Internet and the proportion of instructional rooms with Internet access increased from 51% in 1998 to 92% in 2002 (NCES, 2003).

The increasing availability of the Internet in schools has lead scholars to study the use of Internet in social studies education. Many scholars (see Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002; Hicks & Ewing, 2003; Keiper, 1999; Larson, 1999; Shiveley & VanFossen, 1999; VanFossen & Shiveley, 2000) have studied the instructional use of the Internet in the social studies classroom.

A recent study showed that “Internet use” and “accessing information form the Web” are the most common use of technology in social studies (Whitworth & Berson, 2003). According to Whitworth and Berson (2003), most of the literature about Internet use in social studies offered lists of Web sites, reviews of Web sites, and lesson plans or general lesson ideas. This literature focused on various topics relating social studies

Cassutto (2000) points out that the process of collection information from the Internet as he called “data mining” helps students build critical thinking skills. The Internet also provides visual aids in the form of graphics, diagrams, and timelines to represent a historical concept, consequential events or a family tree. These visual aids foster students’ chronological thinking and understanding of historical events through chronology (Bennett & Pye, 1999).

On the other hand, Hicks et al. (2002) focus on the influence of Internet use on civic education. According to them, some Web sites on the Internet may encourage students’ political participation with nurturing and understanding their political rights and civic responsibilities. Another advantage of the Internet is the ability to provide students with opportunities to learn about other cultures, beliefs and perspectives (Hicks et al., 2002; Hicks & Ewing, 2003). Hicks and Ewing (2003), in their article in which they introduce some online newspapers from different regions of the world such as America, Africa, Asia, and Middle East, conclude that:

1. Global newspapers facilitate the introduction of multiple and global perspectives into classroom and curriculum.
2. Reading global newspapers, students can recognize other people’s concerns, perspectives and points of view.

3. Global newspapers can be very useful tools when students deal with contradictory issues or compare and contrast ideas and points of view.

The Internet also can provide information for students to develop strategies to resolve conflicts and real-world problems (Bennett & Pye, 1999; Dils, 2000). According to Zukas (2000), the Internet can be a very valuable tool in providing information about real-world problems and bringing them into the classroom. He points out that lesson plans build around real-world problems are very consistent with the pedagogical goal of constructivism. These lessons may foster students’ informed decision-making, historical understanding and problem-solving skills.

In conclusion, many researchers (see Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002; Hicks & Ewing, 2003; Larson, 1999; Shiveley & VanFossen, 1999) in the field of social studies education emphasize the role of the Internet in the gathering of written and visual information which helps students to acquire multiple and global perspectives, think, analyze, synthesis, and make informed decisions based on the information they have.

**Web Quest**

Web Quest, one of the Internet-supported instructional strategies, became an increasingly popular form of Internet use in the social studies classroom (Whitworth, & Berson, 2003). The Web Quest model was developed in early 1995 at San Diego State University by Bernie Dodge with help of Tom March (Educational Technology Department at San Diego State University, 1998; Teclehaimanot & Lamb, 2004; Zukas,
A Web Quest is a structured exercise created by a teacher that asks students to solve a problem or find an answer to a question or questions by finding information on the web” (Zukas, 2000, p.68). A Web Quest has five components: introduction, task, process, evaluation, and conclusion (Chandler, 2003). Given step-by-step instruction in each section, students have to solve a problem through the Web Quest activity (Milson & Downey, 2001).

Web Quest is an inquiry and problem-solving oriented instructional strategy which allows learners to enhance their thinking at the levels of analysis, synthesis and evaluation so that they can construct their own knowledge and truths (Chandler, 2003; Educational Technology Department at San Diego State University, 1998; Zukas, 2000). March (2003) points out that the best Web Quest motivates students to see richer thematic and conceptual relationships, to provide real-world learning, and to reflect on their own metacognitive skills which are very important to evaluate at the level of higher-order thinking. According to March (2003), scaffolding is at the heart of the Web Quest mode and can be used to apply such approaches as constructivist strategies, differentiated learning, and situated learning.

*Tele-collaboration*

Using telecommunication along with computers for educational purposes such as making connection among people and resources, has been labeled “tele-collaboration” (Harris, 2001; Karran et al., 2001). The current developments in telecommunication technologies have made different communication techniques more available. Now there are many Internet-based telecommunication techniques such as, e-mail, online discussion groups, electronic pen pals, student-to-student projects, class-to-class projects, and
school-to-school projects in which students from different parts of the world can interact and exchange information about their cultures and beliefs. (Rice & Wilson, 1999).

E-mail exchanges are one of the most common strategies used between students who live in different countries or even continents (Barr, 1994; Baugh & Baugh, 1997; Soh & Soon, 1991). These e-mail exchanges are often called “key pal” exchanges (Dawson & Harris, 1999; Fabos & Young, 1999; Finegan-Stoll, 1998). The purposes of these exchanges vary from "friendship" to the study of foreign language (Ady, 1999; Soh & Soon, 1991), social studies (Baugh & Baugh, 1997), and other topics as well.

A study conducted on four teachers and 100 students at a middle school in the southwestern of the United States indicated that students had shown a very high level of enthusiasm about the electronic communication project which allowed the students to connect with other students from different regions (Szymanski-Sunal, Scheffler, & Sunal, 1996). Although all participant teachers saw the project as a valuable tool to their students, they felt overwhelmed by the complexity of involving students in the projects and complained about lack of organization (Szymanski et al., 1996). Similarly, Barr (1994) points out that a clear structure and purpose of e-mail or pen pal exchanges are imperative for the success of the learning activity.

Yet, a more complicated and a structured form of telecommunication exchange projects mostly require a number of classrooms, teachers, or moderators who coordinate the dialogue and collaboration between classrooms based on particular themes (Fabos & Young, 1999; Kim & Bonk, 2002; Zong, 2002). These telecommunication projects can be considered an online learning community. A learning community requires student-teacher collaboration, student-focused activities, and is populated by experts, novices, teachers,
and students (Fontana, 1997). “An online learning community may then be defined as a
body of individuals who use computer networks to share ideas, information, and insight
about a given theme or topic to support the ongoing learning experiences of all members”
(Fontana, 1997, p.4).

An example of a well organized telecommunication network is International
Education Resource Network (I*EARN), which support worldwide humanitarian projects
and links “approximately 400,000 students at 4,000 schools in more than 90 countries”
(Bragaw, 2001, p.3). This network allows teachers and students to use various online
communication methods including e-mail and videoconferencing in order to create a
collaborative and active learning community in which world problems and issues are
discussed.

Harris (1999) points out that tele-collaboration can not only support global
education by exposing students’ contrary opinions, perspectives, beliefs, experiences, and
thinking processes, but also encourages students to compare, contrast, and/or combine
similar information collected in dissimilar locations. Larson (2003) also finds electronic
threaded discussions as a “useful [tool] for students to interact about public and
controversial issues because they may allow for solid academic interaction with others”
(p. 360). Likewise, Rice and Wilson (1999) state that “telecommunication technologies
easily lend themselves to constructivist principles by providing students with
opportunities to communicate with people all over the world” (p.30). Thus, one of the
crucial functions of tele-collaboration is to help students learn about other cultures,
compare these cultures with theirs, and most importantly help them to be aware of
multiple perspectives (Rice & Wilson, 1999).
Virtual Field Trips

Virtual field trips are a popular new phenomenon in the field of social studies (Bellan & Scheurman, 1998). Virtual field trips or online field trips refer to “computer-based simulations of an actual field trip, which allows the user to vicariously experience the environment of the intended locations” (Clark, Hosticka, Schriever, & Bedell, 2002, p. 3). This form of field trip “can provide students with first-hand experience that might not otherwise be possible, given the expense and logistics of planning a real field trip across the country” (Wilson, Rice, Bagley, & Rice, 2000, p. 152).

According to Bellan and Scheurman (1998), virtual field trips can be helpful when they precede actual field trips because they prepare students for the real field trip (see also Berson & Balyta, 2004). However, computers cannot replicate the “tactile, olfactory, visual, and dialogical experience of an actual field trip” (Bellan & Scheurman, 1998; p. 38). Yet, virtual field trips are also cost-effective and free of problems that may be caused due to a long journey (Berson & Balyta, 2004; Wilson et al., 2000). On the other hand, Berson and Balyta (2004) point out that if virtual field trips are used in isolation, ill-prepared students might only surf the Internet aimlessly without learning through the field trip.

Although there have been discussion about the advantages and pitfalls of virtual and actual field trips (see Bellan & Scheurman, 1998; Berson & Balyta, 2004; Clark et al., 2002), most of the literature in this field generally focuses on creating and planning virtual field trips and providing online resources for teachers (see Bellan & Scheurman, 1998; Clark et al., 2002; Cotton, 1999; Rice & Wilson, 1999; Risinger, 2005b; Wilson et al., 2000), rather than on research-supported evidence about the effective use of virtual
field trips in the social studies classroom. Therefore, there is a need for empirical research about the use of virtual field trips in social studies classrooms from teachers’ and students’ perspectives.

Teachers’ Use of Computer-Supported Instruction in Social Studies

Although there are some studies concerning preservice teachers feedback on computer use in social studies education (see Keiper, Harwood, & Larson, 2000; Owens, 1999; White, 1996), not much research has been done about the level of use of computer-supported instruction in the social studies classroom. One of the first national surveys about the usage of computers by social studies teachers was conducted on 800 teachers who were members of the National Council for Social Studies (Northup & Rooze, 1990). More than 60% of teachers responded to the survey. The study showed that the majority (340 teachers) of respondents had computer accesses (84% of the sample) and almost 55% of teachers who had access to computer actually used them. Furthermore, the data showed that word processing (29%), simulation (23.7%), drill and practice (18.3%) were listed as the most common computer applications used by social studies teachers. On the other hand, database (11.3%), problem-solving (7%), and tutorials (5.4%) were less common strategies compared to the previous three categories (Northup & Rooze, 1990).

Pye and Sullivan (2001) also studied the instructional use of computers in the social studies classroom on 120 middle school social studies teachers in a Midwestern state. The study showed that although simulations (22.5%), and drill and practice (10.8%), and tutorials (9.8%) are still listed by social studies teachers as frequently used computer applications, a number of new methods were cited by teachers (Pye & Sullivan, 2001). The most outstanding finding was that more than half of the participants (53.9%)
indicated they used the Internet in their instruction which makes the Internet the most common strategy. Furthermore, the data indicated that the use of newer methods such as educational games (28.4%), and graphics (16.7%) have been increasing rapidly. Another significant finding was that the use of problem-solving (14.7%) and database (14.7%) were also escalating compared to data from the survey of Northup and Rooze (1990).

It seems that Internet use has become the most popular computer-supported instructional strategy in social studies which might be explained by the rapid new developments and innovations in computer and Internet technologies. Similarly, another current study showed increasing popularity of Internet use among the social studies teachers. According to a study conducted by VanFossen (2000, 2001) on 191 high school (grades 9-12) and middle school (grades 6-8) social studies teachers in the state of Indiana, the majority (more than 85%) of respondents were employing the Internet in some way for professional use (planning, research etc.). In addition, VanFossen’s survey showed that 42.5% of teachers use the Internet occasionally to encourage students to use the Internet for gathering background information. Almost 39% of teachers use the Internet frequently for this purpose. The data indicated that the second most common Internet use among teachers was to gather information for lessons. Slightly more than half of the respondents indicated that they occasionally use the Internet for this purpose while almost 20% of them use the Internet frequently for this purpose.

Therefore, it is clear that social studies teachers use the Internet for personal purposes, and to gather background information for planning rather than for teaching and learning activities in the classroom (Gibson & Nocente, 1999; Keiper et al., 2000; Sunal, Smith, Sunal, & Britt, 1998). Correspondingly, VanFossen’s survey showed that
“developing Web Pages for lesson” or “taking students on a virtual trip” are the rarest Internet use among the teachers who participated to the study. Only 7% of the participants developed WebPages for lessons occasionally and slightly less than 12% of the participants took students on a virtual field trip (VanFossen, 2000, 2001).

Despite the increasing availability of the computer and Internet access in schools (National Center for Education Statistics, 2003), there are still common barriers keeping social studies teachers from employing computer-supported instructional strategies more frequently. The most extensively cited barriers are (a) lack of availability of computers and problems with Internet access (Gibson & Nocente, 1999; Keiper et al., 2000; Sunal et al., 1998; VanFossen, 2000, 2001); (b) lack of training in how to apply the computer- and Internet-supported instructional strategies in the classroom (Rice, Wilson, & Bagley, 2001; VanFossen, 2000, 2001); (c) lack of time (Sunal et al., 1998; Rice et al., 2001); and (d) lack of funding (Rice et al., 2001).

In summary, the review of the literature reveals, few studies have been conducted to study teacher use of computer-supported instruction in social studies education. The literature does support (see Diem, 2000, Martorella, 1999; Shaver, 1999) that social studies teachers utilize computer-supported instruction in ways that does not transform social studies instruction into a more constructivist and student centered pedagogy. Rather, their use mostly is for lesson planning, gathering information, and communication purposes (see Gibson & Nocente, 1999; Keiper et al., 2000; Sunal et al., 1998). This study seeks to fill that gap by in-depth examination the use of computer-supported instructional strategies in social studies education and thorough investigation.
of the influence of these strategies on the principles of constructivist pedagogy in the social studies curriculum.

Summary

In this chapter, I introduced the well-known computer-supported instructional strategies in social studies education. I described each strategy individually and discussed the research on the effectiveness of every single computer-supported instructional strategy. I also summarized the literature about social studies teachers’ use of computer-supported instruction in their classes. As the literature indicates, there is a need for further empirical research to investigate the use of computer-supported instructional strategies in the social studies classroom and the influence of these strategies on the principles of constructivist pedagogy in the social studies curriculum. This study seeks to fill that gap by applying qualitative case study design to acquire in-dept information about the use of computer-supported instructional strategies and the influence of these strategies on the principles of constructivist pedagogy in the social studies curriculum.

Thus, in the next chapter I will present the theoretical framework, methodology, and rationale for the case study design. I will also describe the participants and discuss data collection, data management, and data analysis strategies used through the research process. Finally, I will discuss the trustworthiness criteria of this research and my subjectivity as the researcher.
CHAPTER 3

METHODOLOGY

Introduction

There is escalating support among social studies educators (see Bennett & Pye, 1999; Berson, 1996; Berson & Balyta, 2004; Boyer & Semrau, 1995; Cassutto, 2000; Dils, 2000; Fontana, 1997; Hicks et al., 2002; Larson, 1999; Lengel, 1987; March, 2003; Rice & Wilson, 1999; Rose & Ferlund, 1997; Saye & Brush, 1999; Shiveley & VanFossen, 1999; Whitworth & Berson, 2003; Zukas, 2000) and educational organizations such as the National Council for Social Studies (1994), the College and University Faculty Assembly (CUFA), and the International Society for Technology Information (ISTE) (Hicks, Doolittle, & Lee, 2004; NCSS, 1994; Mason et al., 2000; VanHover et al., 2004) about the imperative role of computer-supported instruction in transforming learning in social studies from a traditional to a more constructivist, student centered, and active mode in which higher-order thinking, critical thinking, problem-solving, and decision-making are facilitated.

However, despite the growing support for computer-supported instructional strategies in social studies education, there is still a need for more in-depth research in order to analyze the effectiveness of computer integration (Berson & Balyta, 2004; Diem,
and to investigate the effects of computer-supported instruction as a way of transforming social studies instruction to a more constructivist and student centered pedagogy. A recent article by VanHover et al. (2004) provides a valuable research framework for studies focus on computer use in the social studies classroom. VanHover et al. (2004) state that

The research studies should be specific to social studies, examining pedagogical approaches and effects on student learning, as well as other issues, including behavior management, technological support, and curriculum development. Case studies and/or ethnographies of classrooms and schools utilizing pervasive technology models could provide an in-depth look at how this new trend influences teaching and learning, the culture of classrooms, and the school climate. Interviews of students, teachers, and administrators could provide important information on lessons learned, problems faced, and the barriers and benefits of the new technology. Examining lesson plans, curricula, test results, and other components of teaching and learning could provide insight and concrete evidence of whether handheld computers influence teaching and learning. This research data can assist educators when wide-spread infusion of handheld computers occurs; the transition may be smoother if informed by research. (p.110)

In the light of this framework, the following research questions were generated for this research:
1. What are the current computer-supported instructional strategies used in the social studies classroom? How do social studies teachers use computer-supported instruction in their classrooms?

2. What factors are influencing social studies teachers’ use of computer-supported instruction in their classroom?

3. How does computer-supported instruction in social studies curriculum influence the principles of constructivist pedagogy?

This dissertation study is designed with the intention of analyzing the use of computer-supported instructional strategies in social studies education and the influence of computer-supported instruction on the principles of constructivist pedagogy so that the findings from the study may be helpful for the discussion about the constructivist theoretical base for computer use in social studies education.

Theoretical Framework

*Constructivism*

This study is grounded in the principles of constructivist learning theory. Constructivism is stemmed from the work of Jean Piaget (1967), Lev Vygotsky (1978), John Dewey (1944), Jerome Bruner (1986, 1990, 1996), and Howard Gardner (1993), among others who studied the representation of knowledge (Fosnot, 1996). Constructivist learning theory is based on the idea that knowledge is constructed by the learner (Fosnot, 1996; Hendry, 1996; Prawat & Floden, 1994; see also Doolittle & Hicks, 2003). According to this theory, prior knowledge of the learners and their interpretation of this knowledge have significant influence on the students’ learning (Doolittle & Hicks, 2003; Hendry, 1996). Since every individual may learn and construct knowledge in various
ways, each may develop “unique” realities based on prior knowledge and experiences
which are highly influenced by the personal and cultural background of a person
(Doolittle & Hicks, 2003; Fosnot, 1996; Hendry, 1996). Thus, “constructivism …
employs a flexible, culturally relativistic, and contemplative perspective, where
knowledge is constructed based on personal and social experience” (Doolittle & Hicks,
2003, p. 76).

This notion of constructivism has significant influence on shifting classroom
practices from the traditional transmission model to a more complex and interactive
model in which students are actively engaged in learning process to construct their own
realities and truths (Prawat & Floden, 1994). Yet, there are various views of
constructivism in which the knowledge construction process is viewed and analyzed in
different ways (Damarin, 2004; Prawat & Floden, 1994). There are three main types
constructivism: cognitive constructivism, social constructivism and radical
constructivism.

Cognitive Constructivism

Cognitive constructivism has been highly influenced from Piaget’s ideas about
cognitive development (Greeno, Collins, & Resnick, 1996). Piaget’s (1967) early work
on children’s cognitive development became influential in American educational
psychology. He had focused on the specific knowledge structures that children develop.
According to this view, learners actively restructure knowledge in highly individual ways
based on their existing knowledge, formal instructional experiences and other influences
that mediate understanding (Windschitl, 2002). Cognitive constructivism assumes the
existence of reality and objective knowledge (Damarin, 2004; Doolittle & Hicks, 2003).
In other words, cognitive constructivists see reality as an independent identity and separate it from the thoughts and beliefs of an individual (Doolittle & Hicks, 2003).

**Radical Constructivism**

Radical constructivism represents the most extreme form of constructivist theory (Doolittle & Hicks, 2003). Radical constructivism, proposed by Ernest von Glasersfeld (1984, 1996), makes no claims of the existence of an objective reality (see also Damarin, 2004). According to von Glasersfeld (1984, 1996), each individual constructs his/her own unique reality and the constructed knowledge is the only reality for an individual. According to this assertion, even if an external “reality” may exist, individual knowledge is not adequate to measure the true nature of this reality (Damarin, 2004; Doolittle & Hicks, 2003). Therefore, unlike cognitive constructivists, radical constructivists assume multiple realities and deny the notion of objective knowledge. According to radical constructivists, even if there is an objective knowledge, it cannot be reached; thus, all knowledge is subjective. Furthermore, this view denies the notion that knowledge is passively transmitted from environment to the individual; rather, knowledge is constructed as a result of the individuals’ active engagement in the learning process (Doolittle & Hicks, 2003).

**Social Constructivism**

Social constructivists focus on the notion that knowledge is constructed through social interaction between individuals (Damarin, 2004; Doolittle & Hicks, 2003; Fosnot, 1996; Prawat & Floden, 1994). Unlike cognitive and radical constructivist views, social constructivists highlight the role of language and communication between individuals on the learning process.
John Dewey (1944) is one of the first philosophers who underlined the social aspects of learning. He stressed that school was a community, although often educators keep students isolated by assigning them to different desks in the school (Phillips & Soltis, 2004). Another psychologist, Lev Vygotsky (1978) had significant effects on the social constructivist view. Unlike Piaget, he stressed learning occurs by interaction with others and much of what we learned was the result of this interaction (Fosnot, 1996). Furthermore, Vygotsky (1978) created the notion of a “zone of proximal development” that is the area of exploration for which the student is cognitively prepared, but requires help and social interaction to fully develop (Fosnot, 1996; Phillips & Soltis, 2004). According to this view, students can become engaged in learning by participating in communities where learning is valued. Therefore, students’ learning occurs in an environment where participation in social practices of inquiry.

*Constructivism, Social Studies, and Computer-Supported Instruction*

Although different views of constructivism exist, there are studies that recapitulate principles of constructivist pedagogy under generally accepted tenets including; (a) knowledge is actively constructed by the learner (Brooks & Brooks, 1999; Hendry, 1996; Prawat & Floden, 1994); (b) knowledge construction can be an individual and/or social process (Hendry, 1996); (c) knowledge can never be certain (Hendry, 1996); (d) multiple perspectives are crucial for knowledge construction (Jonassen, 1992). Yet, these studies take an interdisciplinary perspective about the principles and applications of constructivist theory (see Brooks & Brooks, 1999; Hendry, 1996; Jonassen, 1992).
Likewise, in the field of social studies, there have been discussions about the constructivist pedagogy as a theoretical base that guides the computer integration into social studies education (see Crocco, 2001; Doolittle, 2001; Doolittle & Hick, 2003; Mason et al., 2000). Recently, Doolittle and Hicks (2003) proposed six principles of constructivism that may guide technology integration strategies in the social studies classroom.

1. The construction of knowledge and the making of meaning are individually and socially active process.
2. The construction of knowledge involves social mediation within a cultural context.
3. The construction of knowledge is fostered by authentic and real-world environments.
4. The construction of knowledge takes place within the framework of the learner’s prior knowledge and experience.
5. The construction of knowledge is integrated more deeply by engaging in multiple perspectives and representations of content, skills, and social realms.
6. The construction of knowledge is fostered by students becoming self-regulated, self-mediated, and self-aware.

Furthermore, Doolittle and Hicks (2003) develop six pedagogical strategies for computer use in the social studies classroom based on these principles.

1. Teachers and students should be prepared to implement technology as a tool for inquiry.
2. Teachers should use technology to create authenticity, which facilitates the process of student inquiry and action.

3. Teachers should use technology to foster local and global interaction such that students attain multiple perspectives on people, issues and events.

4. Teachers should facilitate student knowledge construction by using technology to build on students’ prior knowledge and interest.

5. Teachers should enhance the viability of a student’s knowledge by using technology to provide timely and meaningful feedback.

6. Teachers should cultivate students’ academic independence by using technology to foster autonomous, creative, and intellectual thinking. (p. 103)

Therefore, based on these six pedagogical strategies for computer use in the social studies classroom and commonly accepted principles of constructivist theory within the consideration of main goal of social studies, I propose six criteria for effective and constructive use of computer-supported instructional strategies in the social studies curriculum:

1. Students should be active participants in the learning process either in a group or as individuals.

2. Student prior knowledge/experiences should be used through the CSI activity.

3. CSI activity should be authentic and a resemblance of a real-life context.

4. Knowledge construction should be achieved through the CSI activity.

5. Multiple and global perspectives should be analyzed in the course of learning process where CSI is used.
6. Critical thinking, problem-solving, and decision-making should be encouraged during the CSI activity.

