Social Studies and History Teachers' Uses of Non-Digital and Digital Historical Resources

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Abstract

A gap in the literature on digital history was explored through the use of a survey of 104 high school social studies teachers, administered in a large urban/suburban school district in the southeastern United States. The survey examined the extent to which social studies teachers were using non-digital and digital historical resources and the ways in which they were using them. Results indicated that social studies and history teachers were using primary historical sources, but important questions remained regarding the nature of this use. Specifically, it was found that while the teachers in this survey reported using digital and non-digital primary historical sources in their classrooms, they did not report using these resources in a manner consistent with literature-based best practices for social studies and history education.

Introduction

There is limited, existing research that examines the extent to which high school history and social studies teachers are utilizing primary and secondary sources that are accessible from digital, as opposed to non-digital (traditional), sources. This paper seeks to explore this gap in the literature by reporting on the results of a comprehensive survey, administered in a large urban/suburban school district in the southeastern United States. In our research, we examine the extent to which teachers are using digital and non-digital historical resources and the ways in which they were using them. Specifically, we ask the following: To what extent has the availability of online historical resources impacted history and social studies teachers' uses of primary (both digital and non-digital) sources in the classroom? Before presenting our findings, we present a conceptual framework which guides our research and considers the literature on (a) teaching and learning of history and social studies and (b) current efforts to integrate technology into the history and social studies.

Conceptual Framework and Literature Review

Technology toward a Process: A Conceptual Framework

> The term "technology in schools" has long been viewed as an educational
> panacea in which students would be able to learn almost in spite of their teacher, and
> countless school reform measures have been suggested and mandated that advocate state
> of the art technology. "State of the art technology" has evolved from motion pictures, to
> radio, television, microcomputers, educational software, and static Web pages to Internet
> sites that foster interaction and communication between students and teachers. For each
> development, there has been a parallel prediction that its use would revolutionize
> teaching and learning. However, their promises and potential have not always proven
> true—not just today but in the past. (Friedman and Hicks, 2006, p. 248)

As the above quote suggests, care always needs to be taken in succumbing to overly naïve and uncritical assumptions that current and emerging technologies are destined to transform teaching and learning in the 21st century. It is important to acknowledge that a great deal of literature on integrating technology in the social studies appears to have been initially overly optimistic as recently suggested by McNight and Robinson (2006) and illuminated in the work of Larry Cuban (2001). However, care also needs to be taken to avoid dismissing the efficacy of education technologies "simply because they have failed to meet the optimistic claims of computer advocates" (Friedman & Hicks, 2006, p. 250).

The origins of this research grew out of the recognition of the importance of going beyond detailing the promise and potential of current and emerging technologies within the social studies and toward carefully and critically investigating how teachers and teacher educators are, or are not, integrating educational technologies in their classrooms, as well as examining how technology is being used as a tool to scaffold student learning in the social studies classroom (Friedman & Hicks, 2006). Indeed, current educational technologies reposition existing opportunities for students to engage in the doing of history in ways consistent with what Barton and Levstik (2004) describe as the *analytic stance* and what Seixas (2000) terms as a disciplinary knowledge orientation. Such a stance, or orientation, recognizes the importance of teaching the disciplinary processes of knowing and learning history in terms of asking historical questions, critically investigating accounts within the context they were originally developed, and corroborating various pieces of evidence in order to develop historical interpretations.

Along these theoretical lines, Mason, Berson, Diem, Hicks, Lee, and Dralle, (2000) developed a set of guidelines for the use of technology in social studies and history classrooms. These guidelines suggest five simple principles for infusing technology in the classroom. We borrow from these five principles three framing ideas:

1. The use of technology should extend learning beyond what could be done without technology;
2. Technology use should occur in existing socially and educational meaningful contexts; and
3. Technology use should foster the development of participatory and critical democratic experiences.