These six criteria are considered as fundamental elements of constructivist learning in social studies; thus, I used these criteria in order to assess the effective use of computer-supported instruction in the social studies.

Methodology

*Rational for Design of the Study: Qualitative Research*

Merriam (1998) defines qualitative research as “an umbrella concept covering several forms of inquiry that helps us understand and explain the meaning of social phenomena with as little disruption of natural setting as possible” (p.5). Naturalistic inquiry, interpretive research, field study, participant observation, inductive research, case study, and ethnography are often used interchangeably to refer qualitative research (Bogdan & Biklen, 1998; Merriam, 1998). Nevertheless, in education qualitative research is frequently called “Naturalistic” because the researcher regularly visit and observe places where the events he or she is interested occurs; and the data also gathered by means of natural behaviors including talking, looking, eating, and so on (Bogdan & Biklen, 1998).

The most common use of qualitative research is to provide in-depth and interpreted understanding of social phenomena within its natural context (Denzin & Lincoln, 2000; Snape & Spencer, 2003). Therefore, within the research context, an individual’s experiences, beliefs, and perspectives are crucial for qualitative research in order to map and re-present the social world of the individual (Snape & Spencer, 2003). Correspondingly, Merriam (1998) states that “Qualitative researchers are interested in
understanding the meaning people have constructed, that is, how they make sense of their world and the experiences they have in the world” (p.6). Hence, qualitative research involves several data collection methods and strategies such as case study, personal experiences, life story, interview, artifacts, cultural texts, and observations (Denzin & Lincoln, 2000).

Case studies, one of the most common strategies of qualitative research (Stake, 2000), is defined as “detailed examination of one setting, or single subject, a single depository of documents, or one particular event” (Bogdan & Biklen, 1998, p.54). Therefore, a case study design is employed to gain an in-depth description, understanding and interpretation of a situation (Hays, 2004; Merriam, 1998). Furthermore, case studies are preferred for studies in which such questions “how” and “why” are being posed (Yin, 2003).

The main research question of my study was to investigate the use of computer-supported instructional strategies in the social studies classroom and the influences of these strategies on the principles of constructivist pedagogy. My purpose by posing the research questions for this study was to acquire more in-dept information about the use of computer-supported instructional strategies in the social studies classroom rather than getting only descriptive information about them. I wanted to explore all aspects of the use of computer-supported instruction in the social studies classroom to acquire a better understanding about the role of computer-supported instruction and the influences of these strategies on the principles of constructivist pedagogy in the social studies curriculum. Since my research questions require a thorough exploration of the use of
computer-supported instruction in the social studies classroom, it seems that case study research best suits the purpose of my research topic.

Moreover, in order to collect data from different perspectives and be able to compare the findings from different settings, I preferred to use a “Multi-case studies” approach that involved more than one subject and setting in the research process (Bogdan & Biklen, 1998; Merriam, 1998; Yin, 2003). There were a number of reasons behind this decision. One of the first reasons was the investigating different settings which may have significant influence on the outcome of the study. For instance, a limited computer availability or technical support in a school may have influence on teacher’s decision how and when to integrate the computers into his/her teaching. Another example could be related to types of schools investigated for this study. Examining a high school setting along with a middle school setting could also reveal interesting findings. The type of strategies used in high schools could differ from middle schools because age level could be a factor to decide for appropriate type of strategy. Another reason for applying “Multi-case studies” (Bogdan & Biklen, 1998; Merriam, 1998; Yin, 2003) was examining different teachers’ use of computer-supported instruction. This also may reveal significant findings that influence the outcome of the study. For instance, the focus of each participant can be directed to different types of computer-supported instructional strategy or the way they use these strategies can vary from one to another. The variety on these issues and many other issues emerged through the “Multi-case” research process was a contributing factor to enrich the data in my study.
Participants and sites were selected based on a “purposeful sampling” approach in which “researchers intentionally select individuals and sites to learn or understand the central phenomenon” (Creswell, 2005, p. 204; see also Ritchie, Lewis, & Elam, 2003; Glesne, 1999). In this approach, samples are chosen based on a set of criteria because they have particular features or characteristics that enable detailed exploration and understanding of a central phenomenon or puzzle which the researcher wishes to study (Ritchie et al., 2003). Thus, the following criteria were developed for the selection of the participant teachers:

1. They should be familiar with the constructivist pedagogy.
2. They should frequently use computer-supported instruction in their classroom.
3. They should be competent in many computer applications.

Along with these criteria, “heterogeneous samples” (Ritchie et al., 2003) or “maximum variation sampling” (Patton, 2002) method was taken under consideration for this study to ensure diversity among the participants and the settings so that participants’ perspectives, ideas, and classroom practices can be compared within the various contexts. Correspondingly, Creswell (2005) stated that “Maximal variation sampling is a purposeful sampling strategy in which the researcher samples cases or individuals that differs on some characteristics or traits” (p. 204).

Therefore, initially I had planned to select at least one White, one African American, and one female teacher to ensure the diversity in terms of race and gender. In addition to that, I had planned to work in different school settings and districts. Hence, I planned to conduct the classroom observations in different types of settings and my
objective was to work in at least one high school, one middle school, one public school, and one private school throughout the study.

I had asked the social studies education faculty in my program to nominate social studies teachers who met these criteria. Each faculty recommended two social studies teachers. One of the participants (Mike: Pseudonym) was nominated by two faculty so that total five social studies teachers were recommended by the faculty. I contacted the nominated teachers through e-mail asked them whether they were interested to participate in this study. Two of them agreed (Mike: Pseudonym and David: Pseudonym) to participate in the study.

Initially I had planned to work with four participants so that I continued to search for social studies teachers who met my selection criteria. As result of this search process, I was able to locate two more social studies teachers. One of them was nominated by a parent whom I was taking a course with at the time. She nominated his son’s social studies teacher as she knew this teacher (Bill: Pseudonym) was using computer-supported instruction in his classroom frequently. The last participant (Kate: Pseudonym) was nominated by one of the district administrators in her school district.

Therefore, the nomination process was completed by means of three different sources for the study: the social studies education faculty, one school administrator, and one parent.

**Participants**

A multi-case approach was applied for this study in order to cut across a variety of cases. Accordingly, “heterogeneous samples” (Ritchie et al., 2003) or “maximum variation sampling” (Patton, 2002) method was employed for the selection of participants.
and settings so that different participants’ perspectives, ideas, and classroom practices can be compared. As can be seen from Table 3.1, two of the selected participant teachers were White males, one of them was an African American male, and the other was a White female. This variety in the teacher’s gender and race provided different perspectives and ideas about the use of computer-supported instruction in the social studies classroom. Also, one of the teachers was teaching in a private school whereas the other three were teaching in public schools which contributed to heterogeneous sampling and provided diverse data about private and public school settings.

In addition to that, as Table 3.1 shows all participant teachers were very experienced. Most of them had more than 20 years of experience. Another important factor about the participant was their academic backgrounds. As can be seen from Table 3.1, the variety in academic background of the participants was also a contributing factor to the heterogeneity of the sample.
<table>
<thead>
<tr>
<th>Name (Pseudonym)</th>
<th>Age</th>
<th>Race</th>
<th>Gender</th>
<th>Years of Teaching</th>
<th>Educational Background</th>
<th>Major</th>
<th>School Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>David</td>
<td>47</td>
<td>White</td>
<td>Male</td>
<td>25</td>
<td>B.S., M.A. and Ph.D. work</td>
<td>Social Studies</td>
<td>Public Middle</td>
</tr>
<tr>
<td>Bill</td>
<td>52</td>
<td>White</td>
<td>Male</td>
<td>22</td>
<td>B.A., M.A. and Ph.D. work</td>
<td>Social Studies</td>
<td>Private Middle</td>
</tr>
<tr>
<td>Mike</td>
<td>43</td>
<td>African American</td>
<td>Male</td>
<td>19</td>
<td>B.A.</td>
<td>Social Studies</td>
<td>Public High</td>
</tr>
<tr>
<td>Kate</td>
<td>46</td>
<td>White</td>
<td>Female</td>
<td>24</td>
<td>B.A., M.Ed.</td>
<td>History</td>
<td>Public Middle</td>
</tr>
</tbody>
</table>

Table 3.1: Demographic information of the participants.

First Meeting with the Participants

I scheduled individual meetings with each participant. Table 3.2 shows the meeting schedule. In these meetings, I explained to each participant the purpose of the

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Place</th>
<th>Name (Pseudonym)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 18, 05 (T)</td>
<td>11:30 am</td>
<td>In school</td>
<td>Mike</td>
</tr>
<tr>
<td>Oct. 20, 05 (R)</td>
<td>1:00 pm</td>
<td>In school</td>
<td>Bill</td>
</tr>
<tr>
<td>Nov. 1, 05 (T)</td>
<td>3:45 pm</td>
<td>In school</td>
<td>Tim</td>
</tr>
<tr>
<td>Jan. 30, 06 (T)</td>
<td>8:00 am</td>
<td>In school</td>
<td>Kate</td>
</tr>
</tbody>
</table>

Table 3.2: First meeting schedule with the participants.
study and the procedures of the data collection including the interview sessions and classroom observations. Each participant teachers were given the “recruitment letter” (Appendix A) which explains the purpose of the study and the rights of the participant within the research process. Then, each participant was asked to sign the “consent letter” (Appendix B) which was the requirement of Internal Review Board. I also asked the participant teachers to complete a demographic questionnaire (Appendix C).

We worked out a classroom observation schedule with each participant. They gave me information about the upcoming units in which they were going to use computer-supported instructional strategies so that I had a general idea about the units before the classroom observations. I also gathered some documents and leaflets about the schools the districts. Each meeting took from 10 to 15 minutes.

Criteria for the Cases

A multi-case studies approach (Bogdan & Biklen, 1998; Merriam, 1998; Yin, 2003) was employed for this study in order to collect data from a variety of perspectives and settings so that the findings from each participant and setting could be compared. Therefore, four cases were studied in this research. According to Bogdan and Biklen (1998), while the homogeneity of cases is important to promote the generalizability or transferability of the findings, the heterogeneity of cases could also be important if the purpose of the research is to compare multiple settings and participants. In this research, the combination of these two approaches was employed. While all cases had some common characteristic, they were also unique in some particular characteristics. Therefore, the following criteria were developed for the cases:

The participant teachers should be
1. Secondary social studies teachers.
2. Knowledgeable in computer-supported instructional strategies.
3. Using computer-supported instruction frequently.
4. Familiar with the constructivist pedagogy.
5. Willing to let me come to their classroom for an extended period of time.

While these common characteristic were satisfied for all cases, there were uniqueness of each case in terms of participant’s and site’s characteristics. For instance, the participant teachers were heterogeneous in terms of race and gender. There were two White male, one African American male, and one White female teacher participated in this study. The heterogeneity of the sites was also satisfied. One public high school, two public middle schools and one private middle school were used as research sites for this study.

Data Collection

In qualitative research, interviewing and participant observation are the most typical data collection techniques (Bogdan & Biklen, 1998; Creswell, 2005; Jones, 2002). The uses of multiple data-collection methods contribute to the trustworthiness of the data. Ideally, qualitative researchers draw on some combination of techniques, to collect data, rather than a single technique (Glesne, 1999). Therefore, the data were collected from interviews and classroom observations for this study.

Interviews

The four participants were interviewed twice during the data collection period. The degree of the structure of the interviews vary in qualitative research (Bogdan & Biklen, 1998). The first interviews were done in one-on-one and in-depth (unstructured)
An in-depth or unstructured interview is often described as a form of conversation with purpose (Legard, Keegan, & Ward, 2003). In this interview form, the researcher “encourages the subject to talk in the area of interest and then probes more deeply, picking up on the topics and issues the respondent initiates” (Bogdan & Biklen, 1998, p.95). The key feature of in-depth interviewing is to combine structure with flexibility (Legard, et al., 2003).

Even in the most unstructured interviews, the researcher will have some sense of themes to be explored during the interview; but with flexibility that best suites the interviewee and allows the researcher to fully probe and explore the research topics (Legard et al., 2003). Thus, a number of open ended questions were developed as a general outline for the first interview sessions (see Appendix D). The first set of interviews served exploratory purposes to understand the teaching philosophy of the participants and their computer use in the classroom.

On the other hand, Bogdan and Biklen (1998) suggest that after the first set of interviews “… you may want to structure interviews more in order to get comparable data across a larger sample or to focus on particular topics that emerged during the preliminary interviews” (p. 95). Thus, the second set of interviews was conducted in a structured format and the interview questions were developed by the researcher after analyzing the transcriptions of the first interviews. All interview sessions were audio taped. Table 3.3 shows the interview schedule with the participants.
### Table 3.3: Interview chart.

<table>
<thead>
<tr>
<th>Name (Pseudonym)</th>
<th>Interview Date−Time</th>
<th>Duration</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>David</td>
<td>Nov. 10, 05−3:45 pm</td>
<td>46 minutes</td>
<td>In school</td>
</tr>
<tr>
<td>Bill</td>
<td>Dec. 06, 05−12:30 pm</td>
<td>33 minutes</td>
<td>In school</td>
</tr>
<tr>
<td>Mike</td>
<td>Dec. 14, 05−11:25 am</td>
<td>20 minutes</td>
<td>In school</td>
</tr>
<tr>
<td>Bill</td>
<td>Jan. 12, 06−12:45 pm</td>
<td>26 minutes</td>
<td>In school</td>
</tr>
<tr>
<td>Mike</td>
<td>Jan. 19, 06−9:30 am</td>
<td>10 minutes</td>
<td>In school</td>
</tr>
<tr>
<td>David</td>
<td>Jan. 24, 06−3:10 pm</td>
<td>39 minutes</td>
<td>In school</td>
</tr>
<tr>
<td>Kate</td>
<td>Jan. 30, 06−8:00 am</td>
<td>13 minutes</td>
<td>In school</td>
</tr>
<tr>
<td>Kate</td>
<td>Feb. 15, 06−10:30 am</td>
<td>24 minutes</td>
<td>In school</td>
</tr>
</tbody>
</table>

*Classroom Observations*

Observation has been characterized as the essential base of all research method in social sciences (Angrosino & Mays de Perez, 2000). Creswell (2005) defines observation as “the process of gathering open-ended, firsthand information by observing people and places at a research site” (p. 211). Observation is a powerful research tool in social sciences when it “(1) serves a formulated research purpose; (2) is planned deliberately; (3) recorded systematically; and (4) subjected to checks and controls on validity and reliability” (Kidder, 1981, p. 264). Based on these criteria, the purpose of observation sessions was to monitor the way the participant teachers employ computer-supported instructional strategies and to explore some hints and evidences about the influence of computer-supported instruction on student learning. Therefore, two different charts for
classroom observation were developed—classroom observation chart (Appendix F) and classroom observation report chart (Appendix G)—in order to record the data more systematically.

Although initially it had been planned to observe each classroom at least for five sessions, the total number of actual classroom observations was around one hundred. As Charmaz (2000) pointed out, the researcher should keep collecting data until the saturation point is reached. Therefore, I increased the number of classroom observation until finding the same data pattern in each individual case. The numbers of classroom observations ranged from 7 to 31 based on the participant’s frequency of computer use and the length of instructional units in which the computer was integrated.

*Classroom observations: David (Pseudonym).*

David’s class was a seventh grade social studies and was observed by the researcher for 31 class periods. One class period was observed every school day between November 3, 2005 and January 5, 2006. Although the class period time was 45 minutes, due to some unplanned or planned activities (Multiple Intelligence Olympics) the class period time was reduced to 35 minutes for a total eight classroom periods. During the classroom observations, handouts and other documents relating the students’ projects were collected.

*Classroom observations: Bill (Pseudonym).*

Bill’s class was a seventh grade American History and observed by the researcher for 28 class periods. Double class period was observed every other day between November 7, 2005 and January 4, 2006. Although the class period time was 42 minutes in the school, due to some unplanned or planned activities such as fire drill and advisory
schedule, the class period time was reduced to 37 minutes for a total three classroom periods. Handouts and other documents relating the students’ projects were collected during the classroom observations.

Classroom observations: Mike (Pseudonym).

Mike’s two different classes were observed as he was applying different computer-supported instructional strategies in both classes. The first class was a 12th grade American Government class and was observed by the researcher for 19 class periods. Each class period was 47 minutes and it met everyday for double periods. As Mike allocated one period a day for student to work on computers, this class was observed by the researcher every school day for one period a day between December 1, 2005 and January 17, 2006.

The American History class (10th grade) period was 47 minutes and met everyday for only one class period. This class was observed for 11 class periods. One class period was observed every school day between December 1, 2005 and December 15, 2005. There were no schedule changes or interruptions in the class time during the classroom observations except fire drill which occurred two times.

Classroom observations: Kate (Pseudonym).

Kate’s eighth grade American History class was observed by the researcher for seven class periods. Each class period was 48 minutes and met everyday. This class was observed by the researcher every school day for one period between February 8, 2006 and February 16, 2006. Fewer classroom observations were conducted in Kate’s classroom due to limited computer availability in her school. She was only allowed to use computers in her classroom five days a month.
Classroom observation notes.

I took field notes during the classroom observations and recorded date and times of each single observation. I recorded many things during classroom observations such as the time of students worked on the computers; the names of computer-supported instructional strategy or software were used; and even sometimes the Web sites visited by the students. I also took notes of informal discussions with teachers during these visits. I did not audio tape these conversation rather I wrote the summary of these conversation with my own words when I found time.

Research Journal

I kept a research journal to write my feelings and ideas about the data collection process and some emergent patterns in the data. I wrote my personal reflection about the classroom observations and interviews in this journal. I also wrote about pattern emerging from the data. This journal was very useful for me in reassessing my data collection strategies and making modifications throughout the data collection process. The following excerpt is an example from my research journal.

Personal:

I have been having a lot of personal informal interviews with Bill. Everyday we talk a lot about the projects students working on and also other general educational stuff. I really enjoy these conversations. They help me a lot to understand the context. I did not have much chance to talk David except during the interview. He is very dedicated to his students in the class time. I am not sure if this difference between these teachers is because of the personality or the school settings.
Observational:

I think Bill really is a constructivist teacher. He planned the activities in a very structured; yet creative and constructivist way. He always take the role of facilitator in the classroom that is why we had a lot of time to talk during the classroom observations because after he give the general instructions he only answered the individual questions coming from the students. I observed several discussions between Bill and his students individually. There were a wide variety of questions from historical facts to technical questions related to computer use. He responded all of them. He appeared to be a very knowledgeable teacher.

I think David also is a constructivist teacher. Yet he focuses a lot on the current social and civic issues such as election stuff. He had students voted for the state issues and compared the election results with the real one. Also, the food drive thing is a good example of community involvement for the students.

Use of CSI does not necessarily very common among teachers who are known to use it. I mean they do not always use it or always depend on it. My impression so far, from observations, these two teachers—Bill and David—use CSI to support teaching social studies in a more constructivist and creative way.

Methodological:

I think I should prepare a classroom observation sheet in order to be able to count the frequency of what happened in the classroom (i.e. CSI activity, schedule change, overhead use, and other stuff). I transcribed David’s first interview. I think I was not able to find much focus in the interview. It is going to many different directions. I think it would be a good idea to have a second interview in a
more structured form. I am going to work on the interview questions. (Research journal: Nov. 27, 2005)

Handouts and Student Projects

Students were given handouts that explained the projects and teacher’s expectations in all observed classrooms. I collected samples of handouts given by teachers to the students during the classroom observations. I dated each document and wrote pseudonym of the participants on the documents. I kept those documents in an individual folder for further analysis.

I also collected selected student projects from each class. Decisions about selection of the projects were made with the consultancy of the participant teachers. I asked the participant teachers to give me three projects based on following criteria (a) one project received a high grade; (b) one project received a medium grade; and (c) one project received a lower grade. I also had asked the teachers to erase the name of the students so that I did not have access to the students’ name.

Data Management

Data management is an important issue for both qualitative and quantitative researchers (Miles & Huberman, 1994). Yet, in qualitative research perhaps data management is more important for the researcher as typically large amount of data coming from several cases or settings in the various forms (interviews, classroom observations, documents, photos, videos etc.) (Miles & Huberman, 1994). According to Merriam (1998), “Some system for organizing and managing data needs to be devised early in your study” (p. 164). Similarly, Miles and Huberman (1994) stated that “data
can easily be miscoded, mislabeled, mislinked, and mislaid without careful data management plans” (p.45).

Therefore, every single element of data sources including interviews, field notes, and documents needs identifying notations to ensure fast accessibility to the data in both the analysis and write-up phase of the research findings (Merriam, 1998; Miles & Huberman, 1994). All the information about the case should be kept together, including interview transcripts, filed notes, reflective memos, records, and other documents related to the case (Merriam, 1998). All this materials should be organized in a way that they are easily retrievable. Yin (2003) calls this organized materials “case study database.”

I used a simple but effective data management system through the data collection. I recorded date and time of each interviews and classroom observations. I also dated every single document I had received during the classroom observations and wrote pseudonym of the participants on the documents. I transcribed all interviews by myself and typed them on Microsoft Word files. I also typed all classroom observations into Word files. I kept an individual folder for each participant. I put interview transcripts, classroom observations notes, research journal, interview and classroom observation logs, and documents collected through classroom observations in a chronological order in those folders. Participants’ names were not identified by name in those files to ensure confidentiality. Pseudonymous were used in all written reports. Only the dissertation advisor and myself had access to the data during the research process.

**Trustworthiness of the Research**

Through the data analysis process, trustworthiness criteria were taken into consideration by the researcher. As Peshkin (1988) points out, a researcher’s subjectivity
is a very important aspect of the trustworthiness. In order to increase trustworthiness of the research, the researcher should be aware of their subjectivity. Peshkin (1988) states that “researchers should systematically identify their subjectivity throughout the course of research” (p. 17). Therefore, in the following section, I will discuss my academic backgrounds to identify my biases that may have effects on my role as the researcher of the study.

Researcher’s Background and Subjectivity

My academic background.

I graduated from Istanbul University, Turkey, in 1995 with a B. A. degree in the field of history. At the same year, I was accepted to the Ancient History program (M. A.) in the Istanbul University Graduate School. After completing my first year in the program, I started my teaching career in 1996 by working as a social studies teacher in a public school in Istanbul. While I was working as a full-time teacher, I continued in the Masters’ program as a part-time student.

During that time I had another opportunity that opened the world of academia to me. This opportunity came in 1999 when I was awarded by a scholarship by the Ministry of National Education after a highly competitive national exam among young teachers in Turkey. As a part of this scholarship program, I attended intensive ESL courses at the Middle East Technical University, Ankara, Turkey, for nine months.

Finally, I was accepted to the social studies education program (M. Ed) at the University of Missouri-Columbia and began the program in January, 2001. After completing the Masters’ degree in the summer of 2002, I started the social studies and global education Ph. D. program at The Ohio State University.
My experiences with computers.

I had very limited experiences with computers during my undergraduate study at Istanbul University between 1991 and 1995. At that time, computers were not a common tool, and the availability of computers was very limited. During my teaching years, I had relatively more experiences with computers. One of the schools I worked in had a computer lab reserved for teachers. I used the computer lab frequently to prepare exam and test questions, and sometimes to find information about lessons. However, my abilities to use the computer and to do research on the Internet were very limited. I even struggled with typing. During that time I purchased my own personal computer.

When I attended ESL courses at the Middle East Technical University, I frequently used their computer lab. Most commonly, I used the lab to check e-mail and to search the Internet for information about the universities in the United States to which I was planning to apply.

Nevertheless, when I first came to the United States my computer use shifted. Until that time, my use of computers mostly served personal purposes. Yet, beginning with my studies at the University of Missouri-Columbia, I had more opportunities to utilize computers for educational and academic purposes as well as for personal purposes. I had two online courses during my study at UMC and one online course at OSU. I also had a number of experiences with online discussion through Blackboard and WebCT systems as parts of face-to-face courses.

I had had a bias against the online courses at the beginning as I thought that online courses were overused in the program at UMC. I believe that online courses cannot replace face-to-face interaction among students, but at the same time I also acknowledge
that online courses can provide an environment for a different form of interaction. I do not intend to discuss which form of interaction is better than the other. Both have strengths and weaknesses. What I would like to discuss is how these experiences have shaped my beliefs and perceptions about the use of computer and Internet technologies for academic and educational purposes.

First, as I pointed out before, I do not believe online classes can replace face-to-face interaction or that newly developed software programs can replace teachers. Therefore, academic programs should not rely completely on online technologies. Rather, computer technologies, at either the K-12 or at college levels, should be considered as aids that can contribute to the instructional process. I also recognize the significant role of computer and Internet technologies in providing students with opportunities for experiencing various cultures through online interaction and acquiring multiple and global perspectives on a wide variety of issues.

In conclusion, at this point it is absurd to envision an educational setting, at either the K-12 or college levels, that does not use computer technologies. The question is: to what degree should computer technologies be used for educational purposes? In order to answer this question, the role and effectiveness of computer technologies should be analyzed and assessed in all educational settings by means of both quantitative and qualitative research studies.

Trustworthiness Criteria

As I stated my beliefs about computer-supported instructional strategies to identify my biases and subjectivity, I also applied a number of trustworthiness methods (Creswell, 1998; Glesne, 1999; Lincon, & Guba, 1985) through the research process in
order to reduce the influence of researcher’s subjectivity and obtain more accurate results:

1. Prolonged engagement and persistent observation is described as spending extended time in the field so that the researcher is able to build trust, learn the culture, and check out misinformation and hunches. I had a total approximately a hundred classroom observations which allowed me to learn about school and classroom cultures and enabled me to understand and analyze my data in a more effective way. For instance, I had frequent informal discussions with Bill during the classroom periods. We talked about various issues in these conversations including, school curriculum, students’ general behavior, and the dress code. I also visited the school library and observed how the students worked there. These informal interviews with Bill and the observations allowed me to acquire more in-depth information about the school culture and understand the school context.

2. Triangulation is the use of multiple data-collection methods, sources, investigators, and/or multiple theoretical perspectives. I used interviews, classroom observations, informal discussions, and my research journal as multiple data sources for this study. I then compared all these data sources through the analyzing and writing processes. When a pattern emerged from the interviews, I searched for vignettes from the classroom observation reports that supported this pattern. Then, I presented the vignettes along with the corresponding quotations. For instance, Mike frequently stated in the interviews that he used the computer as a presentation tool because he believed Americans are mostly visual learners. Thus, I searched in my classroom observation notes and found a vignette that
represents how Mike used the computer as a presentation tool in the classroom. I included this vignette in the findings section of the dissertation. Using this vignette not only contributed to the robustness of my findings but also gave the readers an idea how this tool worked in the classroom context.

3. Peer review and debriefing is an external reflection and input on the work. I worked with two Ph. D. students who were working on their dissertation during my research process including data collection, analyzing and writing the dissertation. One of them was in the elementary education Ph. D. program in a large Midwestern University. The other one was in the science education program at The Ohio State University. I shared my ideas about data analysis strategies and asked for their review. I also shared some of the written parts of the dissertation. They gave me various ideas and insight about the way I should look at my data and the structural designs of the dissertation.

4. Negative-case analysis is a conscious search for negative cases and unconfirming evidence so that the researcher can refine his/her working hypotheses. I did search for negative-cases that did not support my assertions. I analyzed these cases and compared them with the general pattern of the data. I took these cases into consideration while doing cross-case analysis and writing the assertions of the study. When I found a negative case that did not support the assertion, I modified and/or rewrite the assertion. I also presented the negative-cases with the conforming cases and discussed how and why these negative-cases donot support the assertion. While I acknowledged that not all parts of the data supported the
assertions and findings of the study, I did not leave any parts of the data unanalyzed.

5. Member checking is sharing interview transcripts, analytical thoughts, and/ or drafts of the final report with research participants to make sure the participants’ beliefs and ideas are represented accurately. I shared the draft of cases with the participant teachers to make sure the participants’ beliefs and ideas, and classroom observations are represented accurately. I sent each participant a draft copy of their cases either by e-mail or delivering it to their houses and asked their feedback about it. I received their responses either via e-mail or face-to-face interaction. I then re-examine the drafts and made modifications based on the participant teachers’ responses.

6. Rich or thick description is writing that allows the reader to enter the research context. In other words, describing the setting and the participants in detail. I described each participant’s background, school and classroom context in a very detailed way in order to give reader contextual information as much as possible. For instance, I gave a very detailed description of each classroom such as describing, the locations of the door, windows, board, and teacher’s desk, students’ seating plan, and the number and location of the computers in each classroom. This information could be an important factor to explain the way of the computer was used by the students in the classroom. I also gave very detailed information about each school’s computer and software availability. I described the type of computers which were available to each class and tried to be as much as specific I could. I stated the quantity and type of the computers they had and
the type of the Internet connection they used. This information was crucial to reveal how computers were being used in these classrooms.

Data Analysis

Merriam (1998) describes data analysis as “the process of making sense out of data” (p. 178). According to Merriam (1998) “data analysis is a complex process that involves moving back and forth between concrete bits of data and abstracts concepts, between inductive and deductive reasoning, between description and interpretation” (p. 178).

Creswell (2005) points out exploring the data as the first step in data analysis process. Creswell (2005) stated that “A preliminary exploratory analysis in qualitative research consists of exploring the data to obtain sense of data, memoing ideas, thinking about the organization of the data, and considering whether you need more data” (Creswell, 2005, p. 237). Agar (1996) suggests reading the transcripts several times to get a general sense of interviews before breaking them into parts. Through this process writing memos in the margins of the field notes and/or transcripts is a helpful process to explore the data (Creswell, 2005).

Accordingly, I read the classroom observation notes and interview transcriptions as a first step to start to analyze the data. I wrote memos on the transcripts paper and highlighted the possible key quotes. Then, I created a note book with the list of these memos and my hunches for each case. After reading the whole data corpus for the second time, I edited and clarified the list of memos.

The next step through the analyzing the data was coding process. “Coding is the process of segmenting and labeling text to form descriptions and broad themes in the
data” (Creswell, 2005, p.237). Through reading the interview and classroom observation notes, I found “certain words, phrases, pattern, pattern of behaviors, and events” (Bogdan & Biklen, 1998, p.171) repeated and stand out. These emerged patterns were used to develop coding categories. The relevant texts were coded using NVivo (QSR International, 2002; see also “Viva NVivo 7!”, 2005) software program.

A code book was developed through the process. “Codebooks are simply organized lists of codes” (Ryan & Bernard, 2000, p.781). Through developing the code book or “families or kinds of codes” (Bogdan & Biklen, 1998), a detailed description for each code were provided. (Ryan & Bernard, 2000). Nevertheless, some codes changed and developed through the data analysis process. As Miles and Huberman (1994) point out, some codes do not fit with field material and research questions or other codes sometime flourish too much so that they need to be broken down to subcodes. In both cases, codes have to be revised and relabeled. Accordingly, I revised my codebook or list of codes throughout the data analysis process. Sometimes I had to merge the codes or break them down to subcodes.

Using NVivo (QSR International, 2002) software program, I reduced the list of the codes to a smaller number, grouped similar codes to construct general themes that represent the pattern of the data. Themes or categories “are similar codes aggregated together to form a major idea in the database” (Creswell, 2005, p. 239). According to Merriam (1998), the challenge of the data analysis is to construct themes or categories that capture the pattern of all cases. Table 3.4 provides a list of codes created throughout the data analysis process.
<table>
<thead>
<tr>
<th>Philosophy</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher’s role</td>
<td>Computer</td>
</tr>
<tr>
<td>Curriculum standards</td>
<td>Software</td>
</tr>
<tr>
<td>Constructivism_skills</td>
<td>Common use of computer</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>Microsoft Word/Excel</td>
</tr>
<tr>
<td>Problem-solving</td>
<td>Microsoft PowerPoint</td>
</tr>
<tr>
<td>Decision-making</td>
<td>Internet search</td>
</tr>
<tr>
<td>Views of computer</td>
<td>Validity of information</td>
</tr>
<tr>
<td>CSI definition</td>
<td>Filters/Blocks</td>
</tr>
<tr>
<td>Advantages of computer use</td>
<td>School e-mail</td>
</tr>
<tr>
<td>Access</td>
<td>Web Quest</td>
</tr>
<tr>
<td>Sharing information</td>
<td>Web Page</td>
</tr>
<tr>
<td>Editing</td>
<td>Virtual field trip</td>
</tr>
<tr>
<td>Perspectives/cultures</td>
<td>Tele-collaboration</td>
</tr>
<tr>
<td>Motivational tool</td>
<td>Software/Multimedia</td>
</tr>
<tr>
<td>Limitations of computer use</td>
<td>Simulations/Games</td>
</tr>
<tr>
<td>Disadvantages of computer use</td>
<td>School Portal</td>
</tr>
</tbody>
</table>

**Table 3.4: List of codes.**

Inductive analysis approach was used to capture the pattern of the data. Thus, from direct observation of specific cases a general rule or pattern was formed (Patton, 2002). Once themes and patterns appeared from the data, an analytic outline was built for the study based on the coding and categorization.
Then, as Wolcott (2001) suggests, I created a detailed written outline or list of major topics with a coherent sequence to write the findings of my data. I used the same outline for all cases to make the data representation consistent. After writing all cases, through interpreting the analytic outline, I compared all cases to build the assertions of the study.

Summary

This chapter had described the methodological design of the study. First, I introduced the constructivist theory as the theoretical framework for this research. I gave information about different types of constructivist approaches and explained the connection between the principles of the constructivist theory and computer use in social studies education.

Then, I introduced the multi-case study approach as the methodology of this research study. I gave information about how the sites and participants were selected and briefly described the sites and the participants. I also presented the data collection methods were used through the study. Interviews and classroom observations were the main data collection sources. I gave specific information about date and time of interviews and classroom observations. In addition, I explained the data management methods used in the study. I provided examples from my data including my research journal.

I also presented the trustworthiness criteria used throughout the research process with the researcher’s subjectivity. I wrote about my background and experiences with computers and my possible biases toward the use of computer technologies in educational
settings. Finally, at the end of this chapter, I introduced my data analysis strategies and wrote about coding and categorizing process I had used in this research. I presented the list of codes used in this research in order to provide reader how I proceed from the raw data to the analysis.

In the next chapter, I will present the findings of this research. First, I will begin to write each case individually and present detailed contextual information along with findings of the data. Then, I will do cross-case analysis and compare all cases to construct the general assertions of the study.
CHAPTER 4

FINDINGS

Introduction

The purpose of this study is to examine the use of computer-supported instructional strategies in social studies education and to investigate the influence of these strategies on the principles of constructivist pedagogy in social studies curricula. In order to explore this phenomenon, it is essential to identify the current computer-supported instructional strategies used by social studies teachers. In addition, exploring the use of computer-supported instruction and the compatibility of the computer-supported instruction with constructivist principles was also crucial to this research topic. Therefore, following research questions were generated:

1. What are the current computer-supported instructional strategies used in the social studies classroom? How do social studies teachers use computer-supported instruction in their classrooms?
2. What factors are influencing social studies teachers’ use of computer-supported instruction in their classroom?
3. How does computer-supported instruction in social studies curriculum influence the principles of constructivist pedagogy?
A multi-case studies approach (Bogdan & Biklen, 1998; Merriam, 1998; Yin, 2003) was used for this study in order to investigate these research questions, and collect data from different perspectives and settings. Thus, findings from multiple settings could be compared within this study. Four social studies teachers who use computer-supported instructional strategies frequently in their teaching practices were selected for this study. The data were collected from interviews, classroom observations, and selected student projects. After the data collection process ended, I began to analyze the data by coding and categorizing emerged patterns and themes.

In multi-case study, there are two stages defined for the analysis – the within-case analysis and cross-case analysis (Merriam, 1998). During the within-case analysis each case is treated as a comprehensive case so that the researcher can learn as much as possible about the contextual variables (Merriam, 1998). In this study this method was applied and every single case was comprehensively analyzed.

First, I introduced the participants and presented information about their academic background, teaching experiences, and their professional development activities which may have influences on shaping these teachers’ beliefs about teaching and learning, and computer-supported instruction in social studies education.

Then, I presented school and classroom context. I provided statistical information about the students and teachers and described the classrooms in a very detailed way. I stated many things about the classroom context including the number of the students, physical description of the classrooms, the teachers’ and students’ seating plan, location of board and other equipments in the classroom. I also described the classroom walls and gave brief descriptions of the materials on the walls of each classroom. This information
concerning classrooms context may reveal some indications about the participant teachers’ beliefs concerning teaching and learning, and computer-supported instruction.

Next, I presented the data findings concerning computer and software availability. I stated the number of computers in each classroom and described how they were used by the students and teachers. I also provided information about available computer labs in the schools in terms of the quantity of the computers and printers, and the type of Internet connection. In addition, I presented the data finding concerning software availability in these schools. I stated the participant teachers’ needs for the software programs and named software programs they would like to see in their schools.

Presenting the contextual information in order to understand the dynamics and uniqueness of each case, I began to focus on each participant’s beliefs about teaching and learning and their views about computer use in social studies education. I provided quotations from the interviews and presented evidences from the classroom observations that show the participant teachers’ beliefs about teaching and learning in social studies which can indicate how these teachers use computer-supported instructional strategies in their classrooms.

Finally, I presented the data findings on computer-supported instructional strategies were used in the classrooms observed. First, I introduced the instructional unit in which computer-supported instruction was used. Then, I presented how each computer-supported instructional strategy was used during the units and the classroom observation periods. I used quotations from the interviews and supported these with vignettes from the classroom observation reports to show how these strategies were used in these classrooms and to establish a connection between the participant teachers’ views
about computer-supported instruction and their classroom practices. I also summarized
the findings at the end of each case and evaluated the findings.

Once within-case analysis is complete, cross-case analysis begins. In a cross-case
analysis, the researcher attempts “to build a general explanation that fits each of the
individual cases, even though the cases will vary in their details” (Yin, 2003, p. 121).
Therefore, after the contextual variables and data findings for each single case are
individually described, I will apply the technique of cross-case analysis and compare all
cases to find some patterns and build abstractions that apply across all the cases
(Merriam, 1998). I will also compare all cases within the assertions and refer to the
corresponding literature in the field.

Teacher # 1: David (Pseudonym)

David’s Background and Education

David was a 47 year old White male social studies teacher with 25 years of
teaching experience. He completed his bachelor’s degree at a Midwestern University in
the field of secondary social studies education. He also earned a Master of Arts degree in
the field of social studies from a large Midwestern University, and at the time of the
study he was a doctoral candidate in the social studies program at the same institution.
David also had a teaching associate position at the same university and taught methods
courses to undergraduate social studies students. He had a wide range of teaching
experiences in different grade levels from grade 7 to 12. He mostly taught in suburban
areas. At the onset of the study, he was teaching seventh grade social studies.
School Context

The school was a suburban middle school in a Midwestern state. The population of the school was 396 in the 2004-2005 school year. During this school year, the ethnicity of the student population was 88.67 % White, 3.4 % Black, and 4.3 % Asian. Gender of the students almost was equally divided (49.5 % female and 50.5 % male). There were 31 teachers in the school. The majority of the teachers were White female (63.2 %) and overall 95.2 % of the teachers were White. There were three social studies teachers in the school; one of whom White female and two White males.

The school is a one story building located near a residential area. Some students were able to walk to school although most of them had to take school buses. Parents’ social economic status was upper middle class.

Classroom Context

This seventh grade social studies class had 12 boys and 8 girls all of whom were White. Each class period lasted 45 minutes and met everyday. Each student had an individual desk and students were sitting in a circle position so that they could see each other. The entrance door was at the west corner of the classroom. David’s desk was located at the east corner of the classroom, just opposite the door. So, when he sat on his desk, some students could not face him due to the curricular arrangement of the classroom. In order to face all students, he usually sat right in front of the blackboard which was located on the south side of the wall. The room only had windows at the east side. Yet, the windows almost covered the entire north side of the wall. For instructional purposes, there were three desktop computers, two TVs, one overhead projector, and an equipment for the laserdisc in the classroom. One of the computer monitors, the overhead
projector and some other instructional tools had been purchased by David himself. On the classroom wall, there were an assortment of maps, posters, and pictures most created by the teacher and students concerning Asia, the Middle East, and other places from around the world. Also there were family portraits from all over the world that showed the way of life of these people such as houses, clothing, and so forth.

**Computer and Software Availability**

There were three desktop computers in the classroom for instructional purposes. There was one computer lab in the school building consisting of 30 Macintosh desktop computers and a laser printer. Also there was one mobile lab station with 25 Macintosh laptop computers and one printer. According to David, the access to the lab was an issue although the numbers of the computers were sufficient. David stated that

One of the other issues here is access to the lab… We have a lab and … like the last four times I tried to get in … it’s booked solid so what I’d do is I’ll attend like all next week … the last three days of next week I’ll have the computer lab. So we’ll be back in… but the week after that and the week after that and the week after that is totally logged in and I can’t get into the computer lab. (Nov. 10, 2005)

Along with the availability of the computer lab, David was facing problems with the software programs in his school. In the first interview, he mentioned that a lot of the software programs that he had last year were taken out of the building. According to David, the software programs taken out of the building were programs that could support students’ creation and construction. He stated that
There was a much better program to do graphic representation, to modify pictures to use those images then in other software programs… They took away the DVD writer where we could actually make our own film and … or music or sound. They took away a program that allowed me to show them how to create slides. That was a really good program… that was an introduction to how to do Web design. That’s gone. They just did not want support it … (Nov. 10, 05)

A database program was also one of the programs that were no longer supported by the school districts and David was highly frustrated by this situation. David stated that “It is very sad and it drives me crazy. Because my question is what good educational reason is that we no longer have access to databases?” (Nov. 10, 05). Despite the level of frustration with the databases, he still was seeking ways to use this strategy in his instruction. In the same interview he also stated that

So, now what do I do? I make my own databases at home. I do print outs in different formats and they [students] do [inaudible] of visual piece. But it’s the manipulation of it is equally important and that parts gone. (Nov. 10, 05)

In conclusion, although the number of computers seemed to be adequate in David’s school, he was facing problems with the availability of computers and software programs. According to David, limited access to the lab and the inadequacy of software programs were the two main problems that should be immediately solved.

David’s Beliefs about Teaching and Learning in Social Studies

David described himself as a constructivist teacher without any hesitation. He clearly stated his beliefs about constructivist pedagogy and he was very committed to that belief.
Okay. If you’re talk about styles of teaching, yeah I am a constructivist. Straight out. I am not a behaviorist, I am a constructivist. I’ve had other colleagues of mine and we tease about that all the time. The way we talk about it is… it is our job as a middle school teacher to have… to trouble kids five year old the notion of the world. (Nov. 10, 05)

In both interviews, David indicated a number of times how much he valued multiple perspectives and different points of view in social studies education. In fact, in the second interview, David clearly expressed the importance of multiple perspectives for the students. David stated that

… I think it’s important that they [students] look at multiple perspectives… to not only look at what they believe… they think they believe but also to find out perspectives of others and at least intellectually appreciate what that point of view is. It doesn’t mean you have to agree with it because… I mean then we’re in doctrinination kind of things and I think that’s dangerous coming from any direction. (Jan. 24, 06)

In this frame, David also underlined the necessary skills that students should acquire in modern social studies in order to process and analyze multiple perspectives. According to him, “managing and interpreting information … is one of the biggest skills… for social studies…” (Jan. 24, 06) in the constructivist frame. In the second interview, David stated that “I think a big part of social studies right now is having … manage information and skills in which you are able to converse with your ideas …” (Jan. 24, 06).
It was clear that David’s commitment to exposing students to different perspectives was very high. Along with that he saw the value of critical thinking in social studies for students as a way of analyzing information and multiple perspectives. David considered the goal of social studies for students “is to become critical thinker” (Jan. 24, 06).

As a teacher, David assumed the role of a facilitator and coach in his classroom. The classroom observations revealed that he usually gave instruction to the students about their tasks and let them work individually or within groups. Yet, he was a very dedicated teacher and his commitment to his students was at a very high level. The classroom observations also showed that he gave individual attention to each student during their studies and he visited every single student in the classroom or the computer lab at least twice in one period. In these visits he assisted them with the content of their projects as well as computer and software related technical issues.

David’s View about Computer Use in the Classroom

David viewed the computer as another instructional tool that could be used in the classroom. In the first interview he stated that “Well… it is a tool. It’s one of the tools and it’s an important tool because it’s not going away” (Nov. 10, 05). According to David, there were three main ways to use computer technology in the classroom: (a) information gathering; (b) use in the classroom (presentation tool); and (c) manipulated by students (use of students) (Informal discussion: Nov 28, 05).

Although David considered computers only as one of the instructional tools, he cited the great benefits of computer and Internet technologies in the classroom especially in terms of the accessing to information and providing various perspectives and ideas
from all over the world. According to David, “the computers actually allowed us to have access to a lot of that information, a lot faster than even a newspaper” (Nov. 10, 05). He highlighted the importance of the computer as being a catalysis to expose students with different points of view and “help kids manage information and to manage ideas” (Nov. 10, 05). David stated that

It [computer] opens things up. I mean…[if] the whole way that constructivist point of view is going to work, it’s not two points of view. It’s a lot more points of view than that. And the thing the computer allows you to do quickly is to gain access to these other points of view. (Nov. 10, 05)

As David believed in significance of multiple perspectives and different points of view in social studies education, he underlined the significant role of the computers in terms of providing faster and easier access to information, primary sources and points of views. He stated that

I think … it’s faster and often times easier to identify points of view… if you’ve trained kids as to what to look for. (Jan. 24, 06) … because it gives you access to information you couldn’t get any other way. I mean you can get the primary sources anywhere on the planet using your computer. … In fact, it gives you access to information and ideas… you couldn’t have it… let’s say in a traditional library because you couldn’t afford it… or you may not even have access to it in the first place. … (Nov. 10, 05)

According to David, when computer technologies are used as a motivational tool for the students, it has a great advantage over traditional teaching methods. David’s
following example showed how computer technology in the classroom can be used to motivate students and get them excited about their study.

… Well I use it as a motivational tool… At the end of the school year I teach them how to do basic HTML coding. So they actually design their own WebPages and it demystifies Web sites for kids because then they can go into the source codes and actually read and have a general understanding of how is set up. …for seventh graders … they’re intrigued by how things work. So, I use that angle of it to actually move them into … we do a whole piece on international exploration and… different points of view of what exploration means and they create a Web site that share some of that information. So, I use the HTML skill as a hook to get them excited about or initially interested. (Nov. 10, 05)

Another advantage cited by David was the editing features of several software programs such as Microsoft Word and Excel. According to David, this feature not only made things easier for students but also let them create better products. He stated that … when they [students] write their paper, they don’t want to manually rewrite the entire thing and they’ll fight you on… how much of it they’ll actually relook at, revisit, and reedit. But, if it’s on a computer [it’s] much easier… (Nov. 10, 05)

While David cited a number of great benefits and advantages of using computer technologies in the classroom, he did not mention many downfalls or negative effects of computer use on the students. His main concern about computer use in the classroom could be summarized with these words “They [students] don’t want to open a book. They just want to go to a computer” (Jan. 24, 06). David did not want his students to “…think the only way to find information is through a computer” (Jan. 24, 06), rather he would
like to see his students to seek for multiple sources of information and preferably to use a combination of Internet and print sources. According to David, relying on Internet sources could be a danger for students due to the uncertain quality and reliability of the sources; and therefore, students should be taught to treat Internet sources cautiously.