At the core of such principles is a recognition that "technology must be used to create authentic experiences that link new knowledge to prior knowledge, in socially interactive environments where questions being pursued are relevant to the student" (Doolittle, Hicks, & Lee, 2002, p. 24). If this is to occur—for such a change is simply not inevitable—teachers, teacher educators, and students need to be prepared, as well as ready, willing, and able to use technology as a tool to foster autonomous and authentic inquiry within the social studies classroom.

Historical Thinking: Teaching and Learning History and Social Studies

An increasing body of literature has brought into question the utility and purpose of teaching traditional transmission oriented history and social studies (Goodlad, 1985; Lee, 1998; Spencer & Barth, 1992; VanSledright, 1995; VanSledright, 2002). The National Council for the Social Studies (1994), the National Center for History in the Schools (1996), and more recently, the American Historical Association (2003) have all recognized the importance of teachers engaging students with primary sources in the classroom. The current literature on best or *wise* practice (Davis, 1997) in the history classroom encourages the use of primary sources to support historical inquiry (Hartzel-Miller, 2001; Sexias, 2000; Wilson & Wineburg, 1988). Such practice requires skilled and knowledgeable teachers who can help students develop historical questions, analyze and corroborate various forms of historical evidence, and construct their own historical interpretations (Hartzler-Miller, 2001; Levstik 1996; Levstik & Barton, 2001).

Numerous researchers have also identified potential roadblocks to engaging students in the doing of history (McDiarmid & Vinten-Johansen, 1993; VanSledright, 2000; Wilson & Wineburg, 1988). The influence of tests and standards that pay little attention to historical skills has been identified as a problem by several researchers (Grant, 2000; Grant, Gradwell, Lauricella, Pullano, & Tzetzo, 2002; VanSledright, 1996, 2002). VanSledright (2002) is also concerned that teachers believe that most students are neither willing, nor able, to deeply engage with primary sources. These concerns may explain why few teachers seem to consistently engage students in the doing of history. The National Assessment of Educational Progress (NAEP) found that 70% of students nationwide who took the 8th grade National U.S. history test and 77% of those who took the 12th grade test reported they used primary sources twice a month or less. Interestingly, the recently released evaluation of Teaching American History Grants brought into question the participants' abilities and readiness to organize and provide instruction that went beyond the coverage of content in terms of teaching students the disciplinary knowledge necessary to engage in the doing of history.

> While TAH teacher work products demonstrated teachers' knowledge of facts, they also revealed participants' limited ability to analyze and interpret historical data. Findings from the exploratory study of teacher work products (lesson plans and research papers) indicated that while teachers had a firm grasp of historical facts and some lower-level historical thinking skills, they had difficulty interpreting and analyzing historical information. Although the teacher work products reviewed ranged in quality, nearly all products earned low scores on historical analysis and interpretation. (SRI International, 2005, p. xv)

Digital History: Technological Applications in History and Social Studies Education

Several social studies education researchers suggest that integrating technology into social studies classrooms, specifically web-based technologies, has the potential to encourage active student inquiry (Martorella, 1998; Mason et al., 2000; Van Fossen, 1999; Warren, 2000; Whitworth & Berson, 2003). One form of inquiry in social studies, authentic historical inquiry, is suggested by some researchers to be particularly affected by the use web-based resources (Berson, Lee, & Stuckart, 2001; Doolittle & Hicks, 2003; Lee, 2002; Milson, 2002; Saye & Brush, 1999; Shiveley & Van Fossen, 1999). However, some literature suggests that the excitement about the integration of technology into social studies and history might be overdone (Cuban, 2001; Cuban, Kirkpatrick, & Peck, 2001; Martorella, 1998; Wilson & Notar, 2003). Regardless of whether the potential of technology to influence social studies and history, as reported in the literature, is overdone or not, technology usage in K-12 settings remains less than we might expect given the almost 20 billion dollars invested in the last ten years (Becker, Ravitz, & Wong 1999; Wilson & Notar, 2003).