David’s preferences to use computer-supported instruction over other methods were mostly evaluated based on the advantages of using computer for a specific topic or unit in his classroom. Both interviews indicated that David preferred to use the computer when he could not teach that unit or lesson any other way.

In conclusion, David recognized advantages of computer technology in social studies in accordance with his teaching philosophy which was based upon acquiring multiple perspectives and cultural values. On the other hand, he did not necessarily want to rely on computer technology and use it every single time.

David’s Use of Computer-Supported Instruction

Introduction

The interviews and classroom observations indicated that David integrated the computer in his teaching or “… have the kids working directly on a computer as a part of the class … five or six times a month” (Nov. 10, 05). David used a wide range of computer-supported instructional strategies in his teaching. When he was asked about the most commonly used instructional strategies in his classroom he replied “The most common use for me would be the Internet, word processing. It would be for research. It is the vast majority how I use the computer” (Nov. 10, 05). Furthermore, he cited Database development, Web Page development and use of software programs such as Microsoft Excel and Power Point, and Hyperstudio (Sunburst Technology, 2003) as other
computer-supported instructional strategies in his classroom. In addition, he mentioned a tele-collaboration activity he had been involved in which his students got connected with their counterparts in Ukraine, Poland, and Russia. Although David had experiences with a broad range of computer-supported instructional strategies, only some of them were observed during the classroom observations. Internet searches, the applications of software programs such as Microsoft Word and Power Point were the computer uses observed by the researcher.

The Project

In this computer-supported project students were to do research on a historical figure and discover three positive character traits they have in common. David assigned the historical figure to each student due to observations he had made. The students were to try and discover why David had assigned this particular historical person to them. They had to find at least four sources of information. The requirements were to have at least two Internet sources and one print source. Another source of information was the personal interviews. Students were supposed to have totally six interviews- three with their peers and three with adults- about the historical figures.

In order to complete the assignment, the students were supposed to write an essay in which they compared themselves to the historical figures. In the essay, students were supposed to cite their resources in a certain format given by David. He gave them a handout consisting of citation examples for variety forms of references including, books, articles, Internet sources, and even personal communications.

Another part of the assignment was to present their findings in a secondary way beyond the essay. For this part, students created projects in which they compared
themselves to the historical figures. The type of project was optional. Students were given a choice of doing either a computer-supported project, such as PowerPoint presentation or a project that involved art and graphical work such as creating music, a sculpture or a game.

The students used the computer lab for Internet search and the school library for print resources in order to find information for their essays and projects. Students used the computer lab for 8 class periods and spent a total of 12 class periods to complete the project.

*Internet Search*

The interviews and classroom observations showed that Internet searches were the most common use of the computer in David’s classroom. He used the Internet mostly for its reference materials. As previously mentioned, David was an advocate for multiculturalism and multiple perspectives and he deeply believed in presenting students with different points of view and ideas. Therefore, the Internet was a great tool for him in terms of providing a vast amount of resources on different perspectives. The following excerpt shows how David viewed the role of the Internet in terms of having students involved with diverse perspectives.

It’s [Internet] nice reference area and a good way to look at different points of view and to look at different ideas and I want them to have enough sources that messes their whole idea up because they’re going to find sources disagree with one another. (Jan. 24, 06)

During the classroom observations students used the Internet for a minimum of eight class periods for this project. The Google search engine was the most common
search engine used among the students. Students found text resources about historical figures that they had chosen. They used that information to write their essay as well as create their project. Many of the students searched on the Internet for pictures of their historical figure. As David pointed out during the Internet search, students encountered many resources that provided different points of view about the historical figures they had chosen.

Other than the search features, the Internet was utilized in a different way in David’s classroom. During the classroom observation there was an election on five state issues. On the school Web site they created a link for the students’ ballot and students voted for or against the issues. The participation was very high in the school. All of the students in the class voted that day. Then, the result of the election was shared through the district website. The next day, David shared the election results with the students and compared it to the real election results.

**Word Processing**

During the classroom observation Microsoft Word was used extensively among the students. Many students used the program during Internet searches. The Word program was used by students as a notebook for note taking. Most of students used copy and paste features of the program when they got information from Internet resources. Even URL’s were copied on Word documents by some students. They used those documents like a “scratch paper” while searching and finding information from the Internet. They put any information relevant to their projects on these Word documents. Then, they read, filtered, and edited the information before they wrote their essays and create their projects.
Students also typed their reference lists for this project using Microsoft Word. They were supposed to create a reference list for the project and David was very strict about the format they were using. He gave them a sheet that showed how references were supposed to be written on the reference list and cited in papers. Students had to use the editing features of the program many times as they corrected their reference lists.

Computer as a Presentation Tool

David rarely used the computer for presentation purposes during the classroom observations. He usually preferred to use the overhead projector with transparencies for that purpose. However, one time he used the computer for a presentation for this project. He used the computer in order to show the students how to write a reference list based on the format he had given them. He used one of the students’ reference list as an example and projected it onto the wall. It was a Microsoft Word document and he corrected the mistakes on the paper using the computer and this software program so that students could see the proper format for the references. Although in the interview he mentioned that he used “it [computer] for instruction through PowerPoint presentations” (Nov. 10, 05) he did not use it with PowerPoint during the classroom observations.

PowerPoint

PowerPoint was another software program used in David’s classroom. Almost half of the students preferred to do PowerPoint presentation for this project. The presentations were mostly 4 to 6 slides. The first slide was the title page. The second and third slide were about the historical figures they studied and the following slide was about themselves. The next slide was a comparison of themselves with the historical figures, and the final slide was the bibliography which had been created based on the format
given them by David. When students created the slides they used the information they had gathered through Internet searches, print sources, and the personal interviews. Most of them used the notes they took on Microsoft Word documents from Internet searches.

*School Local Area Network*

David’s school had a local area network and each student had a personal account to access the network. David could upload information such as handouts, source sheets, or any other documents that may help students with their projects, and they could download that information using their account name and password. During this project students downloaded a document created by David and used it to write their reference list. The document was an example that showed how to write a bibliography for the project. Students used the network again during the project to submit their essays which was a comparison between the historical figures and themselves.

*Conclusion/Evaluation*

David is a social studies teacher who believed in constructivist pedagogy and the significance of cultural diversity and multiple perspectives within modern social studies. He highly valued the role of multiple perspectives in helping students to evaluate and analyze information and, ultimately, to be critical thinkers. He saw the role of computer and Internet technologies crucial in providing students with multiple perspectives.

David believed that the computer was a great instructional tool which enabled easier and faster access to different perspectives and provided opportunities for students to improve their work. While David acknowledged the great benefits of computer technologies, he did not differentiate the computer from any other instructional tools in the classroom. This was the reason why he did not integrate the computer in his
classroom for every single unit. He used the computer when it provided “a faster and deeper connection” (Nov. 10, 05) to information and points of views could not be found in traditional library or text materials. This next excerpt summarized David’s view about the computer “… Is it [computer] a panacea to everything? ‘No’. Is it another helpful tool? ‘Yeah’” (Nov. 10, 05).

He applied various computer-supported instructional strategies and had broad knowledge about computer technologies and software programs. The most frequently used computer-supported instructional strategies in David’s classroom were Internet searches, Database development, Web Page development, Tele-collaboration and use of software programs such as Microsoft Word, Excel, and PowerPoint, and Hyperstudio (Sunburst Technology, 2003). Although David had experiences with a broad range of computer-supported instructional strategies, his focus was on the use of the Internet, Microsoft Word, and PowerPoint during the classroom observation.

David’s use of computer-supported instruction in the classroom was highly affected by the lack of computer and software availability in his school. Although the number of computers and the Internet access in the American schools have been increasing rapidly (see NCES, 2003), the interviews and classroom observations indicated that computer and software adequacy was still an issue in David’s school. Yet, David still was able to use computers in the classroom when they were available. The project, discussed previously, was the activity in which the computer was extensively utilized by the students. The activity was very well-structured and planned. Thus, it was easy for the students to follow the instruction and complete all requirements for the project. While the structure was very clear for the students, they had the flexibility to use
any sources they found on the Internet or other sources. Thus, students were responsible for creation of the project on their own as individuals; but, had to follow a certain format.

The students were active participants during the whole project. They did search on the Internet and other print sources and created the project by themselves. David only helped them with the format of their work and technical difficulties encountered with the computer. He assumed a role of facilitator teacher in the classroom and let the students be responsible for their own learning.

The students found many resources from the Internet about the historical figures they were studying. As many studies (see Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002; Hicks & Ewing, 2003; Larson, 1999; Shiveley & VanFossen, 1999) pointed out, in this class students gathered information, evaluated, analyzed, and synthesized the information and made decisions about it through Internet searches.

When the students wrote essays that compared themselves with the historical figures, they had to construct a connection between themselves and the figures. It required not only a critical evaluation of the resources to come up with a conclusion about the figures, but also self-reflection for students. Thus, it seems that this project was an opportunity for students to evaluate their real-life within the project when they constructed their knowledge about the historical figures through analyzing and synthesizing the resources.

I believe that the instructional design for the project promoted the principles of constructivist pedagogy as students were active participants in the learning process and their prior knowledge/real-life experiences were implemented. Furthermore, students
constructed their own knowledge about the figures through evaluating and critically analyzing multiple data sources and made decisions about the information.

Teacher #2: Bill (Pseudonym)

*Bill’s Background and Education*

Bill was a 52 years old White male social studies teacher with 22 years teaching experience. He completed his Bachelor’s and Master of Arts degrees at a large Midwestern University in the field of social studies education. He also took several graduate courses and passed his doctoral candidacy exam in the social studies program at the same institution. However, he did not complete the Ph. D. program. He had a wide range of teaching experiences in different grade levels and course of study. Ancient History, World Geography, Study Skills and Modern World History were among the most current courses he had taught. Bill also had international teaching experiences. He taught in an international school in Tokyo-Japan between 1981 and 1986 and in an international school in Caracas-Venezuela between 1992-1995 and 1998-2001. Bill also held teaching associate position during his doctoral study and taught methods courses to undergraduate social studies students. At the onset of the study, Bill was teaching the sixth grade Study Skill and the seventh grade American History courses in an independent private school in a Midwestern state. Along with that he was the subject area coordinator for the middle school social studies and also served on the admissions and diversity committees.

*School Context*

The school was located in a large city in a Midwestern state. This was an independent private K-12 school serving 619 students. Student population was diverse in
terms of race and also achievement level. There were 82 teachers a few of whom were part time. The school’s tuition ranged from $ 7,700 to $15,800 for an academic year based on grade level. There were three social studies teachers in this school - two White male and one White female.

The school is a one story building located in a residential area. Since it was a private school students came from various places and there was not a bus service provided for students. Therefore, all of the students came to school with their parents or relatives.

There was a dress code for students. Although it was not a strict dress code it was enforced by the school administrators. I was told the dress code was supported by the parents and considered as a discipline aspect of the school. Considering the high tuition expenses, parents’ social economic status was high.

**Classroom Context**

This class was a seventh grade American History class with a population of 10 boys and 9 girls. There were seven African American students—four girls and three boys. Each class period lasted 42 minutes and met every other day for a double period.

Each student had an individual desk and students were sitting in a rectangle position so that they could see each other. The entrance door was at the west corner of the classroom. There were two teacher desks because Bill shared the same classroom with another social studies teacher. His desk was at the northeast corner and at the back side of the classroom relative to the classroom door. So, when he sat on his desk four students could not face him due to the rectangle sitting position. The room only had windows at the north side. Yet; the windows almost covered the entire north side wall. The board was
located on the west wall and there was a Smart Board attached to it in the middle. Therefore, almost half of the board was unusable.

There were four desktop computers located on the west side of the classroom for the use of the students. Also there were one DVD player, and one laptop computer connected to the Smart Board for Bill to use. There were many maps, posters, and pictures about Asia, the Middle East, and other places from around the world on the classroom walls. Most of them represented former students’ works.

Computer and Software Availability

There were four desktop computers in the classroom for the use of the students. Also there was one laptop computer connected to the Smart Board for the instructional purposes. There was one DVD player which connected to the Smart Board. Smart board is an interactive/touch-sensitive board that allows the user not only to utilize markers and an eraser similar to chalk and whiteboard, but also to write notes and comments in a format that could be saved from page to page (University of Southern California, Distance Education Network, n.d.). In addition to that it could be used to display visual effects in many forms including PowerPoint presentations, DVDs or even Web sites. The Smart Board was being used mostly as a presentation tool in the classroom.

There was a wireless Internet connection and print server so that any laptop computer in the building had the ability to connect to the Internet and print documents through the printer which was located in the computer lab. Also, there were 20 PC desktop computers (Dell) in the computer lab.

According to Bill, although the computer availability in the school was sufficient, it would be better if improved. In the first interview Bill stated that
It is sufficient. It is not as good as I would like, obvious. I would love to have each kid with a laptop and… we have discussed that … within may be in next four – five years, there would be a laptop with every student in which case then you’re not at a situation where you have to send kids to the library and some of them to another classroom; some of them in this room; some of them to computer lab to share. But as in a general sense, there are enough computers available almost all the time. So that I haven’t really felt … that I haven’t been able to accomplish something because the resources were not there. (Dec. 6, 05)

In this school it was not uncommon for students to use computers outside the computer lab such as the school library, even other classrooms. Sometimes, two different classes had to use the computer lab during the same class period. During the classroom observation in one occasion two different classes used the computer lab at the same period which caused a shortage of computers. In that case students were allowed to use any available computer in the school either in the library or in other classrooms.

The software availability in the school also seemed to be sufficient. When Bill was asked about the availability of software programs in his school, he replied “At this stage, yes. … school has invested quite a bit money … in software … So that for our purposes here, I would say that we are in pretty good situation” (Dec. 06, 05). However, in the same interview Bill indicated that he would like to have some version of Inspiration (Helfgott & Westhaver, 2006) software program which was a program for webbing and note taking. Although the program has not brought up to his school yet, he was happy and willing to work with what they already had in the school.
Bill’s Beliefs about Teaching and Learning in Social Studies

Bill believed that “when individuals construct their knowledge that knowledge becomes obviously more personal and more meaningful” (Dec. 06, 05) so that in his words he “buys in to the concept of the construction of knowledge” (Dec. 06, 05). Nevertheless, Bill had a broad perspective about educational theories. According to Bill, all educational theories have their weaknesses and strengths so that it is not a good idea to stick only with one theory and use instructional strategies based on this theory. He also acknowledged the importance of different learning styles among students. Yet, he indicated that in real-life situations an individual may have to adjust for a different learning style. He also exemplified a business world situation in which an individual might have to work with people who had different learning styles or understandings from his/her own. Consequently, an individual had to adjust to different learning styles and empathize with their coworkers in order to be more successful in the business. Therefore, according to Bill, in education students should be exposed to various teaching styles that accommodate diverse learning styles so that students could be more prepared for real-life situations such as the business world. When he was asked about his teaching philosophy Bill stated that

So, in terms of my teaching philosophy I want kids to be able to think. I want them to be able to identify different source of information. I want them to be able to deal with different perspectives and with the information available on the Internet. (Dec. 6, 05)

Bill gave a special importance to students’ involvement with different sources of information that represent different perspectives. He indicated that “So as far as I am
concerned I want kids to be able to consume information; to be users of information; to have experiences accessing information, and making decisions about information” (Dec. 06, 05). Bill’s commitment in his classroom to multiple perspectives and different points of view was at a very high level. In the same interview he also indicated that

I try to do as much as possible to create situations in which students are dealing with different ideas, coming up with their own okay… versions. I tend to do more divergent rather than convergent … types of questions. I tend to open things up in terms of discussion and view points … trying to as much as possible … help students in constructing their knowledge. (Dec. 06, 05)

In both interviews, Bill expressed a number of times his commitment to cultural diversity with ties to multiple perspectives. The next excerpt was a good example that showed how he perceived his role as a teacher in helping students to appreciate different perspectives and cultural diversity, and develop their critical thinking skills, in his words “to open their eyes”.

… what I am trying to do is to open the eyes of the students to expose them to as many different perspectives as possible and to … create an environment where… they have the tools to be able… to be successful. So that a lot of what I do as a middle school teacher is to teach process; to teach them the skills; and again specifically here critical thinking, the use of information, gathering information. … and even to sixth graders, they are learning to okay… gather information organize it, take notes, but also to analyze information, compare and contrast, synthesize… and evaluate. So, I am seeing my role as a teacher as being one of developing critical skills that are going to be important for them as they move up
into the next levels and also to expose them to the content that is going to open up the world for them; allow them to be able appreciate a little bit more differences that they’ll encounter in their lives and to… I hope at least to establish some kind of appreciation for cultural diversity. (Dec. 06, 05)

Bill recognized the significance of preparing students for the real-world within the frame of modern social studies education and he underlined the importance of focusing on world exploration for students rather than focusing only on their routine surroundings. He pointed out that

But I also want them to deal within the real-world… to deal in a realistic way and to be prepared for something that they will encounter later. So, what I am looking at… what I think social studies is all about today… I think it should be an out world exploration rather than in world. It should be looking at others rather than merely focusing on ourselves. (Dec. 06, 05)

According to Bill, one of the most important skills in social studies was to teach students how to process and analyze information along with perceptions and points of view and synthesize information and points of view so that they could create their own information. Bill also pointed out that the concept of culture was another important aspect of modern social studies education. Bill stated that

… well first I think the most important skill would be to be able to discern… perceptions and points of view, to be able to understand perspective, to able to take perspective, and to be able to understand it. One of the critical concepts of the social studies, as far as I am concerned, is understanding the concept of the culture and how it permeates to all the other subjects. (Dec. 06, 05)
As a teacher, Bill assumed the role of a facilitator and coach in his classroom. The classroom observations revealed that he usually gave instructions to the students about their task and let them work individually or within their groups. Yet, he was always available for student questions regarding their projects as well as some technical issues. The projects were well-structured and the instructions were very clear. Thus, it was easy to follow for the students. Nevertheless, when students struggled with a problem, he was always able to give them valuable ideas and instructions that would help them overcome the problems.

In conclusion, while Bill believed in the concept of “construction knowledge” and constructivist theory, he also believed in the use of multiple instructional strategies based upon different educational theories. According to him, since the real-world does not function based on the constructivist theory or any other single theory, education could prepare an individual for the real-world only when multiple educational theories and learning styles are appreciated in schools. Bill was committed to multiple perspectives and cultural diversity and he believed that students should be able to process, analyze, evaluate and synthesize multiple perspectives, points of view, and information in the modern social studies frame.

Bill’s View about Computer Use in the Classroom

Bill considered the computer as one of the instructional tools that could be used in the classroom. In both interviews he pointed out this view a number of times. Yet, he acknowledged the great benefits of using computer in the classroom in terms of gathering information and reviewing different resources. He stated that
I use the computer as a tool. A tool that enables to the students … okay … to become more responsible for gathering information for themselves … rather than, myself, being the sole source of information for the students and rather than the textbook being the sole source of information … okay? the computer opens up whole new world of resources. (Dec. 06, 05)

Accessing information through the Internet, probably the most cited benefit of computer use by Bill. According to him, “… the access we have now with the computer opens up incredible variety of sources” (Dec. 06, 05) which was very important for his teaching philosophy because he always encouraged his students to seek alternative sources of information rather than relied on one single source of information.

Along with the availability of an extensive variety of sources on the Internet, Bill highlighted how the Internet could be very effective in providing a much faster access to information compared to traditional sources of information. He stated that

I used it because it makes things that much more accessible. So that much quicker rather than giving an assignment; ‘go home and find four definitions … of culture.’ Within a fifteen minute period, I can have every single kid in this classroom come up with their own definitions of culture by using the computer as well as other sources. (Dec. 06, 05)

As previously discussed, Bill valued cultural diversity and multiple perspectives in his classroom and believed that the Internet had a significant role in bringing multiple points of view through various cultural lenses. According to Bill, Internet technology has enhanced access and connections to multiple perspectives and diverse cultures. For instance, reading online newspapers from different parts of the world which could be an
opportunity to present students with multiple perspectives and different cultures. He believed strongly in benefits of online newspapers for students because

…the concept of the culture was being reinforced to them [students] not just as … a concept and a definition … but they could visually see… different cultures through the different newspapers and different headlines and different perspectives that were being presented. (Jan. 12, 06)

He also highlighted the advantages of using computers as contributing to the students’ project and helping them to work more effectively and easily to accomplish their tasks. He stated that “… projects are made okay much more effective or are … frankly made much easier by using the computer” (Dec. 06, 05). According to Bill, “the computer allows to kids to do so much” and create more opportunities for them through the information accessed to be able construct knowledge. He stated that

… I would say that it [computer] would allow more information to be used and more information to be accessed which in effect then opens up the opportunities for kids to be able to construct knowledge … rebuild the information and construct their meaning. With the computer it makes that much easier. (Dec. 06, 05)

While Bill saw great advantages of the Internet technologies in terms of presenting different cultures and points of view, he cited other advantages of computer technologies in the classroom. For example, being able to share information such as handouts and other documents related to students’ project through the classroom Web site, known as “Team Portal”, was another advantage mentioned by Bill. By using the “Team Portal” students were not only able to download documents related to their
projects, but also able to upload their project and share and “draw the information for themselves” (Dec. 06, 05).

Although Bill recognized the effectiveness of computer use in the classroom in terms of helping students to create and construct, he clearly drew a line between computer use and the purpose of tasks or projects that students were assigned to do. On the one hand, he acknowledged the extreme importance of computer use in the classroom; on the other hand, he definitely did not put the computer in the center of his instruction. This statement from the first interview showed his view about the computer as an instructional tool.

… the computer is not the center of what I do. The computer is just a means … for accomplishing the task. So, the role of the computers… again it’s extremely important because it allows so much … to be done. But, the other side of it is I would do the same thing, if I did not have a computer. (Dec. 06, 05)

When it came to describing the relationship between constructivism and computer use in the classroom, Bill summarized the role of the computer in the classroom with respect the constructivist pedagogy. He stated that “So, ‘is it necessary for constructivist classroom?’ I would say NO! ‘Is it… something that aids in the ability of the students to construct their knowledge?’ Absolutely!” (Dec. 06, 05).

While Bill pointed out benefits and great advantages of computer technologies in the classroom, he cited a number of limitations and disadvantages, too. Technical issues related to computer use were one of them such as lack of memory in the computer and printers which caused lack of quality in student’s projects.
Another limitation related to technical issues was about the ‘Team Portal’. Bill pointed out the necessity for a system that creates a smooth transition between students’ work at school and their homework. He talked about the inadequacy of the system that they have been using for that transition. “… there is always going to be limitations for kids because we still don’t have a smooth transition between how they can work on something here; take it home and work on it and continue working on it here…” (Jan. 12, 06).

Another complaint cited by Bill was a limitation caused by Internet filters and blocks obligated by the school administration. According to Bill, this could be considered a limitation because sometimes even perspectives can be filtered out through this process.