Despite the limits of technology in social studies and history instruction and learning, the theoretical, and to some extent practical, practices of researching, teaching, and learning history seem to have been genuinely affected by technological developments (Ayers, 1999; Barlow, 1998; Lee, 2002; Rosenzweig, 2001; Schrum, 2000). Important structural differences between digital and non-digital historical resources—including the manner in which documents are organized, new indexing and searching capabilities, and improved translations—enhance the prospects for using digital resources in K-12 classrooms (Barlow, 1998; Davidson, 1999; Johnson, 2000; Lee, 2002; Schrum, 2000; Wynne, 2001). Given these prospects, data on the extent of use of digital and non-digital historical resources is needed to determine how social studies and history instruction is being impacted by technological developments related to history document presentation.

The current study was conducted within the context of existing bodies of research that sought to (a) describe and quantify the extent of technological integration, and (b) magnify the affordances of technology. This study seeks to consider pedagogical attitudes and dispositions toward technological integration given the existing literature on historical thinking and digital history. This study was guided by the following over-arching questions:

1. Are high school history and social studies teachers using digital technologies to enhance learning in their classrooms?
2. In what ways are high school history and social studies teachers using digital technologies to enhance learning in their classrooms?

Method

Sample Selection

The sampling frame for this study involved surveying high school social studies teachers, grades 9-12. The working population included all high school social studies teachers (N = 104) in a single, racially diverse county—45.3% White, 44.6% Black, and 5.9% Hispanic (U.S. Census Bureau, 2002)—in the southeastern United States. Of the 104 surveys delivered, 73 surveys were completed, returned, and used in the data analysis, resulting in a 70% response rate.

The sample of 73 surveys was comprised of 38 males and 35 females with a mean participant age of 38.6 years and a mean number of years teaching of 12.8. The highest educational attainment of participants included 7 doctoral degrees, 43 master's degrees, and 20 bachelor's degrees. In addition, all respondents taught history at least part of the day, with the vast majority of teachers (89%) teaching either United States History or World History.

Survey Structure and Design

Following an initial pilot survey examining the impact of online primary sources on the teaching of social studies with a group of social studies teachers in a master's social studies education degree program, the current survey was constructed. The current survey is comprised of three sections: a demographics section, a section on web-based primary historical source use, and a purpose of social studies and best pedagogical practices in teaching social studies and history section (see Tables 1-8). In redesigning the survey, we recognized the importance of determining teachers' beliefs about the purpose(s) of studying history as well as teachers' perceptions of why their students use historical sources. The new questions were designed to determine respondents' beliefs and perceptions, given research on the purposes of history education (e.g., Barr, Barth, & Shermis, 1977; Evans, 1988, 1989, 1994; Levstik & Barton, 2001b; Seixas, 2000) and best pedagogical practices in teaching and learning history (e.g., AHA, 2003; Bain, 2000; Goodlad, 1985; Hartzler- Miller, 2001; NCSS, 1994; Levstik & Barton, 2001b).

In designing the survey questions, we recognized an inherent limitation of survey research, whereby teachers report what they value or what they think others value, not necessarily what they actually do in class (Fowler, 2002). Despite such a limitation, common to all surveys, the survey provides baseline data that can serve as an entry point for further research into teachers' purposes for and uses of digital and non-digital primary historical sources. In addition, we did not explicitly provide a definition of historical inquiry or digital historical resources; rather, we provided a range of statements within the survey designed to reveal the extent to which teachers' understandings and activities reflect the literature on historical inquiry.

Data Analysis

The survey consisted of 84 questions distributed across three areas: demographic information, purposes of history and the uses of historical primary sources, and web-based (digital) historical primary source use. The overall alpha reliability of the survey was .79. The analyses of these data included descriptive statistical analyses (e.g., mean and standard deviation), and tests of significance (e.g., repeated measures analysis of variance and contrasts). All analyses of variance (ANOVA) were corrected for sphericity using the Greenhouse-Geisser adjustment, and all mean comparisons were adjusted at $\alpha = .05$ using the Bonferroni post hoc procedure.