Along with technical issues, Bill also mentioned how students’ learning styles can be a disadvantage for computer use in the classroom. According to him, students who were less experienced with technology may have problems during projects that were computer-supported. On the other hand, Bill pointed out the dependency on the computer technologies as a negative effect on the students. Bill stated that

Yeah… the negative effect is that they [students] become very lazy. Students do not want to go to a book. They do not understand that there are other sources of information. So that, they become rely and depend upon the computer as the soul sources of information …and perhaps more negatively as the sole source of validity of information. (Jan. 12, 06)

While he saw the dependency as the biggest problem, he could not think of a world without computers. The next excerpt probably was the best way to show Bill’s dilemma about computer use in the classroom. “But the dependence upon the computer, I
think, ultimately is … the biggest problem. And … and of course what happens if there is no computer available?” (Jan. 12, 06).

*Bill’s Use of Computer-Supported Instruction*

*Introduction*

The classroom observations and the interview sessions indicated that Bill used computers very frequently in his teaching. He stated that

In one from or another I use the computer everyday. So… whether it is in a from of project such as the kids have just completed or whether simply to put … notes on…the Smart Board, the computer is used everyday in my class. (Dec. 06, 05)

Bill pointed out the most common use of computer-supported instructional strategies in his classroom as the following.

The Smart Board would be the first one. Second one would be as research tool so that the students can do research… on any given topic. And then the third use would be in the creation of projects that the students do. (Dec. 06, 05)

Along with that using some software programs such as Microsoft Word and PowerPoint, and the school portal (Team Portal) were the other significant uses of the computer in Bill’s classroom. However, during the classroom observation periods, there was not an assignment that required a PowerPoint presentation. Yet, the other computer-supported instructional strategies were observed in Bill’s classroom through “The Colonial Newspaper Project.”

*The Project: The Colonial Newspaper*

During the classroom observations, most of these computer-supported instructional strategies were used through a newspaper project. The project was called
“The Colonial Newspaper Project”. Students were supposed to produce a newspaper that was set in the colonial period just prior to the American Revolution. The newspaper had to have following sections: an editorial page, classified section, international news section, entertainment section, and at least one cartoon. Students were given a handout that explained the project. In this handout, it was highlighted that students were supposed to give “clear expression of the viewpoints of both Patriots and Loyalist”. The second handout about the project was the list of events that had to be covered in the newspaper. Another handout given by Bill was a list of some Internet sources about the Colonial Era.

The project was a set up as a group project and students were assigned to the groups by Bill. Although Bill usually assigned students to projects or topics by a draw, in this case he preferred to set up the groups himself and made sure every group were heterogeneous based on different aspects. This time he came up with some criteria. First criterion was one student in the groups should have artistic ability because the newspaper had to have cartoons. The second criterion was the academic quality of students in the groups. Therefore, he assigned one strong and one weak student. One of these students was also assigned as a team leader. He formed groups of three except one group which consisted of four students.

*Smart Board as a Presentation Tool*

As Bill pointed out, using the Smart Board as a presentation tool was the most common use of the computer in his classroom. The next excerpt shows how Bill utilized the Smart Board in his classroom. “Using the computer as a means of activating the Smart Board, placing… information notes onto the Smart Board which are then saved … and are downloaded to a Web site that the students can access later” (Dec. 06, 05).
The classroom observations also showed that Bill used the Smart Board in a variety of ways. The following classroom observation report is a good example of his uses the Smart Board.

Bill distributed handouts about the assignment that explains the assignment of creating a colonial newspaper. Students were supposed to create a colonial newspaper as groups. Students were already assigned to the groups. Bill outlined the activity by giving the students handouts, also the handouts were on the Smart Board so that students could see them on the screen as well as by utilizing their copies. One of the handouts was about the general outline of the activity. The other one was about the historical events in that area so that students could refer to this sheet when they were preparing the newspapers. He also gave them some URL’s about the colonial area in the handout. Also he used the Smart Board to show them how the URL’s work and some exemplary websites from the Internet. Bill had found the resources by himself so that they were sort of filtered. He gave students some clues about how to use the information from the Web sites and read some facts from the Web sites. (Classroom observation notes: Nov. 7, 05)

As previously indicated, Bill not only utilized the Smart Board to introduce students to the project, but also to show them some useful Web sites and sources from the Internet. During the classroom observations, another use of the Smart Board was to use its screen to show students some documentary films. Bill showed the students a set of documentary films about the American Revolution for 10 class periods. The film set was in DVD format and therefore sound and visual effects of the films were at a very high quality.
Internet Search

The interviews and the classroom observations indicated that Internet use was one of the most common computer-supported instructional strategies were used in Bill’s classroom. During the classroom observations, students were sent to the computer lab to do Internet searches at least for 10 class periods to find resources and information for their newspapers. The following vignette exemplified one of the days in which students were searching the Internet and creating their projects.

Some students were searching on the Internet to find cartoons and get ideas from them for their cartoon. Most of the students were using Goggle search engine for that. Some students were searching the Internet for information about the historical event they had to cover in the newspaper. Most of them were using the Internet sources given by Bill. A few students were using the textbooks. It seems that using the Internet was more exciting than reading the textbook. On the other hand, some of them were discussing what they should write in the articles, or help each other about what to write and how the cover the historical events within the newspaper. Group members sat next to each other and usually talked to each other and ask questions about the historical events they should include in their newspaper. Also, they asked several question to Bill about historical facts to make sure they were on the right track. He seemed to be very knowledgeable and successful in answering questions. He reminded them several times not to try to polish what they wrote rather they should finish their draft. Some of the students
were still searching on the Internet while writing because they still needed more information. (Classroom observation notes: Nov. 15, 05)

While Bill considered the Internet as another important source of information, he did not completely rely on it, and wanted his students to seek other sources of information as well such as textbooks or other print materials. Bill also underlined the validity of the information gathered through the Internet sources. He stated that “... we constantly have to remind them [students] … that simply because it is there, it doesn’t mean that it is valid in itself” (Dec. 06, 05). In order to make sure his students check the validity of the information that they gathered from the Internet, Bill suggested that using multiple sources of information. Bill stated that

What we need to do though is to constantly remind them that they need to be able to find multiple sources. They have to confirm information from more than one source before they can begin to consider whether or not is valid. (Jan. 12, 06)

During the colonial newspaper project Bill reminded students several times to check the validity of the information. He asked them to confirm what they have with other sources on the Internet as well as print sources such as their textbooks. When students had begun to search the Internet for the project, he frequently repeated to them “to use the book to get … the basic information; use the Internet only to supplement what [they] can’t find” (Dec. 06, 05) so that they could evaluate and analyze and “make… decisions about information” (Dec. 06, 05).

In conclusion, in this project the Internet primarily was used as another source of information. Yet, the students were able to acquire not only text information but also pictures, figures, and cartoons that they can use inspiration for their cartoons.
Word Processing

Some of the conventional software programs such as Microsoft Word were also among the frequently used programs in Bill’s classroom. In the first interview Bill pointed out that writing papers was another common use of the computer in his classroom. He stated that “… Actually the students would write papers … as a part of it as well. … But I have my students… Sixth and seventh grade type most of the formal papers that they do for me” (Dec. 06, 05).

Also the classroom observation notes showed that students used the computer extensively to type their articles and other sections for the newspaper project. Students used several features of the program such as copying and pasting information from the Internet to the Word documents. In the documents students were able to edit the information, rewrite their sections, and use various types of fonts and colors that resembled an authentic Colonial Era newspaper.

Team Portal

Another type of computer use observed in this class was the utilization of the classroom Web site known as “Team Portal” which was used to share information regarding the courses for all seventh graders in the school. Teachers could upload information and documents regarding the projects and assignments and, students could download these assignment sheets and other supported documents from the “Team Portal”. Students had access to their assignment sheet through the portal during the school time so that if they loose their hardcopy, they can print it again.

Another way the students used the portal was to upload their assignments so that all the other students would have access to the assignments. According to Bill, sharing
the assignments or projects could be helpful for students to see different ideas and draw information from these different approaches. He stated that

That PowerPoint presentation then was placed on the community folder so that all students had access to them. ... So, in effect they had approximately fifty different presentations that they could then use ... to draw the information for themselves. (Dec. 06, 05)

During the classroom observations students used the “Team Portal” a number of times either to download information from the portal or to upload their projects. After they finished the Colonial Newspaper Projects, each group uploaded their newspaper to the portal so that all seventh grade students had access to the newspapers.

**Conclusion/Evaluation**

Bill believed that using multiple instructional strategies based on different educational theories help students to be prepared for real-life. Thus, he applied multiple instructional assessment methods associated with various educational theories. Yet, he valued the constructivist pedagogy as he believed that when knowledge constructed by the individual become more meaningful for him/her. Furthermore, he emphasized multiple perspectives and cultural diversity as important aspects of social studies education.

According to Bill, the computer was a tool which enabled a faster and easier connection to multiple perspectives and cultural diversity and helped students create and construct better work. Thus, the computer and Internet was crucial for his teaching. Yet, he did not put the computer in the center of instruction; rather he viewed it as a tool. Bill
believed that although the computer was not necessary for a constructivist classroom, it helped students to construct their knowledge.

Bill used the computer everyday in his classroom. Computer and software availability was not a problem in his school. Therefore, the access to the computer did not prevent him from integrating the computer in his classroom. The most commonly used instructional strategies in Bill’s classroom were the Smart Board, Internet search, and use of software programs such as Microsoft Word and PowerPoint. Also the school portal, or “Team Portal” as they called it, was one of the most frequently used tools in his classroom.

Most of these strategies, except PowerPoint, were observed through “The Colonial Newspaper” project. The project was carefully planned and well-structured so that Bill created an environment in which students were actively involved in the process of creating the project.

Students did Internet searches to find information about the events they had to cover in the project. The newspaper had to have several sections including an editorial section, cartoons, and advertisements, which covered a broad range of ads such as home selling, obituaries, and marriage. The Internet provided for students not only text materials but also visual aids in the form of graphics, diagrams, and timelines to represent a historical concept, and consequential events. As Bennett and Pye (1999) suggested these visual aids fostered students’ chronological thinking and understanding of historical events through chronology while they were writing sections of the newspaper within the realm of the historical events of the Colonial Era. Thus, students created and constructed
local, national, and international news with various types of advertisements and cartoons which referred to the historical events.

The role of Internet sources was crucial in creating the project as students gathered visual and textual materials. In addition, the Internet was a significant instrument for that project in terms of providing multiple perspectives for students to discuss within the newspaper the conflict between Loyalists and Patriots during the Colonial time. Students referred to the controversial issues during this era within the newspaper especially in the editorial section. Using the Internet sources students evaluated, critically analyzed information, and created a newspaper that addressed multiple perspectives. In the field of social studies many researchers (see Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002; Hicks & Ewing, 2003; Larson, 1999; Shiveley & VanFossen, 1999) indicated the role of the Internet in terms of gathering written and visual information which helps students to acquire multiple and global perspectives, think, analyze, synthesis, and make informed decision based on the information they have. Thus, it seems that this project was a great example of that concept.

I believe that the project created a constructivist learning process for the students in which multiple perspectives were analyzed and critical thinking was promoted. Students were actively engaged in the whole process and constructed their own knowledge through writing the newspaper. The project, to me, was a perfect example of a constructivist learning enhanced by computer-supported instruction. However, it should be noted that the clear structures and instructional design created by Bill was the most contributing factor to promote the constructivist learning within the project.
Teacher # 3: Mike (Pseudonym)

Mike’s Background and Education

Mike was a 43 year old African American male social studies teacher with 19 years of teaching experience. He completed his bachelor’s degree in a Midwestern University in the field of social studies education. Mike was very interested in professional development activities in order to improve his teaching. He was taking a course from a local historical center at the time of the study. He also had a number of courses from the school district in order to be qualified for having permanent lap top computers in his classroom. He had a wide range of teaching experiences in different grade levels from 8 through 12. He mostly taught in suburban areas. At the onset of the study, he was teaching 10th grade American History and 12th grade American Government.

School Context

The school is a suburban high school in a Midwestern state. The population of the school was 2331 in the 2004-2005 school year. During this school year the ethnicity of the student population was 80 % White, 14 % Black, 2.5 % Asian, 1.2 % Hispanic and 2 % Multiracial. Gender of the students was almost equally divided (48.4 % female and 51.6 % male). There were 129 teachers in the school. The majority of the teachers were White female (58.1 %) and 97.1 % of the teachers were White overall. There were 15 social studies teachers- three female and two African American.

The school is a three story building located near a major highway. Many of the students came to school by means of their own cars while some of them took school
buses. Most of the students worked after school. Parents’ social economic status was middle class.

Classroom Context

Mike’s two different classes were observed in the same classroom. The first class was the 12\textsuperscript{th} grade American Government and the second one was 10\textsuperscript{th} grade American History. There were 12 boys —two African American— and 12 girls —one African American— in the American Government (12\textsuperscript{th}) class. There were 12 boys —one African American and one Hispanic— and 11 girls —three African American— in the American History (10\textsuperscript{th}) class. Each class period was 47 minutes and American Government class (12\textsuperscript{th}) met everyday for doubled periods while American History class (10\textsuperscript{th}) met everyday for only one class period.

Each student had individual desks but they were sitting next to each other in three rows. The three rows located between the teacher’s desk at the back and the board in front so that when Mike sat at his desk students could not see him unless they turn back. Yet, when Mike sat at his desks he was able to see all of the students. Also in this sitting position, seeing another classmate face to face was very limited. The entrance door was at the southern corner of the classroom. Although the room was shared by two teachers, there was only one desk for the teacher which was located at the northeast corner of the classroom. The room only had windows at the north side. Yet the windows almost covered the entire north side wall. The board was located on the west side of the classroom.

There were four desktop computers and one printer located on the west side for the use of the students. Also there was another desktop computer with a printer located at
the northwest corner of the classroom. Another desktop computer was located right in front of the board with the projector for instructional use. In the south west corner of the classroom there was a laptop computer station with 12 computers available for use by students at anytime during the class. Therefore, the total number of computers in the class was 12 laptop and 6 desktop computers. Also there was one TV at the northwestern corner and it was attached to the upper side of the wall. The TV was used for broadcasting news and announcements for the students. It was connected to one of the desktop computers so that it could be used for projection purposes.

The classroom walls were full of maps, posters, and pictures mostly about historical figures of the United States and current international political issues such as Arab-Israeli conflicts. There was a long table located right next to the teacher’s desk at the east wall. There were lots of brochures and books on the table with some of the students’ projects.

*Computer and Software Availability*

There were 6 desktop and 12 laptop computers in the classroom for Mike and students to use. During the classroom observations either of the classes did not use the computer lab in the school. They always used the computers in the classroom. Eighteen computers being available in one classroom can be considered a privilege. Yet, this privilege had been earned by Mike by taking classes from the school district to be qualified to have a laptop computer station in his classroom. Although the number of computers seemed to be adequate, students complained about the availability of computers during the classroom observation on a couple occasions. When each student wanted to work individually on the computer, some of the students could not find an
available computer to them because the number of computers is less than the number of
the students in both classes.

Likewise, Mike complained about the inadequacy of the computers, although he
indicated that he was willing to work with what was available. He also complained about
lack of software programs. In the first interview Mike stated that “I think first of all we
need to update some of our software programs. I would love to have a better movie
program...because students love doing video. We need software that makes it easier to
produce videos” (Dec. 14, 05).

There was a wireless Internet connection and print server so that any laptop
computer in the classroom had the ability to connect to the Internet and print documents
via two printers in the classroom.

Mike’s Beliefs about Teaching and Learning in Social Studies

Mike described his teaching philosophy to be about reaching various learning
styles at one time. He stated, “My philosophy is basically trying to reach as different
learning styles as possible in one lesson” (Dec. 14, 05). His main goal was to prepare
students to be in charge of their learning. Therefore, he preferred to design assignments
that created an environment in which a student can work independently as well as in a
group. Students are placed in an environment that places them somewhat in charge of
their learning. In the first interview Mike stated that

I like to do a lot projects that really are open ended. Some students want step by
step instructions, but I want to encourage students be more creative and not just
do what is required. This creates an atmosphere allowing students to become life
long learners. Even though some students go more in-depth while other students

do not; they all still learn. In order to do accomplish this goal you have to create a situation where you are allowing students to be in charge of their own learning. (Dec. 14, 05)

Classroom observations also suggested that Mike created an environment where students were responsible for their learning. He let the students decide several aspects of their projects, such as choosing their group members, and deciding the type of project they were going to do. His view of a classroom represented a student centered classroom where he can assume the role of a facilitator. Mike stated that

… The classroom has to be more students centered … where… as a teacher … I become more of a manager. Making sure that people are on task; making sure that goals and objectives are being met. But, at the same time students are responsible for their own learning. (Dec. 14, 05)

In both interviews he indicated a number of times that he viewed his role as a teacher to be one of a facilitator or a manager, letting students be responsible for their own learning. The classroom observations supported the notion of being a teacher-facilitator. The classroom observation notes indicated that while he let the students work individually he also gave them ideas and advice about their projects.

Mike’s View about Computer Use in the Classroom

Mike viewed the computer as an instructional tool not much different than paper or pencil. Yet, he acknowledged the positive effects the computer has on the classroom environment and the students. Mike stated that
“The computer is just another tool that we use. It’s likening to a pencil or paper. It’s just another tool used in the classroom in order to make learning more exciting and interesting. I just think… it makes it more pleasant. (Dec. 14, 05)

According to Mike, one of the most important benefits of using computer technology in the classroom was that it allowed some students to show their abilities to create great work. Although he was aware that computer use in the classroom did not work for all students, he preferred to integrate the computer in his teaching because he knew that some students would do a great job working with computers and he did not want to limit them.

Mike believed that “the computer just another tool that allows students to go in depth with their learning; allowing students to be in charge of their own learning; allowing them to experiment along with allowing them to be more creative” (Dec. 14, 05). While Mike believed that the computer use in the classroom promoted the creativity of the students, he also mentioned that sometimes the computer makes it easier to “… reach students … especially students who are … visual learners” (Dec. 14, 05).

Mike also mentioned another great advantage of computer technology over traditional methods. According to Mike, computer technology provided students with the ability to edit and read not only textual information but also visual and audio features of their projects. However, it would not be possible for them to edit and read their work if they used traditional types of materials. According to Mike, this feature of computer technology allowed students to do a better job on their projects. He stated that

The computer allows students to correct mistakes; to retype a paragraph; to go back and check their work and say ‘you know, that’s not good enough. I need to
redo that part’. It allows some students who are not satisfied with their work to easily place their frustration aside having to redo parts of a paper or project. In the long run, what you get is better work from most students. (Jan. 19, 06)

Another strength of computer and Internet technology cited by Mike was the vast amount of sources that represented multiple perspectives and different points of views. He believed that the Internet provided not only resources for students from different perspectives but also the most updated information on several issues.

While Mike cited a number of advantageous and strengths of computer use in the classroom, he did not see many disadvantages or weaknesses. He believed that the advantages and strengths of computer use were much more than limitations or weaknesses. Mike’s only concern about computer use in the classroom was students tendency to get distracted easily. He stated, “one downfall of students using technology in a group or individual setting is that students can stray into other areas using the Internet.” (Jan. 19, 06)

Mike’s view about computer use in the classroom tied to his teaching philosophy and his role as a teacher as he believed in the significance of reaching different learning styles. The following excerpt showed the relationship between his teaching styles and utilizing the computer in the classroom.

So if I am doing a presentation on PowerPoint integrating multimedia, then I am reaching those students who learn best by listening; I am reaching those students who learn best by watching. If students are participating, then I am reaching students that learn best by doing. The technology makes it a lot easier to reach more than one learning styles at one time. (Dec. 14, 05)
Mike’s Use of Computer-Supported Instruction

Introduction

Mike integrated the computer in his teaching frequently. He pointed out that he used the computer on average three times a week. His most common uses of computer-supported instructional strategies can be listed as Internet search, Web Page development and use of software programs such as Microsoft Word, PowerPoint and Movie Maker (Microsoft Corporation, 2004). During the classroom observation most of these strategies and software programs were used extensively by the students, especially, PowerPoint presentation and Movie Maker (Microsoft Corporation, 2004) which allowed students to create their own videos. Since there was not any project required for Web Page development, this strategy was not observed by the researcher.

The Projects: The City Planning (12th) and the World War I (10th)

As Mike’s two different classes were observed, there were two different projects in which computer-supported instruction had been used. The first project was “The City Planning” project (12th grade America Government). This was a group project. Each group consisted of three to five students and students were free to select their group members. Every group was supposed to create a city on their own. One part of the project was to submit a written report about the city including history, landmarks, maps, zoning (laws), economics, schools, and other public buildings. The second part was creating a ten-minute video that introduced the city. Students were allowed to use Internet sources not only to gather information for the written part, but also to find appropriate sound and visual effects for their videos.
The second project was “The World War I Project” (10th grade American History). There were three options for this project: writing a diary, creating a newspaper, or creating a PowerPoint presentation. Except for the newspaper projects, students worked individually. Students or groups were assigned to topics related to WWI by Mike. Students were allowed to use the Internet sources not only to gather information, but also to find appropriate sound and visual effects and even historical videos for their projects.

*Internet Search*

The Internet was being used in Mike’s classroom primarily for finding information. While he used the Internet to find primary sources and Web sites for students, he also had the students search on the Internet to find text and visual materials such as images and videos for their projects. Mike gave special attention to the visual and audio materials on the Internet as he believed, “the American public are mostly visual learners” (Jan. 19, 06). Therefore, he would like to have his students use more visual materials in the classroom. Here is an example from Mike’s 10th grade American History classroom observation notes that showed how student searched the Internet for information.

Students started to work on their projects. Some of the students had the laptops and some of them were working on the desktops. Like yesterday all of them were searching the Internet for information to create their project. Mostly the students who were doing PowerPoint projects were working individually. Some students were searching for text information and taking notes of what they found. Some of them were using a regular notebook some of them were using the Microsoft Word program to take notes. The information they found was not limited to text sources.
Many students searched and found images related to their projects. A couple of students searched for documentary videos about WWI. (Classroom observation notes: Dec. 7, 05)

All projects in this class were created based on the information acquired from the Internet. Nevertheless, two projects were really distinguished from the others as students who did these projects were able to use images, audio videos that made the projects appealing for the visual learners.

*Computer as a Presentation Tool*

The interviews and classroom observation indicated that Mike used the computer as a presentation tool. He usually used Web sites and reflected them on the wall to support his lectures. He stated that

… Not only can students listen to what I am saying but also they can actually see an example of what I am talking about. If I were talking about a general in World War I, then I’d try to find a visual of that person. (Dec. 14, 05)

During the classroom observations, Mike used the Internet as a presentation tool for a number of times especially in the 12th grade American Government class. He reflected on the official Web site of the county, city, and their school districts to show students how the local government works and to introduce the city and county officials such as mayors, governors, or other official figures such as board members of their school districts. The following was an example from Mike’s American Government class where he used the Internet.

Mike was talking about X County and Y legislations related to property regulations. He was using the official Web site of X county. The Web site was
projected on the board so that all students could see it. He used a feature of the Web site which was about property taxes. In the Web site, you can write your address and see the plan and picture of your house and the property tax you had paid last year. Mike asked for volunteer students to give their addresses so that he entered the addresses and got the information about the houses. So, each students and the rest of the class saw how much did they pay in 2004 as property taxes for their homes. (Classroom observation notes: Jan. 3, 06)

**Software—Multimedia**

Utilizing multimedia types of software was one of the most common instructional strategies used in Mike’s classroom. He cited a number of times that his major focus was on multimedia related software programs. He stated that

I think right now, my most common use of multimedia is bringing video in the classroom and integrating it with a lesson enhancing a lecture. This type of presentation is working because kids today are more visual learners because they’re of the TV generation. (Dec. 14, 05)

As indicated in the quotation, the reason why Mike used multimedia types of software in his teaching was his belief that the contemporary American students were mostly visual learners. Movie Maker (Microsoft Corporation, 2004) program was used for the “The City Planning Project” in the American Government class during the classroom observations. The next excerpt explained how the students supposed to create their videos.

Yes! They [students] have to have a camcorder. We are able to provide two in the classroom that students can barrow. A lot of students have their own camcorder.
They also need access to a computer that is able to download video. We have five such computers in the classroom that are available to students after school hours. Their computers also have to have a fire wire or USB port and video card. Students are also trained to use a storyboard in order to encourage more organization. Most students find out that the more organize you are the less work the video will be and the better the product. What… they’re doing is really going around town …. and they film what they need and the they edit on … It takes a lot of work… to do. But I think at the end they’ll really proud of what they are doing.

I have seen some really neat projects in the past. (Jan. 19, 06)

Students used Movie Maker (Microsoft Corporation, 2004) software program to edit, add sounds, and other visual effects to their introductory movies about their cities after they had filmed them around town.

*Word Processing—Excel*

Microsoft Word and Excel were the most common software programs were used in Mike’s classroom. The Word program mostly was used for note taking purposes during Internet searches. In both classes (10th grade American History and 12th grade American Government) Internet searches were a big part of the projects. Students did Internet searches in both classes and while they found sources, they copied and pasted information on Microsoft Word documents. Then, they processed the information and used it for their projects. In both classes, students typed necessary parts of the projects on the Word documents.

In the American Government class, along with the Word program, Microsoft Excel was also commonly used for projects. In order to complete the written part of the
“City Planning” project students were supposed to come up with some statistics about the city such as population, religions, and economics for the city. Therefore, this program was used frequently among the groups in order to create bar charts or pie charts that represented the city statistics.

*PowerPoint*

PowerPoint was another frequently used software program in Mike’s classroom. In the American History class, eight students did PowerPoint projects as they had an option to choose the format of the project. There were a wide variety of topics such as “WWI Tanks”, “WWI Weapons”, “WWI Personalities” and “Battles of WWI”. Students used information and images they had found from Internet resources. There were many images in the presentations such as tanks, weapons and aircraft that had been used in the war. One project even had a video downloaded from the Internet. The student added sound and texts to the video which made it stand up for itself. Most of the PowerPoint projects were of high quality and met Mike’s expectation.

However, according to Mike although PowerPoint was popular among the students, “it’s over used.” Even though Mike was not completely against using the program, he cited a couple of concerns about PowerPoint use. He stated that PowerPoint is the software choice of use with presentation. Students are familiar with PowerPoint and they find it an easy tool to use to present a project. In many cases it has become a glorified poster board. What I am trying to get them to do is take PowerPoint to a higher level. This includes the use of integrating multimedia. What they are doing is using PowerPoint as another lecture tool by using too
many words. They need to use PowerPoint to its full potential that will allow their presentation to reach out to the majority of the audience. (Dec. 14, 05)

Although most of the PowerPoint projects had visual materials and the proper amount of text, there was one project that illustrated Mike’s main concern about PowerPoint projects. This project had one slide of a picture of historical figure who was involved in WWI and a long text that introduced that person.

**Conclusion/Evaluation**

Mike described himself as a teacher who assumed the role of coach in the classroom and tried to reach different learning styles. In addition, he wanted students to be responsible for their own learning. He believed that the computer was a great tool that helped him to reach different learning styles and fostered an environment for students in which they could be responsible for their own learning. Also he pointed out that the computer was a tool that facilitated students to do more in-depth creation so that they could improve their work.

Mike used the computer three to five times a week with the students depending on the topics he was teaching. The most commonly used instructional strategies in Mike’s classroom was Internet search, WebPage development, and use of software programs such as Microsoft Word and Excel, PowerPoint, and Movie Maker (Microsoft Corporation, 2004). During the 10th grade “World War I” and 12th grade “The City Planning” projects most of these strategies were observed. Computers and software was sufficient as they had 18 available computers within the classroom.

Students did Internet searches for both projects to find information. As suggested in the literature (Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002;
Hicks & Ewing, 2003; Larson, 1999; Shiveley & VanFossen, 1999), Mike encouraged students to use not only textual materials, but also visual media sources, such as documentary films, for both projects. Students were actively engaged in both projects either individually or within groups.

The WWI projects were mostly PowerPoint projects in which students introduced important figures, battles, or weapons within WWI. Therefore, students search focused both textual and visual media information that could best represent WWI. The Internet was a crucial source for students in terms of gathering information and visual materials for their project. Yet, the Movie Maker (Microsoft Corporation, 2004) program also was significant as many students used that software to edit, add text and sound on the films they had found on the Internet. Thus, students searched for information either text or visual, evaluated, analyzed and edited what they had and finally created their presentations. I believe that most of the projects were successful in terms of students being actively engaged in the process of constructing of knowledge.

However, there was one single PowerPoint project which only had one slide with a picture and a long text which definitely could not be considered a constructivist project for that individual student. This student only copied information from the Internet without any editing. I think every stage of the project should be monitored by the teacher and students should be given guidance and advice about the development of the projects so that such problems could be prevented.

The City Planning project required not only doing extensive Internet search to complete the project’s report, but also in creating a video that introduce their city. Therefore, there were two aspects of that project promoted to the constructivist learning.
On the one hand, students evaluated and analyzed information and created a city from scratch including the history, landmarks, maps, zoning (laws), economics, and schools for the city, on the other hand, they created ten-minute introductory videos about their city. The videos were shot within the student’s neighborhood and I think this aspect of the project created a connection between the project and the students’ real-life context. These two parts of the project required analyzing information, thinking, and creativity with imaginations.

In conclusion, both WWI and the City Planning projects promoted a constructivist learning process for students as they promoted students to think, analyze, create and construct their knowledge.

Teacher # 4: Kate (Pseudonym)

Kate’s Background and Education

Kate was a 46 year old, White, female social studies teacher with 24 years of teaching experience. She completed her bachelor’s degree in a Midwestern University in K-8 teacher education program. She received a Master of Education degree in field of Curriculum & Instruction with emphasis on social studies education from another Midwestern University. She earned the title of “Highly Qualified Teacher” in the field of social studies education from the school district. She has been teaching in the same school district for her whole career, and she has been teaching in the same school for the last 23 years. She taught eighth grade social studies for most of her career expect three years when she taught seventh grade social studies. At the onset of the study, she was teaching eighth grade social studies.
School Context

The school is a suburban middle school in a Midwestern state. The population of the school was 555 in the 2004-2005 school year. During this school year the ethnicity of the student population was 84 % White, 10 % Black, 3.3 % Asian, and 3.7 % other. Gender of the students almost was equally divided (46.4 % female and 53.6 % male). There were 34 teachers in the school. The majority of the teachers were White female (76.4 %) and 97.1 % of the teachers were White overall.

The school is a one story building located in a residential area. Many of the students were able to walk to school while some of them took school buses. Parents’ social economic status was middle class.

Classroom Context

This class was the eighth grade American History class with 10 boys and 11 girls and two of whom were African American. Each class period was 48 minutes and met everyday. Each student had an individual desk. Students’ desks were positioned in three different lines and there were aisles between them. However, during the classroom observation, when students were paired, they moved their desk next to each other. Therefore, they were sitting in groups of two except one group which was a group of three. There were three doors in the classroom. One was the main entrance door which was located at the southeast corner of the classroom. There was another door right next to the main entrance on the west side of it. This door was between the classroom and the supply room which was shared by the classroom next door. To the west of that door in the southwest corner, there was another door that opened to the outside. The room only had a couple of windows at the west side. Therefore the classroom was a little dark. The
The board was located on the west side wall. Kate’s desk was located at the northeast corner of the classroom. So, when she sat at her desk she was able to see all of the students. There were four desktop computers located on north side of the classroom for the use of the students. Also there was another desktop computer for the use of Kate. There was a TV attached to the wall in the northwest corner and one projector that could be connected to the computers.

The classroom walls were full of maps, posters, and pictures mostly about historical figures of the United States and some students’ work. There was a round table located right next to the teacher’s desk at the east wall. There were lots of brochures and books on the table with some of the student projects.

*Computer and Software Availability*

There were four desktop computers in the classroom for the use of the students and one for the use of Kate. There were three laptop stations in the school for classroom use. Each station consisted of 25 Dell laptop computers and one printer. These were the only computer labs in the building. In order to get one laptop station for the class a teacher had to request it at least a month ahead. Kate expressed her frustration about the availability of the laptops for a number of times. She stated that

We have three laptop stations and we have a lot of people who’re using them. … You can only sign them out for five days a month! … Only five days a month and … that’s that you’re limited on that … it’s almost like a discouragement because you’re trying really hard to umm to utilize technology but if you can’t have access to the units and you can’t have access to … you know when you want
them. Like if you don’t plan ahead literally, a good month ahead when you might need them, your chances of getting them are slim to none. (Feb. 15, 06)

Therefore, it is clear that computer availability was a problem in that school. Kate was limited to integrate computers in her teaching. Yet, she did not complain about the software. She seemed to be satisfied with the software that they had. However, as a school they did not have the liberty to decide on the software. In Kate’s word “…software kind of are out of our hands. We can… we can suggest and we can hope but…” (Feb. 15, 06).

Kate’s Beliefs about Teaching and Learning in Social Studies

Kate believed that her teaching philosophy was to help students to learn better and improve themselves. In the first interview she stated her teaching philosophy as follows. “… I think my teaching philosophy is to do the best I can to help students to become good learners … and to help them … you know not just facts but understand purposes” (Jan. 30, 06).

The classroom observations also showed that she was a very dedicated teacher. Her involvement with the students was very high in order to help them to improve their work. Kate saw her role as a teacher to monitor students on what they were doing and also to give them guidance when they needed it. She stated that

I think my role is not just instructional but I think it’s also instrumental that I kind of monitor like how we do it. You know like my role is to kind of plan out for the kids what are we going to [do] …because they have to have some kind of … they have to have direction at this age. You just can’t say ‘well this whole week I am just going to let you play around here’ or ‘I am going to just let you investigate
history for yourself’. They have to have guidance so that’s part of my job. They have to have a purpose. You know, to do it for the sake of doing isn’t always… I mean it’s almost useless. (Feb. 15, 06)

Her view about the social studies was mostly based on a historical perspective. She emphasized the importance of the history for kids rather than other subjects of social studies such as geography or civic education. She stated that

Kids have got to know what happened in the past to know why we’re at today. You have to have that background … of where you’ve been … to know why we are at, where we’re at, and where we are going to go ….There needs to be….there has to be a connection. I think I mean that’s truly the ultimate thing with history. (Feb. 15, 06)

Kate’s View about Computer Use in the Classroom

Kate considered the computer as an aid for instruction. Kate thought that the computer was a powerful tool that helped gain access to a lot of information. According to her, text materials cannot cover entire topics thoroughly and provide information on many issues related to course of study. She stated that “I just think it is the only way to really get a lot of information. … the Internet is important on getting some expanded knowledge for the students. So, you have to have that” (Feb. 15, 06). She believed that computer technologies gave students alternative “opportunities to go as wide as and as deep as they want to go” (Feb. 15, 06). Along with that, Kate pointed out the importance of computer technologies in providing more advanced presentation tools for students.
On the other hand, according to her, if it is overused and not monitored properly computer and Internet use can be a harmful tool for the students. Kate pointed out some negative influences on students that can be caused by frequent computer use. She stated that “I mean that’s the problem with … even looking up words. They don’t even use dictionary anymore. They use dictionary.com. … they don’t even really use the books anymore …” (Jan. 30, 06).

Another of Kate’s concern with computer technology was about a student’s access to inappropriate materials such as chat rooms or porn sites. She stated that

All of the sudden they [students] are in chat rooms; all of the sudden they’re in porn sites. So you know it worries me to some degree that umm we take for granted that’s it a good tool which can be a god tool but we also sometimes fail to put up some censors… (Feb. 15, 06)

According to her, in order to prevent negative consequences of computer and Internet technology uses of students should be monitored by teachers and parents as well.

In conclusion, although Kate had generally positive attitude to integrate computer technologies in her teaching, she also recognized possible negative influences and downfalls of the computer technologies.

Kate’s Use of Computer-Supported Instruction

Introduction

Kate’s computer integration was not very frequent. She stated that “I try to use them [computers] once a nine week in terms of some sort of research” (Jan. 30, 06). Her main computer use with the students was to utilize the computer as a research tool. She
also used the computer herself to update school WebPage with student homework and grades.

Internet searches and PowerPoint presentations were the most common uses among the students in her classroom. Likewise, students used these two strategies when they created their projects.

*The Project: War of 1812*

During the classroom observation periods, students were working on the “War of 1812 Project”. The project was designed as a group project and each group consisted of two-three students. There were 12 topics—usually individual battles—about the War of 1812 stated by Kate in the project handout. Students were assigned to the topics based on their choices. Although students who worked on the same topic sat together, they were supposed to search independently and compare their sources and information they had found. Students were supposed to do Internet searches to find information for their projects and create a project either computer-supported such as PowerPoint or traditional type of project such as poster presentation.

*Internet Search*

Internet search was the most common use of computer in Kate’s classroom. The following excerpt was a summary of how she used the Internet in the classroom. “… like “the war 1812” each had a topic. They would go in detail about their topic and find not only just information but pictures that would represent that time period any primary sources…” (Jan. 30, 06).

As Kate pointed out during the “the War of 1812” project, students searched the Internet to find information about their projects. They were looking for not only textual
information but also for pictures and images that could be used for their projects. Student used search engines—mostly Google search engine—and type keywords related to their project to find relevant sources of information. So, the Internet was used by students to create a base of information for their projects.

Kate also used the Internet to download videos from the district media center to add to her lessons. She thought that it was a valuable aspect of computer and Internet technology which made access to teaching resources faster and easier. Moreover, Kate used the Internet with the students’ real-life work. They did an election activity through the Internet on the state issues that resemblance the real election. Kate believed that the activity not only enhanced students’ critical thinking, but also decision-making skills. She stated that

That’s a little bit more critical thinking and then we were able to actually go online and do kids voting. And so everybody in the state of X—the school districts who wanted to… we went on and we voted one whole day. We had our little school district up there and then we’ve got results from that. So there we’re able to do a lot of decision-making. We’ve influenced the kids voting. And we got to see if we were passed, correspondent to actual voters. (Feb. 15, 06)

Kate preferred to use primary resources from the Internet rather than go and spend time on opinion resources. Therefore, she usually limited students with specific Web sites which consisted of primary sources such as, The Smithsonian or The National Archives. She stated that “…I try to keep with those more than getting into an opinion kind of thing” (Feb. 15, 06).
Word Processing

The Microsoft Word program was the second most common computer use in Kate’s classroom. During the project, students used this program every day. Most of the students were using the copy and paste features of the program in order to take notes for their project. They were copying and pasting some texts they had found from the Internet and also some pictures and images of the people that they were searching about. Students who did PowerPoint projects usually used the Word program to edit and adjust the textual information on the documents before transferring their work to a PowerPoint file. Yet, students who did not have computer-supported projects also used the program for note taking, and print functions in order to put them on poster board.

Computer as a Presentation Tool

Kate used the computer as a presentation tool in the classroom. She used a number of features of the presentation system such as connecting it to the Internet and showed the whole class Web sites rather than have them search information by themselves. Another feature she used was presenting information through this device such as handouts or other type of documents concerning the instructional unit. She highlighted that it was a great feature of computer technology to allow all students to follow lessons. She stated that “It’s kind of a nice way to for everybody to be on the same page, so to speak. You know which is pretty big in the middle school because they don’t always want to be on the same page” (Feb. 15, 06).

PowerPoint

Although PowerPoint software program was not Kate’s favorite program, it was used a lot by her students. According to Kate, mostly students cut textual information
from the Internet and tended to put long text on the PowerPoint presentation without editing the information (Informal discussion: Feb. 16, 06). Yet, PowerPoint seemed to be students’ favorite software. Kate stated that

… They [students] love doing PowerPoint. I think it’s because it is easy. ‘Cut and paste; next screen; cut paste; put a figure in.’ … I don’t think they utilize much … creativity. I mean you can pick the slide you want; you type your title; you type you know. (Feb. 15, 06)

As Kate pointed out many students used PowerPoint for their projects during the class classroom observations. The problem she indicated was visible on most PowerPoint presentations. Students usually used long textual information on the slides. Even some of the text was not legible. It was clear that they did not do much editing on the information they had retrieved from the Internet. On the other hand, there were a couple of projects that were designed very well. One of them was a recreation of a battle, and the students who did the project added sound and animated images to simulate the battle strategy.

Conclusion/Evaluation

Kate, as her teaching philosophy, believed in helping and guiding students so that they could learn better and improve themselves. She assumed the role of a coach or facilitator in her classroom rather than just lecturing. She believed that the computer was a powerful tool that aided instruction and provided access to vast amount of information for students which they could not get from traditional materials.

She was not a frequent user of compute-supported instructional strategies in the classroom although she wanted to use them more frequently. She used the computer at least once in a nine-week period. Computers were inadequate in her school although the
average numbers of computers are increasing rapidly in the American schools (NCES, 2003). Inadequacy of computers in her school was one of the reasons why she was not able to integrate the computer as often as she would like.

The most commonly used instructional strategies in Kate’s classroom were Internet searches, use of software programs such as Microsoft Word, Excel, and PowerPoint. During the “War of 1812” project students did Internet searches to find information and images for their project such as battle scenes, soldier pictures and flags that were represented in the war. They used the Word documents to analyze and synthesize the information before putting on the PowerPoint slides.

Students were actively engaged in the whole process and they did critically analyze the materials they had from the Internet and made decisions about the information so that they could create the PowerPoint and constructed their knowledge about their topics. The literature also support this finding (see Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002; Hicks & Ewing, 2003; Larson, 1999; Shiveley & VanFossen, 1999).

Most of the PowerPoint projects were of high quality and represented the War of 1812 well by utilizing pictures and texts on the slides. These projects seemed to support constructivist learning with their quality in terms of presenting information which was processed, analyzed and synthesized by students. However, some of the projects did not seem to be constructed by students rather most of the information was copied from the Internet without editing.

Therefore, it is clear that doing Internet search does not mean necessarily the information was analyzed and synthesized by students. Rather the whole process of the
Internet search, analyzing information, and creating the projects should be monitored closely to ensure that students are kept on task, and have them think, analyze and create the project by writing with their own words. I believe that although generally the whole project could support constructivist learning, the lack of monitoring students through the process and keeping students on task was downfall of the project.

Cross-case Analysis

I presented the within-case analysis (Merriam, 1998) for each case in the previous section of this chapter. As Miles and Huberman (1994) point out, such analysis focuses mainly on describing, understanding, and explaining what has happened in a single bounded context— the case or site.

The next step in the data analysis of a case study is the cross-case analysis (Merriam, 1998). According to Huberman and Miles (1994), “one aim of studying multiple cases is to increase generalizability, reassuring yourself that the events and process in one well-described setting are not wholly idiosyncratic” (p. 172). In cross-case analysis, the task of the researcher is “to build a general explanation that fits each of the individual cases, even though the cases will vary in their details” (Yin, 2003, p. 121). Therefore, in the next section of this chapter I will apply the technique of cross-case analysis and compare all cases to find some patterns and build abstractions that apply across all the cases (Merriam, 1998).

The patterns and abstractions developed from the data were used to build the following general assertions. I will present each assertion along with a comparison to all cases and refer to the corresponding literature in the field.
Assertions

Assertion 1: The most common use of computers among these teachers was to have students use the Internet for research purposes.

The study revealed that all four participants cited Internet search among the most common strategies they used in their classrooms. In the interviews all participants stated a number of times how frequently they used the Internet as a research tool. Here are some examples of their statements:

The most common use for me would be the Internet. … It would be for research. It is the vast majority how I use the computer. (David: Nov. 10, 05).

So I try the use them [computers] and most of it research based (Kate: Jan. 30, 06).

Well … I use Internet a lot … in the classroom (Mike: Jan. 19, 06)

Second one would be as research tool so that the students can do research… on any given topic. (Bill: Dec. 06, 05)

The classroom observations also showed that using the Internet for research was the most common strategy in the classrooms observed. Generally, the teachers had students use the Internet as a research tool to find textual and visual information for their projects. This finding is consistent with the current literature. A recent study showed that “Internet use” and “accessing information from the Web” were the most common uses of computer in the social studies (Whitworth & Berson, 2003).

Teachers’ focuses within the strategy of using the Internet for research varied to some degree, yet most of them acknowledged the crucial role of the Internet in terms of
providing information to students about multiple perspectives, cultures, and real-world issues. The following excerpt is a good example representing this view.

It’s [Internet] it’s nice reference area and a good way to look at different points of view and to look at different ideas (David: Jan. 24, 06)

Similarly, Bill and Mike also pointed out that the Internet is a good tool for exposing students to multiple perspectives and cultures. This finding also is consistent with the current literature in the field. A number of studies emphasize the crucial role of the Internet in terms of providing information to students about multiple perspectives, cultures, and real-world issues (see Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002; Hicks & Ewing, 2003; Larson, 1999; Shiveley & VanFossen, 1999, Zukas, 2000).

Kate was the only teacher in the study who did not prefer to use Internet sources that represented multiple perspectives, beliefs, and cultures; rather, she preferred to use sources that did not represent opinions or perspectives. Although Kate did not recognize the Internet’s crucial role of providing multiple perspectives and points of view, all other participants used the Internet to expose students to multiple perspectives, beliefs, cultural values, and real-world issues. This variance among the teachers’ Internet use seems to stem from their differing beliefs about teaching, learning, and teaching philosophies. David and Bill, especially, were very passionate about providing students with multiple perspectives and cultural values, while Kate’s focus was on historical events and “facts.”
Assertion 2: Computers were frequently used as a presentation tool in the classrooms observed.

All participant teachers used computers as presentation tools in their classrooms, although how and how often they used them varied.

Among all participants, Bill used the computer for presentation purposes most frequently. He cited the Smart Board as the most common use of computers in his classroom. During the classroom observations, Bill used the Smart Board to show Web sites and handouts related to students’ projects. Bill also showed historical documentary films to students during the classroom observations, which is another method of using the Smart Board.

Kate also used the computer as a presentation tool frequently in her teaching. She used the computer to show Web sites and handouts related to students’ projects during the classroom observations. She stated that “It’s kinda a nice way to …to for everybody to be on the same page, so to speak. You know which is pretty big in the middle school because they don’t always wanna be on the same page” (Feb. 15, 06).

Mike mostly used the computer as a presentation tool to project Web sites on the classroom wall in order to support his lectures with visual aids. Mike gave special attention to providing visual aids with his lectures as he believed that Americans are mostly visual learners. He stated that

Not only just listen to what I am saying but they actually could see it as I am talking about itself. If I am talking about a general in World War I, then I’d try to find out the picture of that … person. (Dec. 14, 05)
On the other hand, David rarely used the computer for presentation purposes. He generally preferred to use an overhead projector. David’s views about using computers in educational settings explain why he did not necessarily use the computer for presentations at the time of the study. He stated that “I don’t use computers just to use computers. I use computers when I can’t teach it another way.” (Nov. 10, 05). Therefore, because he believed the overhead projector was an adequate tool for presenting documents and handouts for students, he did not bother to use the computer.

Computers were also used to present students’ projects. All participant teachers stated that computers were used frequently in their classes for student presentations. Most of these presentations were made with Microsoft PowerPoint. Many PowerPoint projects were presented during the classroom observations in all classrooms observed.

Thus, all participants used computers as presentation tools in one form or another. However, although all classrooms had computer-supported presentation tools, the quality of these tools varied. While all classrooms had regular projectors, only Bill’s classroom had a Smart Board, which provided visual and sound effects of a higher quality.

Although computers are frequently used as presentation tools by both teachers and students, such use has not been studied very much. There are only a few studies, which focus on the use of PowerPoint presentations in undergraduate courses. I will discuss this in the next assertion.