Results

The results of the survey focus on the purpose of teaching history, the use of traditional historical primary sources, and the use of web-based (digital) historical primary sources. The following analysis is divided into three sections: (a) the purpose of teaching history and using

historical primary sources; (b) a delineation of web-based historical primary source use, and (c) reasons why teachers do not use web-based historical primary sources. Within each of these three main sections, all of the actual survey questions in sections two and three of the survey (the uses of historical primary sources and web-based historical primary source use) are addressed.

The Purpose of Using Historical Primary Sources

Why do your students learn history? Respondents indicated that of the reasons listed, the most ubiquitous reason for teaching history was clearly the desire to connect the past and the present (see Table 1). Specifically, 97.1% of the teachers rated connecting the past and the present as *Important* or *Very Important*. At least three-quarters of respondents also supported the rationales of acquiring basic facts, developing historical inquiry skills, making historical generalizations, understanding the place of America in world history, and developing a sense of historical time. These results suggest two primary findings. First, teachers who completed the survey indicated that each reason listed was at least important, if not very important. Second, the most dominant reason for teaching history among the respondents is to connect the past and the present.

Why should students read and analyze historical primary sources? Respondents indicated three dominant reasons for analyzing primary sources. These reasons were as follows: (a) creating a context for developing historical thinking skills; (b) providing a sense of the conditions of the period under study, and (c) understanding the essential facts, concepts, and generalizations that underlie historical knowledge (see Table 2). Less well supported were the reasons of having students consider or reconsider historical truths and providing information necessary for success on standardized tests. These results indicate that while two-thirds of respondents support the use of primary sources to question historical truths and prepare for standardized test success, they see these reasons as being much less important than developing historical thinking skills, providing students with a sense of the conditions of a particular time, and understanding basic facts.

How often do your students engage in the use of historical primary sources and from where do you find sources? Less than half of the teachers in our survey indicated that they tend to use historical primary sources in their classrooms more than once a week (41.0%); a third indicated that they use historical primary sources once a week (32.9%), and only a quarter of the respondents indicated that they use historical primary sources a few times a year (26.1%). Further, when asked from where they obtained their historical primary sources, the vast majority of teachers indicated they obtained their historical primary sources from textbooks (91.7%) and the web (84.9%), while fewer teachers obtained their historical primary sources from books of primary sources (63.0%) or resource packets (54.2%) (see Table 3). These results indicate that teachers report that they are only occasional users of historical primary sources; however, when they do use these sources, they obtain them primarily from textbooks and the web.

How often do your students engage in historical primary source analysis activities? Respondents were fairly clear in the analysis activities they foster in their students. Teachers who completed this survey clearly favor analyzing primary sources to identify key individuals, events, or ideas; detect and evaluate bias, distortion, or propaganda; compare and contrast details across

multiple sources (see Table 4). Specifically, more than half of the teachers in this survey indicated that they engage in these activities *very often* or *often*, while less than a third of respondents indicated that *very often* or *often,* they have students analyze primary sources to uncover the context in which a source was created or to assess a source for credibility, authority, and authenticity. This lack of support for engaging students in context and credibility analyses is important, given the research literature on the importance of sourcing and contextualizing primary historical sources (Wineburg, 1991).

How often do you use digital and non-digital historical texts, images, or audio/video recordings? Almost two-thirds of respondents reported frequent use of digital and non-digital historical texts and images. In contrast, less than half of the respondents reported frequent use of digital and non-digital historical audio/video recordings. The results from this question were analyzed differently than the rest of the results in the study due to the nature of the two related questions (i.e., How often do you use non-digital historical primary sources? and How often do you use digital historical primary sources?). The results indicated that overall, respondents used non-digital historical primary sources more than digital historical primary sources, $F(1,35) = 19.67$, MSE = 8.78, $p < .05$, and that respondents used historical texts and images more than historical videos regardless of where the sources originated, digital or non-digital, $F(2,70) = 13.78$, MSE = 1.31 $p < .05$. Subsequent to this analysis, a series of contrasts were conducted to investigate the possible mean differences between digital or non-digital historical texts, images, and videos. The results of these contrast analyses indicated that respondents used non-digital historical texts more often than digital historical texts, non-digital historical images more often than digital historical image, and non-digital historical videos more often than digital historical videos. Overall, these findings indicate that the teachers who completed this survey tend to use historical texts and images more than audio/video recordings and that the origin of these sources is more often non-digital than digital or particularly web-based.

A Delineation of Web-based Digital Historical Primary Source Use

How often, and why, do you access historical primary sources online? There is a clear indication that respondents are only occasional users of the web for the acquisition and instructional use of primary historical sources (see Table 3 and Table 5). Specifically, only slightly more than half of the respondents (57.4%) indicated that they *very often* or *often* accessed the web to print images and text, and less than half of the teachers (44.3%) indicated that they *very often* or *often* accessed the web to identify web sites for students' use (see Table 5). Additionally, only a third of the respondents indicted that they *very often* or *often* identified web sites for students to use in class (35.3%) or saved specific sections of sources for later use (30.2%).

How often and for what reasons have you accessed specific history or social studies web sites? Respondents indicated that they were mostly unfamiliar with and therefore never used three well-developed and notable history web sites. Specifically, the vast majority of respondents had neither heard of the Library of Congress' *American Memory* site nor the University of Virginia's *Valley of the Shadow* site (see Table 6). In addition, less than a third of the respondents had used the United States Government's *National Archives and Records Administration* (NARA) site for any reason. If the teachers who completed this survey are not using high-quality

and high-profile websites such as *American Memory*, *Valley of the Shadow*, or *National Archives and Records Administration*, what sites are they using for accessing web-based historical primary sources? When asked what sites they used to access historical primary sources, respondents' top responses were as follows: (a) governmental sites such as the *Department of Education* (n = 9); (b) television sites such as the *History Channel* (n = 8), and (c) news sites such as *Washington Post* (n = 7). These findings indicate that teachers are not using social studies and history digital libraries and repositories to obtain their historical primary sources but rather more culturally popular web sites.

Reasons why teachers do not use web-based historical primary sources

What changes would increase your use of web-based historical primary sources? The likelihood of respondents using online historical primary sources would be increased by more web accessible computers in the classroom and school, more time in the curriculum devoted to the study of historical documents, and fewer standards and standardized tests (see Table 7). Specifically, almost two-thirds of the respondents indicated that more web accessible computers, more time to study historical documents, and fewer standards and standardized tests were important to influencing their use of primary sources in the classroom. Less well supported was training on locating primary sources on the web and training on using primary sources. Finally, respondents indicated that more training on using the web in class was not a factor likely to increase their overall use of primary sources in the classroom. These results indicate that in order to use more historical primary sources, teachers desire more web-accessible computers with time to use them and less training for accessing the web or locating and using primary sources.

What are your overall perceptions of using primary historical sources online? Respondents clearly indicate that the most significant effect of the web is access to previously unattainable sources and the ability to compare these sources (see Table 8). To a lesser extent, respondents acknowledged that using resources from the web increases class preparation time, provides rich historical experiences, increases the variety of sources used, changes one's use of primary sources, and allows for more control over sources. Finally, two-thirds of the respondents *strongly disagreed* or *disagreed* that there is no difference in teaching with or without web-based historical primary sources and that locating useful sources on the web is frustrating. Overall, these results indicate that the teachers believe that the web is a valuable tool for accessing previously unattainable sources and making source comparisons and that the variety of sources available provide for rich historical experiences but at the cost of increased class preparation time.

Conclusions and Implications

Throughout the 1980s and into the 1990s, reformers, who targeted ineffective and uninteresting history classes, argued for the inclusion of more authentic and meaningful primary historical sources as part of the process of engaging students in the doing of history (see Yarema, 2002). Similarly, researchers in social studies and history education are calling for a shift away from a fact-driven approach and toward an inquiry-based approach to social studies and history education (Doolittle & Hicks, 2003; Lee, 1998; Seixas, 2000; VanSledgright, 2002). Finally, there is call for the use of technology, specifically, the use of web-based digital historical

primary sources, in the pursuit of this authentic and meaningful historical inquiry (Barlow, 1998; Lee, 2002; Mason & Hicks, 2002). As Dean Cantu and Warren Wilson (2003) note "with the growing number of technology and Internet proficient students in middle schools and high schools…the need for digital pedagogues in history classrooms is growing exponentially" (p. ix).

This study provides one piece of evidence that history teachers are using historical primary sources in their classrooms, yet important questions remain regarding whether the use of these historical primary sources is for acquisition of facts or the pursuit of inquiry, and whether technology is being used to facilitate this pursuit. Specifically, although the teachers in this survey did broadly agree that developing their students' historical thinking skills was as important as the acquisition of basic facts, the historical primary sources most frequently used by respondents were taken from textbooks not from websites dedicated to providing historical primary sources. Unfortunately, these textbook-based sources are typically short or excerpted and not set within the historical milieu of the original document. In addition, when historical primary sources were used, they were used more often as evidence of key individuals, events, and ideas, and to a much lesser extent for comparing and contrasting details across multiple sources or evaluating the credibility, authority, authenticity, and completeness of primary sources— central elements of historical inquiry (Wineburg, 1991; Seixas, 2000).

Thus, while teachers expressed an equal valuation of the importance of the acquisition of basic historical facts and the development of historical inquiry with the ability of historical primary source to facilitate both the understanding of facts, concepts, and generalizations, and the development of historical thinking skills, teachers generally used non-digital, rather than digital, collections of historical primary sources. This lack of use of digital collections of historical primary sources was evident in teachers' lack of awareness of well-known and substantial digital historical primary source collections (e.g., Library of Congress American Memory). However, this lack of use of digital collections of historical primary sources was not indicative of a lack of valuation as more than three-quarters of teachers indicated that access to digital collections of historical primary sources allowed for the use of previously unattainable sources, provided a valuable tool for comparing sources, increased the variety of sources used in the class, and supplied rich historical experiences. Interestingly, most teachers in this study viewed the impediments to using digital historical primary sources as external. That is, teachers indicated a desire for more computers with access to the web, more time in the curriculum for the use of historical primary sources, and less standardized testing. The importance of these external impediments was in contrast to a lack of importance posited for the need for more training on locating and using historical primary sources.

Neither digital nor non-digital historical primary sources will have a major impact in the social studies or history classroom until teachers make more active use of the sources themselves. Given the usage patterns of primary historical sources reported by the teachers in this survey, additional web access, increased class time, and fewer standardized tests must be coupled with a shift in teachers' dispositions toward authentic inquiry with the broad and active use of primary historical sources. Further research is required to explore how the frequency of use, number of sources used in a lesson, and the depth of use of historical primary sources differs when using textbook-based primary sources and digital historical primary sources.

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Table 1

Teachers' Perceptions of the Purpose of Studying History

Rate the importance of the following statements regarding why students learn history (n = 71)	Mean[a,b]	Very Important	Important	Somewhat Important	Not Important
Connect past and present	3.72[c]	74.6	22.5	2.8	0.0
Acquire knowledge of basic facts	3.41[d]	53.5	33.8	12.7	0.0
Develop historical inquiry	3.37[d]	50.7	32.9	9.6	2.9
Make historical generalizations	3.33[d]	50.0	34.3	13.7	1.4
Understand America in world history	3.31[d]	47.1	38.6	12.9	1.4
Develop a sense of time	3.11[d]	35.2	42.3	21.1	1.4

Note. With the exception of the Mean column, all values reported are percentages.

[a] 4 = Very Important, 3 = Important, 2 = Somewhat Important, 1 = Not Important

[b] Means with similar superscripts are statistically similar, means with dissimilar superscripts are

statistically different, $F(5,330) = 7.99$, MSE = 2.92, p. < .05.

Table 2

Teachers' Philosophy Regarding the Use of Historical Primary Sources

According to your philosophy, why should students read and analyze historical primary sources? (n = 73)	Mean[a,b]	Very Important	Important	Somewhat Important	Not Important
To create a context to develop historical thinking skills	3.56[c]	61.1	33.3	5.6	0.0
To provide a sense of conditions relevant to the period studied	3.56[c]	63.0	31.5	4.1	1.4
To understand facts, concepts, and generalizations	3.51[c]	59.7	33.3	5.6	1.4
To question historical truths and engage in interpretation	3.29[d]	52.1	27.8	15.3	4.2
To render information needed for success on standardized tests	2.92[e]	30.6	36.1	27.8	5.6

Note. With the exception of the Mean column, all values reported are percentages.

[a] 4 = Very Important, 3 = Important, 2 = Somewhat Important, 1 = Not Important

[b] Means with similar superscripts are statistically similar; means with dissimilar superscripts are

statistically different, $F(4,236) = 13.56$, $p < .05$.

Table 3

Teachers' Frequency of Primary Source Use Based on Primary Source Origination

Origin of Primary Source

Frequency of Use	Textbooks or Ancillaries	Resource Packets	Primary Source Books	World Wide Web
More than once a week	36.6	21.9	31.5	38.3
Once a week	31.5	13.6	19.1	27.3
A few times a year	23.2	9.5	12.3	19.1
Never	0.0	0.0	0.0	0.0

Note. All values reported are percentages, and rows may sum to more than

100 percent as respondents were allowed to check more than one response.

Table 4

Students' Frequency of Actions when Analyzing Historical Primary Sources

How often do your students engage in the following actions when analyzing historical primary sources? (n = 71)	Mean[a,b]	Very Often	Often	Sometimes	Infrequently	Never
Examine source for key individuals, events, and ideas	3.96[c]	36.6	36.6	14.1	11.3	1.4
Detect and evaluate bias, distortion, and propaganda	3.80[c,d]	21.9	46.5	21.1	8.5	1.4
Compare and contrast details across multiple data sources	3.56[d]	19.7	36.6	26.0	14.1	2.8
Uncover context in which a source was created	3.06[e]	9.9	19.7	43.7	19.7	7.0
Assess a sources credibility, authority, or authenticity	2.97[e]	9.9	19.7	36.6	25.4	8.5

Note. With the exception of the Mean column, all values reported are percentages.

[a] 5 = Very Often, 4 = Often, 3 = Sometimes, 2 = Infrequently, 1 = Never

[b] Means with similar superscripts are statistically similar, means with dissimilar superscripts are

statistically different, $F(4,350) = 12.85$, MSE = 17.18, $p < .05$.

Table 5

Teachers' Frequency of Web-based Historical Primary Source Use for Specific Tasks

How often do you access web-based historical primary sources for each of the following tasks? (n = 68)	Mean[a,b]	Very Often	Often	Sometimes	Infrequently	Never
Gain access and print out images and text	3.69[c]	26.5	30.9	30.9	8.8	2.9
Identify URLs based on specific themes for students' use	3.38[c]	19.4	23.9	38.8	11.9	6.0
Identify URLs that can be accessed in class by students	2.99[d]	11.8	23.5	32.4	15.1	15.1
Cut, paste, and save specific sections of sources for later use	2.93[d]	15.1	15.1	29.4	20.6	17.6

Note. With the exception of the Mean column, all values reported are percentages.

a 5 = Very Often, 4 = Often, 3 = Sometimes, 2 = Infrequently, 1 = Never

[b] Means with similar superscripts are statistically similar, means with dissimilar superscripts are

statistically different, $F(3, 190) = 8.69$, MSE = 8.69, $p < .05$.

Table 6

Accessing of Specific Web-based Historical Primary Sources to Conduct Historical Analysis

For what reasons have you accessed the following sites? (n = 125)	Mean[a,b]	Conduct Historical Analysis with Students	Obtain Historical Resources for Students	Visited, Not Used for Historical Analysis	Heard of or Never Used	Never Heard of or Used
National Archives and Records Adminsitration[c]	2.39[f]	13.1	16.4	4.9	27.9	37.7
American Memory[d]	1.43[g]	8.2	0.0	0.0	9.8	82.0
Valley of the Shadows [e]	1.13[g]	0.0	1.6	1.6	4.9	91.8

Note. With the exception of the Mean column, all values reported are percentages.

[a] 5 = Used with students, 4 = Used for resources, 3 = Visited, not used, 2 = Heard of, never used, 1 = Never heard of or used

[b] Means with similar superscripts are statistically similar, means with dissimilar superscripts are statistically different, $F(3,190) = 8.69$, MSE = 30.03, $p < .05$.

[c] http://www.archives.gov/

[d] http://memory.loc.gov/

[e] http://www.iath.virginia.edu/vshadow2/

Table 7

Importance of Specific Changes in Schools or Classrooms that Would Increase Teachers'
Likelihood of Using Web-based Historical Primary Sources

What school or classroom changes would increase your likelihood of using web-based historical primary sources? (n = 66)	Mean[a,b]	Very Important	Important	Somewhat Important	Not Important
More computers with web access in the classroom	3.18[c]	57.6	16.7	12.1	13.6
More time in the curriculum to study historical documents	3.08[c]	43.0	26.2	26.2	4.6
Fewer standards and standardized tests	2.81[c]	36.5	25.4	20.6	17.5
More training on locating primary sources on the web	2.52[d]	22.2	30.2	25.4	22.2
More training on using primary source documents	2.42[d]	16.4	27.4	24.7	21.9
More training on using the web in my classroom	2.02[e]	16.4	14.8	23.0	45.9

Note. With the exception of the Mean column, all values reported are percentages.

[a] 4 = Very Important, 3 = Important, 2 = Somewhat Important, 1 = Not Important

[b] Means with similar superscripts are statistically similar, means with dissimilar superscripts are

statistically different, $F_{(5,211)} = 11.43$ MSE = 15.29, $p < .05$.

Table 8

Teachers' Perceptions of Web-based Historical Primary Sources

To what extent do you agree with the following statements? (n = 68)	Mean[a,b]	Strongly Agree	Agree	Disagree	Strongly Disagree
The web allows access to previously unattainable sources.	3.39[c]	52.2	37.7	7.2	2.9
The web is a valuable tool for comparing sources.	3.18[c,d]	30.9	57.4	10.3	1.4
Using web sources increases the variety of sources I use.	2.97[d]	22.4	53.7	22.4	1.5
Using web sources increases class preparation time.	2.94[d]	17.4	63.8	14.5	4.3
Web sources provide richer historical experiences.	2.92[d]	18.2	59.1	19.7	3.0
The web has changed how I use primary sources in class.	2.90[d]	21.7	47.8	29.0	1.4
Using web sources allows for more control over sources.	2.67[d]	11.9	46.3	38.8	2.9
I only use specific web sites to access sources.	2.23[e]	3.0	37.9	37.9	21.2
There is no difference in teaching with or without web sources.	2.20[e]	6.1	24.2	53.0	16.7
It is frustrating locating useful sources on the web.	2.19[e]	7.4	27.9	41.2	23.5

Note. With the exception of the Mean column, all values reported are percentages.

[a] 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree

[b] Means with similar superscripts are statistically similar, means with dissimilar superscripts are

statistically different, $F(9,313) = 21,97$, MSE = 20.06, $p < .01$.