**Assertion 3: Use of conventional software programs such as Microsoft Word, Excel, and PowerPoint were among the most common uses of computers.**

The interviews and classroom observations showed that Microsoft Word and PowerPoint were the most common software programs used in all classrooms. In all
classrooms, students used Word documents to type their papers and also as “scratch paper” to take notes, evaluate and analyze information, and edit the information before they created their final projects. The editing feature of the software program was cited by all participant teachers as a great advantage for the students as it prevented them from needing to retype, consequently saving time and thereby helping to improve students’ work. According to David, this feature not only made things easier for students but also let them create better products. He stated that

… when they write their paper, they don’t want to manually rewrite the entire thing and because they’ll fight you on… how much of it they’ll actually re look at, revisit, and reedit. But, if it’s on a computer … [it’s] much easier… (Nov. 10, 05)

Similarly, Mike emphasized that it would not be possible for students to edit and re-adjust their work if they worked with traditional materials. According to Mike, this feature of the computer technology allowed students to do better work on their projects. He stated that

The computer allows students to correct … those mistakes; to retype a paragraph; to go back and look at their work and say ‘you know what that’s not good enough, I want to redo that’. It allows them to … kind to do … without having them to start all over from scratch and retyping the entire paper so what is you get is better work from students. (Jan. 19, 06)

PowerPoint was the other software program commonly used in all classrooms during the study. Although PowerPoint was not used during the observation of Bill’s classroom, he cited that he frequently used it with the students. Projects involving
PowerPoint were observed in all other participants’ classrooms during the classroom observations. In all classrooms observed, students usually used PowerPoint concurrently with Internet searches and Microsoft Word to create their projects.

Although all participant teachers let the students work on PowerPoint projects, some concern were raised about the application of this strategy among the participants. Mike pointed out a PowerPoint project should stand up on its own and reach out to its audience. However, he believed that most of the PowerPoint projects do not meet these criteria and stated that “… if there’s too many words on there [PowerPoint slides], that’s not what really doing the job, only done is found another lecture tool …” (Dec. 14, 05).

According to Kate, students mostly copied textual information from the Internet and then tended to put long text on the PowerPoint presentation without editing the information (Informal discussion: Feb. 16, 06). However, PowerPoint seemed to be students’ favorite software. Kate stated that “… They [students] love doing PowerPoints. I think it’s because it is easy. ‘Cut and paste; next screen; cut paste; put a figure in.’ I think … I don’t think they utilize much … creativity” (Feb. 15, 06).

There were not many differences in how this software was applied in the classrooms observed. Students did Internet searches and copied information from the Internet to Word documents so that they could evaluate and analyze information, then they would edit the information before they created their final PowerPoint projects. The concerns raised by Mike and Kate were valid. The quality of the PowerPoint projects varied to some extent. While there were high-quality projects, some of them had long, unreadable text. It was clear that those students did not spend adequate time on the
projects; rather they copied and pasted information from the Internet without any editing and probably without even reading it.

In addition, Microsoft Excel was also used by the students in the classrooms observed. Although it was not used as frequently as Microsoft Word or PowerPoint, students used Excel to create databases, tables, and charts for their projects.

In conclusion, Microsoft Word and PowerPoint were the two most commonly used software programs used in the observed classrooms. However, there is not much research in the literature about these applications. The research focuses on the effectiveness of PowerPoint presentations in undergraduate courses (DenBeste, 2003; see also Bartsch & Cobern, 2003; Frey & Birnbaum, 2002; Susskind, 2005) rather than in K-12 educational settings. Similarly, there are few studies on the effectiveness of computer-supported writing activities in social studies (see Berson, 1996). Therefore, it is clear that there is a need for more empirical research to investigate the role and effectiveness of Microsoft Word and PowerPoint in the social studies classroom.

**Assertion 4: The use of other software programs was rare in the classrooms observed.**

The data indicated that software programs other than Microsoft Word, Excel, and PowerPoint were rarely used in the classroom. Mike was the only teacher who used a software program different from those just mentioned. He had students create videos using Windows Movie Maker (Microsoft Corporation, 2004). Kate mentioned an experience using the software program Inspiration 8.0 (Helfgott & Westhaver, 2006) with the students. David cited a number of uses of different software programs such as database software and Hyperstudio (Sunburst Technology, 2003). However, due to the lack of software programs in his school he was not be able to use many different software
programs with his teaching, even though he was the most knowledgeable teacher about computer and software technologies of all the participants. Finally, Bill named the software program Inspiration 8.0 (Helfgott & Westhaver, 2006) as a need for his school. Thus, it seems that the availability of software programs significantly affected software use among the teachers.

The lack of software mostly affected David’s teaching as he was very proficient in various computer applications and eager to use them in the classroom. Kate and Mike did not complain about lacking software, and Bill named only one program that he needed. In fact, none of them were seeking new computer applications that could be used in the social studies classroom. All of the participants except David admitted that they did not have much knowledge about software programs designed for social studies.

One of the first national surveys about the computer use of social studies teachers provided a result consistent with this finding. The survey was conducted on 800 teacher members of The National Council for Social Studies, and they listed “awareness of software in social studies” as the number-one category of training experience that they desired (Northup & Rooze, 1990). Current studies in the literature also show that a lack of training in how to apply computer- and Internet-supported instructional strategies in the classroom is one of the problems cited by social studies teachers (see Rice et al., 2001; Vanfossen, 2000, 2001).

Another reason for the participant teachers not preferring to use different types of software could be related to a lack of time due to curriculum requirements. For instance, David stated that “There is some really good simulations out there. But I’ve got have two to three weeks to do it and according to the mapping of my curriculum they won’t give
me that kind of time” (Jan. 24, 06). Similarly, Bill also pointed out that simulation types of software program did not fit with his curriculum. This finding is also consistent with the current literature in the field. Lack of time was also cited as one of the factors that affected social studies teachers’ use of computer-supported instruction (see Sunal et al., 1998; Rice et al., 2001).

Nevertheless, while the lack of software and time issues related to the curriculum seem to be the major problems that prevent the participant teachers from using different types of software, the teachers’ lack of proficiency with using software programs was also a significant reason. Most of the participants did not have much experience with using educational software programs other than Microsoft Word, Excel, and PowerPoint.

It is clear that lack of software availability was one factor that prevented the participant teachers from not having enough experience to become proficient in these types of software. Without different types of software, there was no reason for the teachers to learn how to use them—or even find suitable programs. Moreover, because districts or school administration made decisions about software selection there was nothing the teachers could do about these issues. However, administrative issues related to computer use in the classroom are beyond the scope of this study.

Assertion 5: Lack of computers was still a problem in some of the observed classrooms.

While the data from National Center for Education Statistics (NCES, 2003) showed a rapid increase in the number of instructional computers—on average, 131 instructional computers per school—in American schools, access to computers for instructional use was still a problem in David’s and Kate’s schools. Limited access to computers was cited as a major factor that affected their integration of computers into
their teaching. There were limitations for getting into the computer lab. For instance, Kate only was allowed to have the computer station in her classroom five days each month.

On the other hand, Mike and Bill did not have many problems with accessing computers. Mike did not have problems with computer access because he had 18 computers in his classroom, as he had earned a certificate from the district to have a laptop station in the classroom. This seems to be a privilege, but it was earned by his hard work and dedication. Although Bill did not have many computers in his classroom and the number of computers was not very high in the computer lab (there were 20 PCs), he had the advantage of being in a private school. In Bill’s particular private school, unlike in the public schools, students were allowed to use all available computers within the school building. Thus, students could go beyond the computer lab to use computers in the library or in other classrooms, even while classes were in session. Unfortunately, the public school did not have the flexibility to allow teachers and students to use the computers more effectively.

In conclusion, the lack of computer availability was still a problem in some of the observed schools, and it limited the participant teachers from integrating computers in their teaching. This finding also is consistent with the current literature. Lack of computer availability and problems with internet access was the one of the most cited problems keeping teachers from using computer-supported instruction (see Gibson & Nocente, 1999; Keiper et al., 2000; Sunal et al., 1998; Vanfossen, 2000, 2001).
Assertion 6: The Internet is a great tool for students to acquire global and multiple perspectives.

The interviews and classroom observations indicated that the most important innovation within the educational technology frame was that the Internet provided vast amounts of information and sources to the students as well as to teachers. All participant teachers recognized the significant role of Internet sources in education in terms of easier and faster access to information. Kate stated that “I just think it is the only way to really get a lot of information. … the Internet is important on getting some expanded knowledge for the students” (Feb. 15, 06).

Access to global and multiple perspectives through Internet sources was another crucial aspect of computer technologies (see Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002; Hicks & Ewing, 2003; Larson, 1999; Risinger, 1996a, 1998b; 2000b; Shiveley & VanFossen, 1999, Zukas, 2000). Most of the participant teachers valued the crucial role of global and multiple perspectives within the modern social studies frame. Bill and David, especially, focused on multiple perspectives in their teaching and cited the significant role of the Internet in terms of providing multiple perspectives. David stated that

I think … it’s faster and often times easier to identify points of view… if you’ve trained kids as to what to look for. (Jan. 24, 06) … because it gives you access to information you couldn’t get any other way. I mean you can get the primary sources anywhere on the planet using your computer. … In the fact that it gives you access to information and ideas… you couldn’t have it… let’s say in a
traditional library because you couldn’t afford it… or you may not even have access to it in the first place. … (Nov. 10, 05)

In addition, Bill emphasized the role of the Internet in providing multiple perspectives and information about diverse cultures through online newspapers. The following excerpt shows how he valued international online newspapers as a tool for providing multiple perspectives and information about cultural values from all over the world.

All [online newspapers] written in English but … okay published in different parts of the world. So, the concept of the culture was being reinforced to them [students] not just as a… a concept and a definition … but they could visually see… different cultures through the different newspapers and different headlines and different perspectives that were being presented. As we worked through … the course content from this point [on them]: examining the cultural regions in the Middle East, Asia, and Africa, they will increasingly be looking at … cultural values … So, we’ll talk about the language; we’ll talk about the values; we’ll talk about the technology; we’ll talk about the way that side is organized family unit exc. And then they will be able then to use these concepts of culture to deal with issues within those regions. So, culture becomes really not just the focus of the course but it’s the lens through which they [students] examine these different cultural regions. (Jan. 12, 06)

Similarly, Hicks and Ewing introduce some online newspapers from different regions of the world in their 2003 article and point out that online newspapers facilitate the introduction of multiple and global perspectives into classrooms and curricula. These
newspapers promote students’ awareness about other people’s concerns, perspectives, and points of view.

Although Mike did not necessarily focus on global, multiple perspectives in his teaching, he also acknowledged this aspect of the Internet. When Bill, David, and Mike had their students work on the Internet, they advised students specifically to seek for multiple information sources that represented multiple perspectives. On the other hand, Kate wanted to keep her students from sources that represented opinions; rather, she preferred to use sources that represent “facts and events.” She stated that

… if they [Internet sources] have government attached to anything or national archives seems to be the best one for me. The Smithsonian or National archives those kind of … I try to keep with those more than getting into an opinion kind of thing. You can sometimes tell opinions when they start out and say you know ‘I think we should do this…’ you know and it is like ‘what!’ (Feb. 15, 06)

While Kate had a different approach to using Internet sources, all of the other participants valued the Internet’s role of adding multiple and global perspectives and cultural diversity to the content of the course.

There is a clear connection between teachers’ beliefs about social studies, their teaching philosophies, and how they perceived and used the Internet with the students. Because Bill, David, and Mike believed in the importance of global and multiple perspectives, they valued and used the Internet within that frame. However, Kate’s focus was not on that aspect of social studies, so she used the Internet in different ways.
Nevertheless, the role of the Internet in providing global and multiple perspectives was generally recognized by most of the participant teachers, and in fact it was utilized to promote multiple perspectives in their classes.

*Assertion 7: Computer-supported instructional strategies have the potential to promote constructivist pedagogy in social studies education.*

Although there is growing support for the use of computer-supported instructional strategies in social studies education (see Berson, 1996; Berson & Balyta, 2004; Hicks et al., 2002; Hicks et al., 2004; Mason et al., 2000; Rice & Wilson, 1999; Rose & Ferlund, 1997; Saye, & Brush, 1999; Shiveley & VanFossen, 1999; VanHover et al., 2004; Whitworth & Berson, 2003), the effectiveness of computer integration as a way of transforming social studies instruction to a more constructivist and student centered pedagogy has also been criticized (see Diem, 2000; Martorella, 1999; Shaver, 1999).

Thus, this study is designed to examine the use of computer-supported instructional strategies in social studies education and to investigate the influence of these strategies on the principles of constructivist pedagogy in social studies education. Doolittle and Hicks (2003) proposed six pedagogical strategies that may guide effective and constructive computer use in the social studies classroom. I developed six criteria based on their framework in order to assess how effective and constructive the integration of computers was in each case. The criteria are as follows:

1. Students should be active participants in the learning process, either in a group or as individuals.
2. Students’ prior knowledge/experiences should be used through the CSI activity.
3. The CSI activity should be authentic and should resemble a real-life context.
4. Knowledge construction should be achieved through the CSI activity.

5. Multiple and global perspectives should be analyzed in the course of learning processes where CSI is used.

6. Critical thinking, problem solving, and decision making should be encouraged during the CSI activity.

I analyzed the classroom observation notes and the selected student projects to decide whether these criteria were met in the projects. The following table was created as a result of this analysis.

<table>
<thead>
<tr>
<th></th>
<th>CSI (David)</th>
<th>CN (Bill)</th>
<th>CP (Mike)</th>
<th>WWI (Mike)</th>
<th>W-1812 (Kate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Active Participants</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Students’ Prior Knowledge &amp; Experiences</td>
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<td></td>
<td>X</td>
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<tr>
<td>Real-life Context</td>
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<tr>
<td>Knowledge Construction</td>
<td>X</td>
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<tr>
<td>Multiple &amp; Global Perspectives</td>
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<tr>
<td>Critical Thinking, Problem-Solving, &amp; Decision-Making</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Note. CSI (David) = Computer-supported instructional project. CN (Bill) = Colonial Newspaper project. CP (Mike) = City Planning project. WWI (Mike) = World War I project. W-1812 (Kate) = War of 1812 project.

Table 4.1: The student’s projects in accordance with the criteria for effective and constructive computer integration
As Table 4.1 shows, most of the student projects reinforced an environment in which students more actively engaged, critically analyzed and synthesized multiple perspectives; were involved in real-world experiences; and, most importantly, created and constructed their own knowledge. I will discuss each project individually in order to provide more detailed information about the successes of the projects in terms of constructivist computer integration.

**Student Projects**

**CSI project (David).**

Students were supposed do research about a historical figure for this project. As a part of the project, students were supposed to write an essay and create a project in which they compared themselves to the historical figure. The activity was structured and planned very well. Thus, it was easy for the students to follow the instructions and complete all requirements for the project. The students were active participants during the whole project.

The students found many resources on the Internet about the historical figures they were studying. When students wrote essays comparing themselves with the historical figures, they had to construct a connection between themselves and the figures. This activity required not only a critical evaluation of the resources in order to draw a conclusion about the figures, but also self reflection for the students. Thus, it seemed that this project was an opportunity for students to use their real lives within the project when they constructed their knowledge about the historical figures through analyzing and synthesizing the resources.
The colonial newspaper (Bill).

This project was a good example of presenting multiple perspectives. The students were supposed to produce a newspaper that was set in the colonial period with a clear expression of the viewpoints of both Patriots and Loyalists. The analysis of the selected student projects showed that students presented the two different views throughout the newspaper. This newspaper project also clearly showed that students were actively engaged through the process of preparing the newspaper because they were critically analyzing and synthesizing multiple perspectives. More importantly, students wrote every section in the newspaper with their own words using the information they had collected. Through this process, they had to think, analyze, and synthesize information to construct their own knowledge.

City planning (Mike).

This project was a good example of how to integrate students’ real-world experiences and contexts. This was a group project created by Mike’s twelfth-grade students. The task was to create a city and write a report explaining the history, landmarks, maps, zoning (laws), economics, schools, and other public buildings of their city. As a part of the project students were supposed to create a ten-minute video that introduced the city. Students filmed the videos in their own neighborhoods so that the videos represented parts of their real lives. In this project, students were not only actively engaged in the process, but they also had to make many critical decisions to create the best film possible. Thus, they had to evaluate the information they had collected to create their city. Their final task was creating the videos based the information that they had collected and the way that they had designed their city.
World War I (Mike).

This was a set of projects related to WWI and created by Mike’s tenth-grade students. There were three options for this project: writing a diary, creating a newspaper, or creating a PowerPoint presentation. Except the newspaper projects, students worked individually. Students did Internet searches to find information for their projects. The Internet was a crucial source for them in terms of gathering information and visual materials for their project. Most of the students created PowerPoint projects, but the Movie Maker program (Microsoft Corporation, 2004) was also significant as many students used that software to edit and to add text and sound to the films they had found on the Internet.

Thus, students searched for visual or textual information; evaluated, analyzed, and edited what they found; and finally created their presentations. I believe that most of the projects were successful in terms of students were being actively engaged in the construction of knowledge process. However, one PowerPoint project consisted of only one slide containing a single picture and a lengthy text. It is clear that this student only copied information from the Internet without any editing.

In conclusion, the World War I projects generally promoted a constructivist learning process for students because they were active engaged in the whole process, critically analyzed the information they had, and created and constructed their knowledge.

War of 1812 (Kate).

The project was designed as a group project, and each group consisted of two or three students. There were twelve topics—usually individual battles—about the War of
1812, and Kate stated these topics in the project handout. Students were assigned to the topic of their choice. They were supposed to do Internet searches to find information about their topic and then create a project. The project could be either computer-supported, such as a PowerPoint presentation, or a more traditional project, such as a poster presentation.

Students were actively engaged in the whole process. They critically analyzed the materials they had from the Internet and made decisions about the information so that they could create the PowerPoint presentations and construct their knowledge about their topics. Most of the PowerPoint projects were high quality and represented the War of 1812 well by using pictures and text on the slides. These projects seemed to support constructivist learning because students had to process, analyze, and synthesize information. However, some of the projects did not seem to be constructed by students; rather, most of the information was copied from the Internet without any editing.

Discussion

Most of the projects showed that computer-supported instructional strategies have the potential to promote constructivist pedagogy in social studies education because they reinforced an environment in which students more actively engaged, critically analyzed and synthesized multiple perspectives; were involved in real world experiences; and, most importantly, created and constructed their own knowledge. Nevertheless, it must be noted that not all of the projects achieved these aspects of constructivist computer integration with equal success. There are many reasons for this uneven success.

One of the reasons is directly linked to the instructional design and process of the unit in which computer use was integrated. Bill’s and David’s units were especially well-
structured and the instructions were very clear to the students. The expectations for the units were clearly identified so that students would know how and what to do to reach the expectations. More importantly, students were closely monitored by the teachers while they were working, and they were given feedback on their work frequently.

Similarly, there are studies in the literature that emphasize the need to structure computer-supported instructional strategies well for the learning activity to succeed (see Barr, 1994; Berson & Balyta, 2004; Ehman et al., 1992; Szymanski et al., 1996). A study that investigated the use of electronic communication between middle school students also supported this claim (see Szymanski et al., 1996). This study, conducted on four teachers and 100 students in a middle school in the southwestern United States, indicated that although all participant teachers saw the project as a valuable tool to their students, they felt overwhelmed by the complexity of involving students in the projects and complained about the lack of organization (Szymanski et al., 1996). Likewise, Barr (1994) points out that e-mail or pen pal exchanges need a clear structure and purpose for the learning activity to succeed.

Berson and Balyta (2004) also point out the importance of well-structured virtual (online) field trip activities. They stated that if the virtual field trips are used in isolation, poorly prepared students might only surf the Internet aimlessly without learning through the field trip.

Finally, Ehman et al. (1992) point out the significance of well-structured database activity. The authors examined the database activities of eight social studies teachers from four different states. The study showed that the participant teachers were not able to provide clear instructions for students and as a result students were confused and
overwhelmed. Ehman et al. (1992) concluded that structure is an essential part of this
database-supported problem-solving; thus, the sequences in the activity such as unit
introduction and presentation of the problems should be very well-structured and planned
and, more importantly, clear expectations should be provided for each sequence.

Therefore, it seems that the findings that computer-supported activities need to be
planned and structured well are also supported by the current literature. However, even if
units are structured well, if the creation of projects is not monitored closely and students
are not given feedback and directions during the process, the units lose the constructivist
edge. Rather, the units can easily transform to traditional types of projects. Thus, it is
crucial to monitor students while they are working and give them feedback on their work
regularly to make sure they stay on task. Ehman et al. (1992) similarly state that effective
teachers reinforce “structure through the use of regular checking of individual student
work at key points, as well as in whole-class debriefing of particular phases of the
process” (p. 196). This statement also is consistent with the findings of this study. Two of
the participants, especially, closely monitored students while they were working and
regularly checked their progress as individuals or groups. Moreover, they gave a five-
minute, whole-class debriefing in each class session throughout the activity to talk about
things they have done and things they will do in the next sequence of the activity.

In conclusion, as this study and the literature in the field (see Barr, 1994; Berson
& Balyta, 2004; Ehman et al., 1992; Szymanski et al., 1996) indicate that well-structured
computer-supported activity with the close involvement of the teacher is essential for the
success of the learning activity.
Summary

In this chapter, I presented the findings of this study. First, I treated each case individually and provided a detailed description of each setting. I described the participants’ academic backgrounds, their beliefs about teaching and learning, and their beliefs about computer-supported instruction in social studies. I also described the school and classroom context as well as the computer and software availability at each site. Then, I presented the participants’ use of computer-supported instructional strategies with the classroom observation vignettes. I described each strategy within the context of the instructional unit that was being presented. Finally, I summarized each case individually and evaluated the findings at the end of each section.

Second, I did a cross-case analysis and compared all cases to find some patterns and build abstractions across the cases. I presented each assertion with key quotes from the data and compared data from all settings. I also compared the findings of this study with the current literature in the field.

In the next chapter, I will discuss the research questions of the study and summarize the findings of this research. I will also discuss the implications of this research and further research possibilities.
CHAPTER 5

CONCLUSION

Introduction

The purpose of this study was to examine the use of computer-supported instructional strategies in social studies education and to investigate the influence of these strategies on the principles of constructivist pedagogy in social studies education.

Case study design was employed to gain an in-depth description, understanding, and interpretation of the use of computer-supported instructional strategies in the social studies classroom and the influences of these strategies on the principles of constructivist pedagogy. In order to collect data from different perspectives and be able to compare the findings from different settings, I preferred to use “multi-case studies.”

I therefore worked with four social studies teachers who used computer-supported instructional strategies frequently in their classes. I conducted two interviews with each teacher and observed their classes. I collected samples of handouts given by teachers to the students and selected student projects from each class during the classroom observations.

I analyzed the data using NVivo (QSR International, 2002), a qualitative software program. I presented each case with detailed descriptions in order to understand and
explain what happened in each individual case. Then, I applied cross-case analysis and compared all the cases to find patterns and build abstractions across the cases. The patterns and abstraction coming from the data were used to build the following general assertions. In this chapter, I will discuss the following assertions in relation to the research questions.

**Assertions**

1. The most common use of computer among these teachers was to have students use the Internet for research purposes.
2. Computers were used as a presentation tool frequently in the classrooms observed.
3. Use of conventional software programs such as Microsoft Word, Excel, and PowerPoint were among the most common uses of computers.
4. The use of other software programs was rare in the classrooms observed.
5. Lack of computers was still a problem in some of the observed classrooms.
6. The Internet is a great tool for students to acquire global and multiple perspectives.
7. The computer-supported instructional strategies have the potential to promote constructivist pedagogy in social studies education.

**Discussions of Research Questions**

*What are the current computer-supported instructional strategies used in the social studies classroom? How do social studies teachers use computer-supported instruction in their classrooms?*
The interviews and classroom observations showed that the participant teachers used a number of computer-supported instructional strategies. Table 5.1 shows the participants’ self-reported use of computer-supported instructional strategies. However, it must be noted that not all of these strategies were observed during the data collection period due to the time limit.

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<th>Kate</th>
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Table 5.1: Self-reported use of computer-supported instructional strategies by the participants.

As table 5.1 shows, use of the Internet and of software programs such as Microsoft Power Point, Word, and Excel were the most common type of computer-supported instruction in the classrooms observed. In addition, computers were used as presentation tools frequently in these classrooms. Multimedia software was used by only one teacher during the classroom observations. Other strategies listed in the table were
not observed during the data collection period, although the participant teachers reported they had had experiences with these applications.

The Internet was the most common computer use in the observed classrooms. All participants used the Internet because it provided fast and easy access to a vast amount of resources and information. This finding is consistent with the recent literature. A number of studies showed that “Internet use” and “accessing information from the Web” were the most common use of computers in social studies education (Whitworth & Berson, 2003; see also Pye & Sullivan, 2001; Vanfossen, 2000, 2001).

Along with its fast and easy access to information, most of the participant teachers valued the Internet for its ability to provide global and multiple perspectives to students. This finding also is consistent with the current literature in the field. A number of studies emphasize the crucial role of the Internet in providing information to students about multiple perspectives, cultures, and real-world issues (see Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002; Hicks & Ewing, 2003; Larson, 1999; Risinger, 1996a, 1998b, 2000b, 2001a, 2003b; Shiveley & VanFossen, 1999, Zukas, 2000).

The computer was also frequently used as a presentation tool in the observed classrooms, either by students or by the teachers. All participant teachers used the computer to show Web sites and handouts related to student’s projects during the classroom observations. Another form of computer use was to present students’ projects. All participant teachers stated that computers were frequently used in their classes for student presentations. There were many PowerPoint projects presented during the classroom observations in all classrooms observed.
Although computers were used as presentation tools frequently by both teachers and students, not much has been written in the literature on this subject. Nevertheless, it seems that there are a number of benefits of using computers as presentation tools. The data showed that when a computer was used as a presentation tool, it not only improved the quality of the presentation’s visuals and sound, it also gave the teachers flexibility to use other types of tools with the computer, such as connecting to the Internet or to a DVD player. Clearly, it is not possible to have such flexibility and ease in transferring to another presentation tool with a traditional overhead projector.

Another common type of computer use by the participant teachers was the use of software programs. Only conventional software programs such as Microsoft Word, Excel, and PowerPoint were commonly used in the observed classrooms. In all classrooms, students used Word documents to type their papers and also as “scratch paper” to take notes, evaluate and analyze information, and edit the information before creating their final projects.

PowerPoint was the other software program used frequently in all classrooms during the study. There were not many differences between classrooms in how this software program was used. Students did Internet searches and copied information from the Internet to Word documents so that they could evaluate information, analyze it, and edit it before creating their final PowerPoint projects.

In addition, Microsoft Excel was also used by the students in the classrooms observed. Although it was not used as frequently as Microsoft Word or PowerPoint, students used Excel to create databases, tables, and charts for their projects.
Microsoft Word, Excel, and PowerPoint were the most commonly used software programs in the observed classrooms. However, other studies about the computer use of social studies teachers have shown that word processing, graphics, simulation, educational games, drill and practice, and tutorials are commonly used computer-supported instructional strategies in social studies education (see Northup & Rooze, 1990; Pye & Sullivan, 2001).

Many reasons could explain the discrepancy between the findings of my study and the literature in the field. I believe one of the discrepancies is due to comparing results from a qualitative study with results from quantitative research. As the design of a qualitative study necessarily cannot have the same scope as a national, quantitative survey, it is almost impossible for me to find all the strategies cited above in one single study. The discrepancy could also be related to major developments in computer hardware and software in the last decade that have increased the integration of computers in social studies education (see Berson & Balyta, 2004; Nickell et al., 2001; Rose & Fernlund, 1997; VanHover et al., 2004; White, 1997; Whitworth & Berson, 2003). As newer software programs have been developed for the use of social studies teachers, it is natural that some of the more old-fashioned programs would be abandoned for the newly developed ones.

However, the data in this study showed that newly developed software programs other than Microsoft Word, Excel, and Power Point were rarely used in the observed classrooms. There are a number of reasons for that situation and I will discuss it in the next research question.
What are the factors influencing social studies teachers’ use of computer-supported instruction in their classroom?

The data indicated that a number of factors influenced social studies teachers’ computer use in their classrooms. The first factor was the lack of computer and software availability in the schools. The data showed that in the two of the observed schools, computer availability was a factor that kept the teachers from integrating computers more with their teaching, even though the data from the National Center for Education Statistics (NCES, 2003) showed a rapid increase in the number of instructional computers (an average of 131 instructional computers per school) in American schools. Similarly, the literature indicated that lack of computer availability and problems with internet access was one of most cited barriers keeping teachers from using computer-supported instruction (see Gibson & Nocente, 1999; Keiper et al., 2000; Sunal et al., 1998; Vanfossen, 2000, 2001).

In addition, the lack of software was a problem in some of the observed classrooms, and it kept at least one participant from using computer-supported instructional strategies more frequently. Nevertheless, most of the participant teachers were not seeking new computer software programs that could be used in the social studies classroom. In fact, due to administrative processes, the teachers did not have much responsibility for choosing software programs or even much effect on which programs were chosen.

Moreover, most of the participant teachers did not know or feel comfortable using educational software programs other than Microsoft Word, Excel, and PowerPoint. One of the first national surveys about the computer use of social studies teachers provided a
result consistent with this finding. The survey was conducted on 800 teacher members of National Council for Social Studies, and they listed “awareness of software in social studies” as the number-one desired category for training experience (Northup & Rooze, 1990). In addition, a lack of training in how to apply computer-supported and Internet-supported instructional strategies in the classroom was cited one of the factors that kept social studies teachers from using computer-supported instruction. (see Rice et al., 2001; Vanfossen, 2000, 2001).

Another factor influencing social studies teachers’ use of computers in their classrooms could be related to lack of time due to curriculum requirements. Two of the participant teachers complained about the time limit and curriculum requirements. Although not much research has been done on this issue, this finding is also supported by the literature. Lack of time is one of the most extensively cited barriers keeping social studies teachers from using computer-supported instructional strategies more frequently (see Rice et al., 2001; Sunal et al., 1998).

In conclusion, the lack of computers and software, teachers’ proficiency in software programs, and time issues related to the curriculum seem to be the major problems that prevent the participant teachers from using computer-supported instructional strategies more frequently.

*How does computer-supported instruction in the social studies curriculum influence the principles of constructivist pedagogy?*

Although the effectiveness of computer integration as a way of transforming social studies instruction to a more constructivist and student-centered pedagogy has been criticized (Diem, 2000; Martorella, 1999; Shaver, 1999), this study indicated that
computer-supported instructional strategies have the potential to promote constructivist pedagogy in social studies education. However, as all the participant teachers pointed out, a computer is basically a tool for instruction. Yet, they also acknowledged that it is a very powerful tool that has the potential to foster constructivist pedagogy in social studies education.

For instance, the Internet provides fast and easy access to a vast amount of resources representing multiple and global perspectives and different cultural values (see Bennett & Pye, 1999; Cassutto, 2000; Dils, 2000; Hicks et al., 2002; Hicks & Ewing, 2003; Larson, 1999; Risinger, 1996a, 1998b; Shiveley & VanFossen, 1999). It is not possible to find equivalent resources in a textbook or a traditional library. This study also showed that most of the participant teachers valued the role of Internet in providing multiple and global perspectives, and information about conflicts and real-world issues that engage students in processing and analyzing information. Similarly, many researchers in the field of social studies education highlight the role of computers in engaging students in critical thinking, decision-making, and problem-solving (see Bailey, 1987; Bennett & Pye, 1999; Berson, 1996; 2004; Berson & Balyta, 2004; Boyer & Semrau, 1995; Casutto, 2000; Dils, 2000; Fontana, 1997; Hicks et al. 2002; Larson, 1999; Marsh, 1986; Rice & Wilson, 1999; Rose & Ferlund, 1997; Saye, & Brush, 1999; White, 1996; Whitworth & Berson, 2003; Zukas, 2000).

A computer is also a tool that allows students to create and construct information. Although students can create and construct information without using a computer, this tool makes the process easier and faster. Using computer software programs, students can edit, readjust, and rewrite their papers or projects. The editing feature of a software
program was cited by all participant teachers as a great advantage for the students. They pointed out that this feature of the computer means that students do not need to retype their work, which consequently saves time and may help improve their work. On the other hand, in traditional poster board projects, students have to redo all of their work if they make a mistake. All of the participant teachers acknowledged the role of computer technologies in providing students with many opportunities to construct information faster and more easily.

Therefore, it can be concluded that the Internet and many computer applications can be more effective than traditional tools in promoting constructivist pedagogy in social studies education. Yet, it must be noted that while the computer is a very powerful tool that can nourish constructivist pedagogy, it is more effective when the instructional design is well-structured. As the classroom observations and the analysis of student projects indicated, when the instructional process, goals, and requirements of the unit were clear, the unit was more meaningful and understandable to the students. The students were able to actively engage in the processes of thinking critically, analyzing, making decisions, and constructing their own knowledge and realities. Similarly, the related literature also pointed out that well-structured computer-supported instruction is crucial for the success of the learning activity (see Barr, 1994; Berson & Balyta, 2004; Ehman et al., 1992; Szymanski et al., 1996).

Another important factor in promoting a constructivist learning process was teacher’s involvement with the process. It must be noted that a teacher’s behavior has a significant influence on the quality of students’ projects in a computer-supported instructional unit. It is clear that teachers generally have a facilitating role as students
work on their own in this type of project. Yet, this study showed that it is important that teachers closely monitor the working process to make sure all students are on task because students working on computers can easily get off track. In addition, teachers should always give constructive feedback and guidance to students over the course of their studies to make sure that their projects are going in the right directions. Ehman et al. (1992) similarly point out the importance of regularly checking individual student work at key points and debriefing the whole class at particular phases of the instructional process.

The instructional design of the units, teacher involvement in the process, and attitude towards working with students depend on the teaching philosophy of the teacher. Thus, it can be concluded that although computer technologies have the potential to support the principles of constructivist pedagogy in the social studies classroom, utilizing this tool in the most effective way is entirely based on the quality of the instructional design, and thus ultimately based on the teacher.

Implications

1. The number of computers used for instructional purposes should be increased in schools.

As this study showed, computer availability is still a problem in some of the public schools, even though the average number of computers has been increasing rapidly. Therefore, it is necessary to take steps to solve that problem. I believe that schools should be equipped with an adequate number of computers so that teachers would not have to change their instructional strategies due to a lack of computers.
It is clear that each school’s need for computers should be decided based on school population. However, the number of computer labs in a school is a related issue. This study showed that even a school with a very small student population needs more than one computer lab because when the single lab was booked by one of the teachers, other teachers had to change their teaching strategies. Thus, depending on school population, multiple computer labs should be created in the school buildings, and the number of computers should be distributed evenly among those labs.

2. More educational software programs should be made available for teachers’ use.

As the study indicated, educational software programs are rarely used in schools because these software programs were often not available. Therefore, school districts should take action to furnish schools with a wide variety of educational software programs that could be used in many disciplines.

It must be noted that the process of buying software programs is handled by the school districts’ administrators, and teachers generally are left out of that process. I believe that teachers’ opinions should be taken under consideration when decisions are being made about buying a particular software program. Committees of teachers could be formed within school districts to recommend software programs, or surveys and questionnaires could be frequently given to teachers to ask their opinion about these software programs.

3. Teacher education programs should focus more on computer-supported instructional strategies in methods courses.

The study showed that teachers’ lack of knowledge about some computer-supported instructional strategies and software programs is one of the major problems
that prevents the participant teachers from using computer-supported instructional strategies more frequently. I believe that teacher education programs should introduce all computer-supported instructional strategies to preservice teachers, either in methods classes or in technology classes that are specifically designed for that purpose. More importantly, these classes should provide hands-on activities for preservice teachers in the use of educational software programs.

Another important aspect of these classes should be preparing preservice teachers to use computers with the students. As the data showed, one of the problems with the use of computer-supported instruction was associated with a lack of clearly structured instructional design. Thus, it is crucial to focus on well-structured instructional design in these courses to prepare preservice teachers to integrate computers in their future classrooms more successfully and effectively.

Increasing the number of courses that are designed to introduce the use of computer-supported instruction in teacher education programs could help to solve the problem. Yet, I believe that the quality and content of the courses is more important than their number. There is a need for further research about teacher education programs to design a curriculum that prepares preservice teachers for computer- and technology-rich classrooms.

4. Professional development activities should focus on more computer-supported instructional strategies for in-service teachers

While it is important to prepare preservice teachers for computer-supported instruction, it is also important to teach in-service teachers ways to improve their proficiency with using computers and educational software programs. Therefore,
professional development activities that focus on computer-supported instruction for in-service teachers should be organized.

One of the purposes of these activities should be teaching in-service teachers the computer skills they need to become proficient computer users. As the data in this study indicated, some of the participants still did not have the ability to use a number of educational software programs. Therefore, some professional development activities should focus on introducing educational software programs to in-service teachers and giving them ideas for integrating these software programs with their instructional designs.

Further Research

One of the limitations of my study was the absence of student participation. Students’ participation with this study would have contributed to the findings of this research. A follow-up study could be done with the participation of students to investigate the same research questions that were examined in this research. Examining student’s perspectives and attitudes toward computer integration in the classroom would give another perspective to the research and increase the trustworthiness of the results. Acquiring student perspectives would provide a more reliable analysis of the effectiveness of computer-supported instructional strategies in the classroom and the influence of these strategies on constructivist pedagogy in social studies education.

In addition, both qualitative and quantitative studies could be done to examine effectiveness of a particular computer-supported instructional activity such as Web Quest, PowerPoint, or the use of another type of software. I believe that focusing on a particular computer-supported instructional strategy would provide more in-depth findings to help to examine the effectiveness of these strategies individually. Of course,
the findings from that type of research would be more valuable if students were active participants in those studies.

While studying the use of computer within the classroom, it is also important to investigate the influences of outside classroom aspects on computer integration in the social studies classroom. Administrative issues regarding computer and software use in schools can have significant influences on teachers’ use of computer-supported instruction. It is very crucial whether school and district administrators support the use of computer-supported instruction in the classroom. Thus, further studies could be done to investigate the school and district administrators’ views and attitudes toward computer integration in the classroom. In addition, parents’ support for the use of computer-supported instruction is very important and further research could be done to investigate parents’ views and attitudes toward computer integration in the classroom.

Another possible research area is social studies teachers’ proficiency with general computer use and with educational software. As this study indicated, the teachers did not have a high level of proficiency with educational software. It is crucial to identify social studies teachers’ weaknesses in specific computer applications so that the needed steps can be taken to solve the problem. These studies could be both qualitatively and quantitatively oriented. However, I believe that it is important that these studies be administered by school districts so that each individual district can know the weaknesses of its teachers in particular computer applications.

Additionally, further research studies should be done on social studies teacher education programs. These studies could investigate a number of topics related to integrating computers into teacher education programs. One of the purposes of these
studies should be investigating the role of computer technologies in teacher education programs. The final goal of these studies should be to find the ways of integrating computers that suit best the preservice teachers’ needs and prepare them for technology-enriched classrooms. Therefore, the focus of these studies should range from investigating how many technology courses are needed in a teacher education program to examining the content, quality, and, most importantly, the effectiveness of these courses. A longitudinal study could reveal significant findings on this topic. For instance, a study investigating the first-year teaching practices of social studies teachers in order to analyze the effectiveness of the technology courses they had in the teacher education program would be a valuable study. The final aim of these studies should be constructing a model for technology and computer integration in social studies teacher education programs.

Finally, research studies could be designed to investigate the effectiveness of professional development programs that focus on computer-supported instruction. As this study indicated, professional development activities for in-service social studies teachers focusing on integrating computers are necessary. More research can be done to evaluate the weakness and strengths of social studies teachers in the area of computer integration. Thus, the needs of social studies teachers could be identified in order to develop more effective professional development programs.

These programs should focus on introducing newly developed software programs to social studies teachers. As this study indicated social studies teachers do not have much knowledge about available software programs which could be utilized in the social studies classroom. In addition, professional development programs should focus on instructional design strategies which best suit the use of computer and software programs.
in the social studies classroom. This study showed that instructional design is very crucial for the success of computer-supported instruction. Thus, professional development programs should prepare in-service social studies teachers to be able implement computer-supported instruction in the best effective way. As with the proposed research focusing on teacher education, the ultimate goal of the research in this field should be creating the best, most effective model for professional development programs that can help teachers utilize computer technologies in the classroom.

Closing

This study contributed to the research in a number of ways. First, this study identified the most commonly used computer-supported instructional strategies in the social studies classroom and described how these strategies were implemented by social studies teachers. Additionally, the findings of this study pointed out the factors influencing social studies teachers’ computer use in the classroom. These findings could contribute the ongoing research in the field and provide another perspective to further research.

Yet, more importantly this study is one of the first studies that focus on how computer-supported instruction facilitates the principles of constructivist pedagogy in the social studies curriculum. I believe that this study provided a clearer understanding of the relationship between computer-supported instruction and constructivist pedagogy, and a guidance for application of computer-supported instructional strategies in the social studies classroom. This finding of the study could also provide a base for further research regarding the relationship between computer-supported instruction and the principles of constructivist pedagogy.
LIST OF REFERENCES


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APPENDIX A

RECRUITMENT LETTER
Dear……..

My name is Mehmet Acikalin. I am a graduate student majoring in Social Studies & Global Education at The Ohio State University. I am interested in investigating “The influence of computer-supported instructional strategies on the principles of the constructivism”. I have obtained your name from my professors in the social studies and global education program (Dr. Merry Merryfield, Dr. Cynthia Tyson, Dr. Steven Miller). I am asking for your consent to participate in this study, which will help me understand the relationship between computer-supported instruction and the constructivist pedagogy.

This study intends to (a) find evidences about social studies teachers’ perceptions and beliefs about constructivist pedagogy (b) understand how the constructivist pedagogy influenced by computer-supported instruction in social studies classes. In order to do this, I am going to interview with you and observe your classes at least five times.

If you agree to participate, please sign the consent form. Your participation in this study is voluntary, and you are free to withdraw from participation at any time during the study.

All information will be kept strictly confidential by assigning a pseudonym that will substitute for your name on all materials. No actual names will be used in any report of the research. The tapes will be used for research purposes only and they will be kept in a secure place.

If you have any questions related to this study, please feel free to contact me at (614) 451-0346 and/or acikalin.1@osu.edu.

Sincerely,

Mehmet Acikalin
APPENDIX B

CONSENT FOR PARTICIPATION IN RESEARCH
I consent to participating in research entitled: “The influence of computer-supported instructional strategies on the principles of the constructivist pedagogy in the social studies curriculum”

Dr. Cynthia A. Tyson, Principal Investigator, or his/her authorized representative; Mehmet Acikalin has explained the purpose of the study, the procedures to be followed, and the expected duration of my participation.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Furthermore, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without prejudice to me.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: ___________________________  Signed: ___________________________

(Participant)  

Signed: ___________________________

(Principal Investigator or his/her authorized representative)
APPENDIX C

DEMOGRAPHICSQUESTIONNAIRE
1. Gender: (1) Male  (2) Female

2. Age: _______

3. Graduated from the University of ______________________________
   a) College of Education b) Arts and Sciences
   c) Other (Please specify) ___________________________

4. Major:
   a) Social Studies Education b) Other (Please specify) ___________________

5. Master’s Degree? If yes, please specify the name of the institution, year of graduation,
type of degree (M.Ed. or M.A.)
   ________________________________________________________________

6. Doctoral Degree? If yes, please specify the name of the institution, year of graduation,
type of degree (Ed.D. or Ph.D.)
   ________________________________________________________________

7. I mostly have taught:
   (A) Urban area a) Large city b) Small city
   (B) Rural area
   C) Small town

6. Overall number of years of teaching social studies _____________________

7. Current grade teaching.
   a) Sixth grade b) Seventh grade c) Eighth grade d) Other(Please specify)
   ____________________

8. Grades taught: __________________________

10. Number of computers in your classroom: ___________________
1. Do you use computer-supported instructional strategies in your classroom? If yes, how often?

2. Could you name the most common use of computer and the Internet as a teaching tool in the classroom? What types of applications do you use? Software, Web sites?

3. Could you give me an example that represents your application of computer-supported instructional strategies (CSI) into your classroom?

4. How is the idea that using computer-supported instruction consistent with your teaching philosophy?

5. How do you describe the influence of computer-supported instruction on student learning?

6. What do you think about the influence of computer-supported instruction on enhancing students’ critical thinking, problem-solving, and decision-making skills?

7. How do you see the role of computer-supported instruction in the social studies classroom as promoting the principles of constructivist pedagogy?
APPENDIX E

INTERVIEW CHART
<table>
<thead>
<tr>
<th>Teacher (Pseudonym)</th>
<th>Interview date/time</th>
<th>Place</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
APPENDIX F

CLASSROOM OBSERVATION CHART
<table>
<thead>
<tr>
<th>Date/time</th>
<th>Teacher(Pseudonym)</th>
<th>School name</th>
<th>Classroom</th>
<th>Comment</th>
</tr>
</thead>
</table>

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APPENDIX G

CLASSROOM OBSERVATION REPORT CHART
### PART A

<table>
<thead>
<tr>
<th>Date /Time</th>
<th>Teacher(pseudonym)</th>
<th>School</th>
<th>Classroom</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Classroom Description</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Number of Students</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
</table>

### PART B

<table>
<thead>
<tr>
<th>Type CSI used</th>
<th>Drill &amp; Practice</th>
<th>Spreadsheet</th>
<th>Internet search</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Simulations</td>
<td>Graphics/Art</td>
<td>Telecollaboration</td>
</tr>
<tr>
<td></td>
<td>Tutorial</td>
<td>Developing WebPages</td>
<td>E-mail/chat</td>
</tr>
<tr>
<td>Games</td>
<td>Web Quest</td>
<td>Virtual field trip</td>
<td></td>
</tr>
<tr>
<td>Databases</td>
<td>PowerPoint</td>
<td>Other (specify)</td>
<td></td>
</tr>
<tr>
<td>Word processing</td>
<td>Hyperstudio</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

### Description of CSI activity

### PART C

**Followings are observed through the activity.**

1. Students are active participants. ___No ___ Yes (Explain) _________________
2. Group work ___No ___ Yes (Explain) ______________________________________
_____________________________________________________________________
3. Individual work ___No ___ Yes (Explain) _________________________________
_____________________________________________________________________
4. Students prior knowledge/experiences are used ___No ___ Yes (Explain)
_____________________________________________________________________
_____________________________________________________________________
5. Authenticity/Real life context ___No ___ Yes (Explain) ___________________
_____________________________________________________________________
6. Knowledge construction ___No ___ Yes (Explain) _________________________
_____________________________________________________________________
_____________________________________________________________________
7. Multiple perspectives/Global perspectives ___No ___ Yes (Explain) _________
_____________________________________________________________________
8. Critical thinking ___No ___ Yes (Explain) ______________________________
_____________________________________________________________________
9. Problem-solving /Inquiry ___No ___ Yes (Explain) _______________________
_____________________________________________________________________
10. Decision-making ___No ___ Yes (Explain) _____________________________
_____________________________________________________________________
11. Other Comments: