

NEW FORMAT, SAME OLD STORY?: AN ANALYSIS OF TRADITIONAL AND
DIGITAL U. S. HISTORY TEXTBOOK ACCOUNTS OF SLAVERY

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ABSTRACT

JAMIE L. LATHAN: New Format, Same Old Story?: An Analysis of Traditional and Digital U. S. History Textbook Accounts of Slavery
(Under the direction of Cheryl Mason Bolick)

While the distortions and omissions in traditional U. S. history textbook accounts of slavery have been well documented (Alexander, 2002; Brown & Brown, 2010; Banks, 1969; Council on Interracial Books for Children, 1977; Elson, 1964; Gordy & Pritchard, 1995; Kane, 1970; Kochlin, 1998; Washburn, 1997), no study has analyzed digital U. S. history textbooks for those same distortions. Given the digital history affordances of increased accessibility of primary source documents (Lee, 2002), multiple perspectives of historical narratives (Ayers, 1999), flexibility in presentation forms (Cohen & Rosenzweig, 2005), and integration of formerly marginalized historical accounts (Bolick, 2006), it should follow that digital U. S. history textbook accounts of slavery eliminate, or at least minimize, the stereotypes, distortions, and omissions. After conducting a content-based, hypertext-based, image-based, and multimedia-based content analysis of traditional and digital U. S. history textbook accounts of slavery, it is clear that digital U. S. history textbooks do not take advantage of the affordances of digital history and, consequently, continue to perpetuate the distortions and omissions of the traditional textbooks. Using Critical Race Theory, New Literacies, and Hypertext Theory as an

interpretive lens, the findings of the study highlight both the disappointment and hope of the untapped potential of digital U. S. history textbooks.

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DEFINITION OF TERMS

Textbooks: a bound content and instructional manual for a specific course of study.

Digital history textbooks: Internet-based, repositories of primary source documents and original digital historical narratives bound together or structured chronologically, thematically, or interpretively. The boundaries established for digital history textbooks in this study eliminate other digital formats from consideration and affect the recording and enumeration of visual, audial, and textual content for each book. In the “labyrinthine spaces of the Internet, where there are no borders and only flow” (Laspina, 1998, p. 209), digital history textbooks could take many forms and, because of hypertext links, the images, audio recordings, and text included could be infinite.

Backlinks: incoming hypertext links to a website or web page. Backlinks are used in webometrics to measure the popularity of an academic web page, usually a university web page (Aguillo, Ortega, & Fernandez, 2008). In this study, webometrics is used to measure the popularity of the free digital textbooks.

Digital “Space”: storage capacity, usually measured in gigabytes (GB), of a server’s hard drive. Ten GB is enough to house more than one million html documents or three thousand high-resolution photographs. Additionally, on the Amazon Kindle Fire, one thousand books take up about one GB of space (Price, 2012). Another critical factor in digital “space” of digital textbooks is bandwidth, which is the speed at which data flows across a network. Multimedia files, such as videos, music, and flash animations require more bandwidth for user downloads. Offering one-hundred GBs of downloads and Internet traffic, ten GBs of data input, and twenty-four hour a day availability on the

Linux operating system, Amazon will host a frequently-visited website with multimedia content, like a digital history textbook, for an estimated cost of \$11.88 per month (Amazon Web Services, n. d.). With these factors in mind, “space” in digital textbooks is not infinite, rather the monies available to support production and maintenance costs limit it.

Outdated: obsolete and outmoded. In this study, I used the term to describe my interactions towards technology, the U. S. history content about slavery, and the video content included in the digital textbooks. Revealing my own preferences for the “recent” and the “new,” I am aware that “new” does not always mean “best” as it relates to interactions with technology. However, with the changing nature of U. S. history content and recent findings and interpretations, the “new” in terms of historical scholarship usually means improvements on the traditional accounts. Additionally, the “new” literacies approaches to student learning in the digital age, which facilitate active engagement and learning through videos, games, and interactive images of digital textbooks, may be improvements on the traditional format of videos, which facilitate more passive learning.

Democratization: decentralizing and diffusing knowledge, access to knowledge, and construction of knowledge. This study critiques the claim that digital history democratizes the doing and telling of history (Bolick, 2006; Cohen & Rosenzweig, 2006; Friedman, 2005). By including multiple and diverse perspectives (Ayers, 1999) and formerly marginalized historical accounts (Bolick, 2006), and by eliminating the traditional gatekeepers to the master narrative through the inclusion of primary sources and personal histories, digital history has the potential to be a tool of empowerment for

all students of history. In addition to the content, the creation, access, ownership, and teaching of digital history textbooks should be democratized.

Chapter 1: INTRODUCTION

Thomas J. Sellers may not ever become a household name, but he deserves a place in this digital history textbook analysis. Not because he was a digital historian—in fact, he was an African American newspaper editor in Charlottesville, Virginia in the 1930s—but because his life and his newspaper, *The Reflector*, represents my initial exposure to the methods and tools of digital history. During the fall semester of 1998, in my third year of undergraduate studies at the University of Virginia, I, along with three classmates, created a digital history project about *The Reflector*, an African American newspaper in 1930's Charlottesville, Virginia. Under the direction of Dr. William Thomas III, the then-director of the Virginia Center for Digital History, I interacted with primary source documents and “did” history for the first time in my academic life. Though our class project seems basic now, I was completely engrossed in transcribing newspaper articles, conducting biographical research, and learning and writing html code to create a space on the Internet for Mr. Thomas J. Sellers and his newspaper, *The Reflector*.

Since that moment, my eyes have been opened to the intrigue of historical investigation and the passion for making this accessible to historians and non-historians alike. Four years later, as a high school history teacher, I continued to develop my experiences in digital history by teaching A. P. U. S. History via distance-learning interactive videoconferencing during the 2002-2003 academic year. A few years later, I

participated in workshops and wrote lesson plans for the *Documenting the American South* collections of the University of North Carolina at Chapel Hill. Working directly with digital primary source documents allowed me to hone my historical thinking skills and share those skills and knowledge with my distance-learning and face-to-face students.

During the spring semester of 2010, prompted by my interests and the proliferation of online K-12 education (Picciano & Seaman, 2009) and digital resources, I took a graduate education class in digital history. Taught by Dr. John Lee at North Carolina State University, the class exposed me to the characteristics and theoretical underpinnings of digital history as a method and field of study. In addition, the class allowed me to learn how to evaluate digital historical resources and create original historical materials by making technological adaptations to existing print materials.

In that same spring semester of 2010, as a graduate student assistant, I wrote lesson plans for *North Carolina History: A Digital Textbook*. Now, as I conduct this study on digital United States history textbooks, I realize that though I have learned a lot about digital history, there is still much more to learn.

I approached this study aware of some of the ways that I had used digital history resources in additive, rather than transformative ways. Often, I would assign students primary sources to read online and never challenge them to interact with the documents in ways that would foster historical inquiry. The potential of digital history to transform my history instruction lie dormant during those times when I was more interested in the accessibility of previously inaccessible documents to students. Since delving deeper into

digital history by analyzing digital history textbooks, I now understand that accessibility is just the tip of the iceberg.

Historical accounts of slavery, with the thousands of digital resources in textual, video, and audio formats, provide a great laboratory to test all of the affordances of digital history. As a history teacher interested in taking advantage of computer-aided history texts and projects, I am drawn to the content of slavery because of the numerous possibilities to challenge the dominant narrative of U. S. history. With digital history, the marginalized perspectives and experiences of the enslaved and the events and ideas responsible for the foundation and perpetuation of racism during slavery can be integrated into the historical narrative. Through hyperlinks, digital history textbook accounts of slavery can include the experiences of African Americans in the U. S. historical narrative from the pre-colonial to the Civil War era. In this way, slavery will not just be a topic addressed when discussing the American South or the lead-up to the Civil War, but it will be a topic that is interwoven into the foundational and developmental narrative of the nation. As an African American teacher, I am drawn to the voices and perspectives of the free and enslaved African Americans made available through digital historical resources. The accessibility of textual and audial primary sources, like the slave narratives of the Federal Writers' Project, allows enslaved African Americans to speak for themselves without the filter of historians. From these digital resources, I gain an even greater appreciation for the perseverance, courage, and creativity exhibited by enslaved African Americans in the midst of the persistent racism, brutality and horrors of slavery. But, even with these thoughts in mind, digital history, for me, is not just a tool of empowerment for African American history, rather it is a tool

and method of doing history that can highlight the lived experiences, multiple perspectives, and complexity of slavery in United States history.

With that potential in mind, this study is an effort to construct a description and analysis of accounts of slavery in digital U. S. history textbooks, as compared to traditional U. S. history textbooks, with respect to the experiences of the enslaved, the centrality of race and racism, and recent historical scholarship on slavery. This study also seeks to determine whether U. S. digital history textbook accounts of slavery use the affordances of digital history to integrate more experiences of the enslaved, race-consciousness, and recent historical scholarship into the history narrative than traditional U. S. history textbooks.

The following research questions and related sub-questions guide the study:

1. How do digital U. S. history textbooks and traditional U. S. history textbooks describe slavery?
 - a. How are primary sources from enslaved African Americans used in the digital and traditional textbook accounts of slavery?
 - i. Do digital U. S. history textbooks have more primary source documents than traditional U. S. history textbooks?
 - ii. Do digital U. S. history textbooks have different primary source documents than traditional U. S. history textbooks?
 - iii. In both the digital and traditional U. S. history textbook, are the primary source documents located within the main historical narrative text or are they located on the margins of the history textbook page?

- b. How is the Critical Race Theory tenet of the centrality of race and racism represented in the digital and traditional textbook accounts of slavery?
 - c. How is recent historical scholarship about slavery used in the digital and traditional textbook accounts of slavery?
- 2. Do digital U. S. history textbooks take advantage of the accessibility of primary sources, hypertext links, images, and multimedia presentations to tell a story of the African American slave experience that reflects the marginalized voices of the enslaved, the centrality of race and racism, and the recent historical scholarship on slavery?

For the first sub-question of the first research question, I hypothesized that the number of primary sources would be greater, more varied, and more integrated in the digital U. S. history textbook than the print textbooks. For the second sub-question of the first research question, I hypothesized that the inclusion of more documents from different perspectives in the digital U. S. history textbooks would make the topics of race and racism more visible than in the traditional textbooks. Regarding the third sub-question of the first research question, I hypothesized that the inclusion of documents from multiple perspectives and the ability to easily edit and add to digital historical content (Cohen & Rosenzweig, 2005) would make the digital U. S. history textbooks more reflective of the most recent historical scholarship than traditional textbooks.

For the second research question, I divided the research into four sections and developed two hypotheses for each one. In terms of primary sources, I hypothesized that the number of primary sources would be greater, more varied, and more integrated in the digital U. S. history textbook accounts of slavery than the traditional textbooks. I also

hypothesized that the primary sources in digital textbooks would include more of the marginalized voices of the enslaved, the centrality of race and racism, and the recent historical scholarship on slavery than in the traditional textbooks. For the hypertext links, I hypothesized that digital U. S. textbook accounts of slavery would have internal and external links. I also hypothesized that those links would allow the digital U. S. history textbooks to include more of the marginalized voices of the enslaved, the centrality of race and racism, and the recent historical scholarship on slavery than the traditional textbooks. For images, I hypothesized that the digital U. S. history textbook accounts of slavery would have more images related to slavery than traditional U. S. history textbooks. Additionally, I hypothesized that the images in the digital U. S. history textbook accounts of slavery would include more of the marginalized voices of the enslaved, the centrality of race and racism, and the recent historical scholarship on slavery than in the traditional textbooks. Lastly, for multimedia content, I hypothesized that the digital U. S. history textbook accounts of slavery would have multimedia content. I also hypothesized that the multimedia content would include more of the marginalized voices of the enslaved, the centrality of race and racism, and the recent historical scholarship on slavery than the traditional textbooks.

The remainder of this chapter will present the problem statement, the theoretical frameworks, the methodological frameworks, and the significance of this study. In the problem statement, I will discuss the rationale and purpose for this study. The theoretical framework will synthesize critical race theory, hypertext theory, and new literacies. The methodological framework will both preview how the theoretical frameworks inform the methods and introduce the historical narrative approach to be used in the evaluation of

historical scholarship in the textbooks. In the significance of the study section, I will discuss the influence this study can have on teachers, students, and K-12 digital U. S. history textbook publishers.

Problem Statement

The decline of K-12 traditional (hardback/paperback) textbook sales (AAP, 2011) has prompted textbook publishers to look to digital textbooks as a potential replacement. According to Douglas Levin of the State Educational Technology Directors Association, twenty-two states are moving towards digital textbooks (Lederman, 2012). Even U. S. Secretary of Education, Arne Duncan, on Tuesday, October 2, 2012 called “for the nation to move as fast as possible away from printed textbooks and toward digital ones” (*ibid.*, para. 2). This could be exciting news for history teachers given that digital history textbooks can provide much greater access to primary source documents and other resources than a traditional book. However, history teachers should be concerned about the potential commercial take-over of digital history (Rosenzweig & O’Malley, 1997) by for-profit educational curriculum agencies that are more interested in making money than in portraying an accurate and multicultural history. Corporations and their curriculum specialists, instead of professional historians, will define the curriculum. In this context, greater access means very little if the documents one has access to contain latent ideologies that privilege elite capitalist interests over historical scholarship (Apple, 2004).

Given the prospects of digital history textbooks replacing traditional history textbooks in K-12 social studies classrooms, it is important to critically examine the history being told. Traditional U. S. history textbooks tend to be nationalistic monuments celebrating the past (Tyack, 1999), devoid of controversy and conflict in historical

interpretations. Subject to political and economic trends, textbooks often convey a grand narrative determined by the political power of the dominant society (Apple, 2004).

Considering these pressures influencing history textbooks, Foster (2006) adds that U. S. history textbooks are inherently conservative and static. Loewen (1995) goes so far as to state that U. S. history textbooks are filled with myths, distortions, and erroneous depictions of the past.

With promises to “democratize the doing of history” (Bolick, 2006; Cohen & Rosenzweig, 2005; Friedman, 2005) through access to online primary sources that open the vault to untold stories, and promises to help students build historical knowledge through historical context and voices of the participants (Hofner & Swan, 2008), digital history is a potential solution to the mis-education offered by traditional U. S. history textbooks. Supporting the notion of digital history textbooks, Lee (2001) states:

[t]extbook narratives often lack the irresolution and controversy that is an inherent component of historical research and inquiry . . . [w]hen teachers and students use digital historical resources, they embrace the complexities associated with the construction of authentic historical narrative. (para. 48)

While there are many examples of traditional textbook analysis research, the field has not yet progressed to examining digital textbooks. This study, a comparative analysis of traditional and digital U. S. history textbooks, is the first of its kind. Rather than examining a complete textbook historical narrative like Loewen (1995) in *Lies My Teacher Told Me: Everything Your American History Textbook Got Wrong*, I will take an in-depth look at textbook depictions of United States slavery.

Textbook accounts of slavery provide a useful sample for analysis because of the abundance of digital and print resources available, the changing interpretations and contentiousness of slavery, and the tendency of U. S. history textbooks to gloss over

discussions of race and racism. According to Berlin (2004), "[W]herever the issue of slavery has appeared--whether in books, museums, monuments, or classroom discussions--there have been tense debates over how to present the topic, often accompanied by charges that interpreters have said too much (why do you dwell upon it?) or too little (why can't you face the truth?)"(p. 1260).

The purpose of the study is to examine and compare how traditional and digital U. S. history textbook accounts of slavery address the experiences of the enslaved, the ideas and experience of race and racism, and the recent historical scholarship on slavery. Additionally, the study will analyze whether U. S. digital history textbook accounts of slavery use the affordances of digital history to tell a narrative that includes more of the marginalized voices of the enslaved, more discussions of race and racism, and more recent historical scholarship than traditional U. S. history textbooks.

Theoretical Frameworks

Critical Race Theory (CRT). Critical Race Theory is “a theoretical lens that illuminates the discursive and material ways that race operates in society and schools (Bell, 1995; Ladson-Billings & Tate, 1995; as cited in Brown & Brown, 2010, p. 34). At its foundation, CRT focuses on challenging the discourse on race and racism within U. S. law (Bell, 1995; Delgado, 1996). In education, CRT emphasizes the aspects of schools, classrooms, and content that explains the functions, causes, and consequences of racial education inequality (Zamudio et al., 2011). For the U. S. history textbook, CRT serves to “accentuate and empower the powerless” (Lintner, 2004, p. 30) through mainstreaming marginalized people groups and exposing racism. The principle of CRT that is critical to

those functions, and hence, important to this present textbook research, is the centrality of race and racism (Solorzano, 1997).

Race and racism have been a dominant force in United States history. To teach U. S. history is to teach the development of race and racism in the past and present. In fact, a history teacher's "[f]ailure to engage in critical discussions [with students] about race will only further polarize a nation with increasingly rich racial diversity" (Howard, 2003, p. 30). Race and racism should be essential foci of U. S. history curriculum in schools (*ibid.*).

The CRT tenet of the centrality of race and racism in contemporary U. S. social, political, and economic inequality and its roots in the history of U. S. slavery should be addressed in United States history textbooks. The values of racism and democracy cannot coexist without tension; in fact, democracy should require dealing with issues of racism and institutional oppression. U. S. history textbooks for too long have followed a "racial script" that trivializes or ignores race or racism (Ladson-Billings, 2003). Gay (2003) refers to this avoidance of discussions of race and racism in curriculum materials as "deracialization." Both paperback and digital curriculum can become "deracialized" by "de-emphasizing, distorting, excluding, or avoiding elements of race and racism in the presentation of individuals, the analysis of critical events, and the exploration of sociopolitical issues in educational programs and practices" (*ibid.*, p. 129). For example, Marri (2003), in a content analysis of online social studies lesson plans, demonstrates how "[r]ace is only addressed in lessons that examine the experiences of people of color . . . [and] stories and narratives that capture the continual struggle against racial discrimination . . . are missing from the lesson plan websites" (p. 250). United States

history textbooks, whether traditional or digital, should illuminate the development of race and racism in their accounts of slavery.

CRT serves to recognize the ubiquity of racism and unmask and exposes racism in its various manifestations (*ibid.*)—in the case of this study, in the textbook accounts of slavery. With this in mind, traditional and digital U. S. history textbooks cannot divorce the history of slavery from race and racism. Omi and Winant (1994) are clear in their statement justifying the need to examine U. S. history within a racial context:

A cursory glance at American history reveals that far from being color-blind, the United States has been an extremely “color-conscious” society. From the very inception of the Republic to the present moment, race has been a profound determinant of one’s political rights, one’s location in the labor market, and indeed one’s sense of “identity.” The hallmark of this history has been racism. (p. 1)

Regarding the traditional and digital textbook accounts of slavery, the CRT tenet of the centrality of race and racism allows the deconstruction and uncovering of historical narratives about racial progress in the U. S. (Delgado & Stefancic, 2001). For example, “CRT challenges the hegemonic narratives of meritocracy and of the centrality of exceptional leaders, rather than collective action, in the push for racial equality” (Vasquez Heilig, Brown, & Brown, 2012). CRT also analyzes racism “as structural and institutional” (*ibid.*), rather than as individual acts of prejudice or hate.

Hypertext theory. The origins of hypertext theory can be traced back to the ideas of Vannevar Bush, an engineer who served as the Director of the Office of Scientific Research and Development during World War II. In an essay entitled, “As We May Think,” he describes a machine called a “memex” as an imaginary device that would assist scholars and decision-makers in retrieving, storing, and arranging information among the massive quantities of information at their disposal (Bush, 1945).

For Bush (1945), the “memex” would simulate the workings of the human mind, creating connections between information and ideas and building new knowledge from those connections. George Landow (1992, 1997, 2006), drawing on the idea of the “memex” and the work of critical literary theorists such as Jacques Derrida, Roland Barthes, and Gilles Deleuze, promotes hypertext as tool that enables people to construct knowledge in a non-linear and associative way.

Hypertext is “text composed of blocks of words (or images) linked electronically by multiple paths, chains, or trails in an open-ended, perpetually unfinished textuality described by the terms link, node, network, web, and path” (Barthes, 1974, p. 5-6). The linking of hypertext allows “associative indexing” (Landow, 1997), a process in which users create trails or connections or links between items and sets of items. Because there are no limits to the number of links a user can create within and between texts, the “hypertext [environment] thrives on marginality” (*ibid.*, p. 88), with each text existing in relation to other texts and the boundary of power moving away from the author to the reader. This openness of the text also blurs the distinctions between author and reader. In fact, in hypertext environments, texts can be open-source allowing readers to make their own contributions to works. Known as “writerly” text (Barthes, 1974), this feature of hypertext requires an active reader and contributor to a text, as opposed to “readerly” text (*ibid.*), which requires a passive reader and consumer of a text.

The implications of these attributes of hypertext for the present textbook study of digital and traditional U. S. history textbook accounts of slavery are numerous.

Hypertext "enabl[es] readers to move between authors' arguments and their evidence in a way that is not possible with printed texts that provide only citations. Links make that

relationship dynamic; printing out the article and accompanying evidence would render it static" (Robertson, 2006, p. 449). Ayers and Thomas (2003), in their historical scholarly article using hypertext, *The Differences Slavery Made*, called their approach to hypertext in history, a "prismatic" model, "one that allows readers to explore angles of interpretation on the same evidentiary and historiographical background" (p. 1299). By linking to multiple texts and creating a web of associated texts and interpretations, hypertext use in history textbooks has the potential to enhance the dominant historical narrative with multiple perspectives and marginalized voices. Additionally, intertextuality, which is the ability to move instantaneously from one text to another in hypertext, facilitates an understanding of historical context and subtext, a necessary process in developing historical thinking skills (Wineburg, 2001).

The expansiveness and openness of text allowed in hypertext mirrors the complexity and non-linearity of United States history. According to Rommel-Ruiz (2006):

American life does not follow a linear progression like a textbook—it is polyrhythmic and improvisational, and deserving of a narrative framework that can appropriately recount its multivocality and complexity. Technologically, hypertext and the Internet offer us this opportunity to reconsider how we structure history, one that may be more accurate and representative of the American experience than the one currently represented via print. (p. 462)

Specifically related to African American history, the structure of hypertext validates its improvisational, communal, and oral storytelling characteristics along with "offer[ing] ways for people to think about a past that reinforces a community of interconnected, but different, voices" (*ibid.*, p. 467). For the current study of textbook accounts of slavery, the features of hypertext in the digital U. S. history textbooks have the potential to give the traditionally marginalized voices and experiences of the enslaved, discussions of race

and racism, and recent historical scholarship on slavery equal value and equal placement in the non-linear and non-hierarchical historical narrative of slavery.

New literacies. Given the potential openness of the digital historical narrative through hypertext and the abundance of digital historical resources, the new literacies are needed for understanding, adding to, and critiquing the digital history textbooks. With the exponential growth of digital history texts outpacing pedagogy and curriculum, teachers are in a “post-typographic” era in which “electronic texts are destabilizing previously held conceptions of literacy and are requiring students and teachers to examine assumptions about reading, writing, books, and what we know . . . about curriculum practice” (Semali, 2001, Section 2). Addressing the foundations of these new literacies to be taught, Leu et al. (2004) defines new literacies as “the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world” (p. 2). Additionally, the new literacies allow use of the Internet “to identify important questions, locate information, critically evaluate the usefulness of that information, synthesize information to answer those questions, and then communicate the answers to others” (*ibid.*). In the K-12 classroom of the twenty-first century, “. . . teachers must realize that using the Web is not first and foremost about the passive acquisition of knowledge but about the active construction of knowledge. Ultimately, this is a question of critical reading—reading while simultaneously evaluating the relevance and reliability of what is being read” (Kuiper and Volman, 2008, p. 248). According to Tapscott (1998), student use of the Internet for learning is “not just point and click. It’s point, read, think and click” (p. 63).

For this study, the new literacies will be used to determine whether the digital history textbooks facilitate the location, evaluation, contextualization, and understanding of the historical narrative. Through use of the new literacies, the digital U. S. history textbooks should scaffold student historical thinking by making visible the stances and opinions of authors and the documentary record. According to Wineburg (2001),

[t]extbooks rarely cite the documentary record; if primary material appears, it is typically set off in ‘sidebars’ so as not to interfere with the main text . . . the textbook speaks in the omniscient third-person. No visible author confronts the reader; instead, a corporate author speaks from a position of transcendence, a position of knowing from on high (p. 12-13).

To become critical readers and historical thinkers, students “need to see author biases and evaluate them” (Crismore, 1984, p. 296) as distinct from historical documents.

The new literacies will also frame the analysis and contextualization of visuals (Kuiper & Volman, 2008) in the digital history textbooks. Additionally, the use of multimedia presentations will be evaluated based on new literacies principles of multimedia message design (Mayer, 2008).

Methodological Frameworks

Both the theoretical frameworks and the historical record inform the research methods in this textbook research study. Using Critical Race Theory, I read, coded, and analyzed how race and racism are conveyed in the textbook (Vasquez Heilig, Brown, & Brown, 2012). I counted the number of times that the terms “race” and “racism” appear in the text, while also coding for specific discussions of race and racism, and “whether racism was positioned as structural/institutional in nature or as individual bias and/or prejudice” (*ibid.*, p. 409) across the textbooks. With hypertext theory, I described hypertext links and link paths in the digital textbooks. I also used hypertext theory to

determine whether links to primary source documents are integrated into the historical narrative and whether links are used to “annotate anachronistic language, . . . provide information on a text’s author, or . . . identify passages that reveal a point of view and genre . . .” (Robertson, 2006, p. 451). With new literacies framing my methodological approach, I counted and described the images related to slavery in the textbooks, and counted and described the video, audio, and interactive graphics about slavery in the digital textbooks. With the new literacies, I also evaluated whether hypertext links were used to scaffold student understanding through annotations (Robertson, 2006). Additionally, I evaluated the video content based on multimedia message design (Mayer, 2008).

The historical record or narrative informed the methods in this study through the primary source documents. To analyze the experiences of the enslaved in textbook accounts of slavery, I counted and described the primary source documents from the era of African American slavery in the United States.

For the analysis and evaluation of textbook accounts of slavery based on recent historical scholarship, I used the historical narrative approach (Cramer, 2012; Leahy, 2010; Loewen, 1995). Relying on the historical record as a measuring stick, “[t]he principal strength of historical narrative [approach] is that it makes use of leading histories and recent scholarship as a base to critique textbooks; therefore it offers a perspective that is rich in historical detail” (Cramer, 2012, p. 115).

Significance Of The Study

This study and analysis of digital and traditional U. S. history textbook accounts of slavery fills a gap in the literature regarding digital history and textbooks. Rather than

view the openness and nonlinearity of digital, hypertext history as the polar opposite of the closed, linearity of textbooks (Rommel-Ruiz, 2006), this study seeks to find affordances of digital history within the structure of a digital history textbook. The increased accessibility of primary source documents (Lee, 2002), the multiple perspectives of historical narratives (Ayers, 1999), the flexibility in presentation forms (Cohen & Rosenzweig, 2005), and the integration of formerly marginalized historical accounts (Bolick, 2006) in digital history makes it possible to radically transform the textbook accounts of slavery. This study reveals whether digital U. S. history textbook accounts of slavery live up to the potential.

The comparative examination of the traditional and digital U. S. history textbook accounts of slavery uncovers whether the historical narrative changes when the format changes from paper to digital. The insights gained from the data collected may lead to both traditional and digital U. S. history textbooks containing an inclusive, multi-perspective narrative that addresses controversial topics.

Lastly, the study could lead to the mobilization of digital historians for the purposes of writing more digital history textbooks. If this happens, digital historians may grab the digital history textbook market from the hands of the major textbook publishers. With that in mind, textbook publishers could also use the study to improve current digital history textbooks.

In the upcoming chapters, I will review the literature related to the study (Chapter 2), frame the methods for the study (Chapter 3), report the results of the study (Chapter 4), and discuss the interpretations and significance of the results (Chapter 5).

Chapter 2: LITERATURE REVIEW

This literature review addresses the role of U. S. history textbooks in history classes and the historical and contemporary factors keeping U. S. history textbook accounts of slavery devoid of primary source documents, discussions of race and racism, and recent historical scholarship. The field and methods of digital history is then explored as a potential solution to the aforementioned problems with traditional textbook accounts of slavery. A history of representations of African Americans and slavery in U. S. history textbooks and relevant research on teaching about slavery is then presented to situate the current study among the many similar history textbook content analyses. The research design of this study is then explained in the context of related literature and theoretical foundations.

United States History Textbooks

The backbone of the United States history classroom, the U. S. history textbook permeates almost every aspect of classroom instruction. Writing in 1955, Cronbach stated that “[o]nly the teacher—and perhaps a blackboard and writing materials—are found as universally as the textbook in our classrooms” (p. 3). Those words still ring true today in most U. S. history classrooms. The Association of American Publishers (2012) in their advocacy-oriented, school funding report argue that “[t]extbooks and other instructional materials are second only to the teacher in the central role they play in classroom instruction” (para. 1). This reliance on textbooks in U. S. history classrooms is not without its problems. For instance, the “godlike tone” (Loewen, 1995, p. 16) and

“rhetoric of certainty” (*ibid.*, p. 287) of U. S. history textbooks makes it difficult for teachers to teach critical thinking through the controversies, uncertainties, and alternative and oppositional perspectives in the history of our country. Additionally, through U. S. history textbooks, students are implicitly taught that if a person, place, event, or idea is included in a textbook, then it is true and important; while, conversely, omission from a textbook means that some idea or thing may not be true and is not important (Loewen, 1995). With the uncritical acceptance of textbook accounts by teachers and students, the U. S. history classroom becomes an uncontested terrain of indoctrination. Sewall (2000) stated that U. S. history textbooks have been “the official portraits of our country’s past . . . that are assigned to students with the foreknowledge that these students will someday participate in public affairs” (p. 2). Romanowski (2009) added that U. S. history textbooks “reflect a national consensus regarding cultural knowledge and values that members of society want transmitted to their children” (p. 290). While assimilation to, and appreciation of, United States values should be emphasized in history textbooks, that emphasis should not come at the expense of facilitating critical thinking.

Challenges of Creating the “Perfect” U.S. History Textbook

Although U. S. history textbooks are often presented to students as unbiased, factual accounts of the national narrative, the many ideological and economic influences on the textbook narrative prove that “unbiased” presentation to be false (Loewen, 1995). The ideological and economic nature and purposes of U. S. history textbooks reflect uniformity, profitability, and the contemporary moment in which the history is written. Those factors could hinder whether textbook accounts include primary sources, discussions of controversial issues, and recent historical scholarship.

According to David Tyack (1999), textbooks are like stone monuments designed to commemorate the past and reflect the public culture. Similar to monuments, textbooks can reveal more about their creators than about the past they represent. Because the values and perspectives of the creators are made legitimate through textbooks, those textbooks reveal not only what knowledge is of most worth, but whose knowledge is of most worth (Apple & Christian-Smith, 1991). With schools tending to serve the interests of the elite, the knowledge transmitted in schools through textbooks is a form of symbolic capital defined and controlled by the elite powerful groups in society (Bourdieu, 1973). Disguised as school knowledge for all students, textbook knowledge is symbolic capital that reinforces the power of dominant groups. In her analysis of United States history textbooks, Anyon (2011) found that textbooks, despite claims of objectivity, expressed dominant groups' ideologies and legitimized the unequal social and economic relations between dominant and less powerful groups. Particularly, Anyon (2011) found that U. S. history textbooks imposed beliefs and constrained choices defining past "'success' and 'failure' in social, economic, and political matters" (p. 127). Therefore, in terms of the U. S. labor movement, "governmental reform and labor-management cooperation are characterized as successful methods of social recourse, whereas confrontation and strikes are depicted as failures" (*ibid.*, p. 127). In this sense, textbooks explicitly emphasize particular content at the expense of other content while implicitly maintaining the status quo and hierarchy in social class relations (Sleeter & Grant, 1991).

Addressing race, class, gender, and disability in U. S. history textbooks, Sleeter and Grant (1991) found that, by presenting one version or perspective of history, textbook accounts reify certain values and give prominence to the knowledge of the elite

or privileged in society. Despite the multiculturalism and diversity movements, which led to more inclusion of minority groups in textbooks, their study showed that textbooks continued to legitimate the status of White, able-bodied males (*ibid.*). Given the prominence in U. S. schools of a schooling paradigm, which is “designed to provide an ample supply of people who are loyal to the nation-state and who have learned the skills needed to perform the work that is necessary to maintain the dominance of the . . . elite in the social order” (Shujaa, 1998 p. 10), there is little wonder that history textbooks are its main conduits. Foster (2006), in his analysis of the representations of immigrant groups in U. S. history textbooks, summed up the assimilationist and monocultural attributes of textbooks in this way:

For the most part history textbooks never were intended to promote reflective thought, to stimulate critical analysis, or to celebrate cultural diversity. The function of history in American schools essentially has been to instill in the young a sense of unity and patriotism and veneration for the nation’s glorious heritage. (*ibid.*, p. 157)

Additionally, for Foster (2006), ideological influences make textbooks inherently conservative and static. Textbook accounts continue to perpetuate conservative themes of nationalism, absence of conflict and controversy, and “mentioning” (*ibid.*). The nationalistic theme of progress and national pride preserves the status quo because if “society constantly is improving little needs to be done to address social ills” (*ibid.*, p. 167). Also, the theme of mentioning “involves adding content to the text without altering the book’s organizing framework or central message” (*ibid.*, p. 169). In this way, minorities and women may be added to the historical narrative, but those additions are superficial and do not change the structure or meaning of the narrative.

The conservative ideologies inhibiting a historical narrative filled with multiple perspectives through primary source documents, controversial issues, and recent scholarship are present in the textbook publishing industry through the accountability and standards movement, the state textbook adoption policies, and the economics of selling textbooks. The “invisible hand” of the market, the “political hand” of state textbook adoption (Apple & Christian-Smith, 1991), and the “standardization hand” of the accountability movement guide textbook publishers. Because of the expense of creating and printing textbooks and the difficulty of predicting whether new books will be profitable in the market, often textbooks beget textbooks (Tyack, 1999). To minimize risk, textbook publishers “find it wise to copy successes . . . [and] easier to add to the master narrative than to rethink it, easier to incorporate new content into a safe and profitable formula than to create new accounts” (*ibid.*, p. 929). The predominant political climate and culture of the large textbook adopting states of California and Texas, because they have a large market desirable to publishers, shape the textbook content and curriculum across the nation. So, because of the “Texas” and “California” effect, in which the textbook publishers create content that meet the larger states’ curriculum (Tulley & Farr, 1990), the political climate of those states may necessitate the inclusion or exclusion of content that may not reflect the climate in other states. The infusion of politics in the textbook publishing process is also evident through the influence of political interest groups. Even with the political influences, textbooks often steer clear of overtly political or controversial content that may alienate readers and offend potential consumers. In a similar way, the standards and accountability movement influences history textbook publishers to avoid controversial issues. To ensure that students learn

the key people, events, and dates, the standards-based history textbook does not facilitate historical inquiry, critical analysis, or student-centered activities. According to Leahy (2010), “[t]he end result is the production, adoption, and dissemination of textbook narratives scrubbed of controversy, new research, and alternative perspectives, a vital part of historical study and democratic life” (p. 39).

The Multicultural Inclusion Movement for U.S. History Textbooks

Even though the canon of the United States history textbook narratives have mostly included top-down, monocultural accounts, the movement towards multicultural inclusion in textbooks has not necessarily led to a historical narrative featuring accounts from multiple perspectives. Increasing demands for minority representation in textbooks coincided with the growth of “bottom up” social history in the history discipline and the Civil Rights movement of the 1960s (Tyack, 1999). Using the arguments of Dr. Kenneth Clark, the sociologist that conducted the “doll experiments” on African American children as evidence in the *Brown v. Board of Education of Topeka, Kansas* (1954) case, many African American civil rights activists argued that racist textbooks were psychologically damaging to Black children (Zimmerman, 2011). African Americans thought that history textbooks justified and perpetuated White racism, so they were more interested in textbooks that would diminish White prejudice rather than textbooks that would protect and promote Black egos (*ibid.*). But, psychological health became the major emphasis of U. S. history textbooks, which led White conservatives and other racial and ethnic groups to argue that negative material about their past would harm their mental health as well. The result is a U. S. history textbook that “mentions” (Foster,

2006) minorities and celebrates race and diversity, but significantly downplays racism (Zimmerman, 2011). Zimmerman (2011) added that

[w]hen Blacks won new material about their triumphal deeds . . . they cleared the way for other groups to do the same. So textbooks billowed to 700 or even 800 pages, giving every group ‘some history to be proud of’ but diverting them from the painful history they shared. (p. 232)

Conservative critics of the multicultural inclusion movement in U. S. history textbooks call it a “textual affirmative action” (Sewall, 1987, p. 75) that inundates the central historical narrative of the nation’s political and economic development in a sea of political correctness. Sewall (2000) in a later publication added that “old master narratives in yesteryear’s textbooks – faith in progress and patriotic pride – have vanished, too rosy and innocent in view” (p. 28). In discussing the “heroes” in new U. S. history textbooks as opposed to the “heroes” in old U. S. history textbooks, Sewall (2000) wrote that new textbooks

advance a civic agenda that highlights and ennobles people of color, peace advocates, anti-colonialists, environmentalists, and wronged women . . . [while] Alexander Hamilton and Henry Clay, Alexander Graham Bell and Thomas Edison . . . do not exactly vanish, but they are not much savored either. (p. 43)

Inclusion in U. S. history textbooks, however, does not have to be a zero-sum game. To highlight one group, person, or event in U. S. history does not mean that you have to not talk about another group, person, or event. United States history textbooks should facilitate student choices in investigating multiple accounts of historical narratives. Those choices, however, would mean more pages in the print textbook, which would be more expensive for publishers and schools. With that in mind, this research study fills a gap in the literature by examining digital history textbooks as a potential tool to help

U. S. history textbooks overcome some of the aforementioned ideological and economic barriers.

Digital History and Digital History Textbooks

Digital history holds the potential to completely transform the writing, doing, and teaching of history. As a method and field of study, digital history allows greater accessibility of primary source documents (Lee, 2002), multiple perspectives of historical narratives (Ayers, 1999), flexibility in presentation forms (Cohen & Rosenzweig, 2005), integration of formerly marginalized historical accounts (Bolick, 2006), student-centered pedagogical approaches (Cohen et al., 2008; Lee, 2002), greater opportunities for historical thinking (Saye & Brush, 2007), and more opportunities for collaboration (Burton, 2005). According to Wynne (1999), “[the Internet] decentralizes and democratizes access to knowledge bases in ways that used to be impossible . . . [and] democratizes pedagogy because it deals with evidence from a variety of sources to give voice to a range of human endeavors” (p. 25). Consistent with these claims about the transformative power of Internet technologies in the history discipline are the claims that the aforementioned affordances of digital history democratize the telling and doing of history (Bolick, 2006; Cohen & Rosenzweig, 2005; Friedman, 2005).

In this section of the literature review, I provide an overview of digital history and its affordances, and, from that overview and related research, develop a definition of digital history textbooks. According to Professor William Thomas III, digital history “is an approach to examining and representing the past that works with the new communication technologies of the computer, the Internet network, and software systems” (as cited in Cohen et al., 2008, p. 454). With the capacity to transform how

history is written, digital history uses hypertext links to allow readers to connect to multiple and, perhaps, marginalized accounts. This hypertextuality also makes the historical narrative non-linear, but imaginatively open-ended (Cohen et al., 2008). As historians, and not librarians or archivists, digital historians should do a lot more than make more historical documents accessible online. In fact, digital historians should “use computers to do history in ways impossible without the computer” (Burton, 2005, p. 207). Professor Amy Taylor mentioned some of the improved ways to do history:

[t]here’s the ability to access images and video with new efficiency and therefore to make these forms a more central part of historical analysis. There are possibilities for mapping . . . the plotting of data through GIS maps to see the spatial dimensions of people’s lives or capturing movement through animated maps (as cited in Cohen et al., 2008, p. 484).

The Difference Slavery Made: A Close Analysis of Two American Communities published by Ayers and Thomas in 2003 exclusively for an online readership demonstrates the benefits of digital history. According to Burton (2005), the article “allowed readers to better learn about and see change over time . . . to browse the historical argument in a nonlinear fashion through hyperlinks . . . to directly reference many of the primary and secondary sources cited in the article, and . . . to provide very detailed and specific claims about evidence the reader is able to see on the spot” (Burton, p. 211). Digital history is also participatory and interactive. Comparing digital history to gaming, Professor Thomas wrote that in digital history, just like in gaming, “users have control over where their characters will go and what they will see and do, but the creator/author controls the parameters of that experience” (as cited in Cohen et al., 2008, p. 460). That digital history is composed of many primary source documents presented in different formats that convey multiple perspectives and marginalized accounts, and

student-centered activities facilitating historical thinking and collaboration, is evident in the above examples.

Through its offering of an unmediated history, digital history provides a good solution for those students of history who fear being manipulated by textbook publishers and authors that may distort the past to meet their own needs of commercial greed, political ambition, or cultural prejudice (Rosenzweig & Thelen, 1998). Digital history strips away the layers of mediation and offers readers a more balanced and collaborative role in constructing the past (Cohen et al., 2008). The reader can work directly with “raw” digital history materials compromising “documents, information and communications that are heterogeneous and that have little, if any, organization” (Cohen, 2004, p. 337). *The Atlantic Slave Trade and Slave Life in the Americas: A Visual Record* website developed by James S. Handler and Michael L. Tuite, Jr. is a good example of raw digital history because it offers lots of images, but no overall framework or educational context for the images (Burton, 2005). In response to raw digital history, Thomas stated that “[t]he single largest question . . . was whether we (digital historians) had abdicated our responsibilities to the reader—to guide, inform, interpret, and tell the reader the story, the meaning of the past” (as cited in Cohen et al., 2008, p. 475). Anticipating Thomas’ concern, Cohen (2004) defined “cooked” digital history, in opposition to “raw”, as “helpful markings and a measure of homogeneity” (p. 337) added to the presentation of historical materials online. While cooked would seem preferable to raw because of the added structure to the disorganized mess of online historical documents, cooked digital materials consume lots of time and money in its construction, and “enshrine certain choices, paths, interpretations and associations” (Cohen, 2004, p.

339) in its structure. To be over-“cooked” is the equivalent of historical commentary on the Internet with few opportunities for historical inquiry; while, to be too “raw” is the equivalent of an unorganized digital historical archive.

A potential compromise between raw and cooked digital history are interpretative digital history web sites. According to Lee (2002a), those sites “contain some description, explanation, analysis, and/or evaluation of historical primary sources as well as original digital historical narrative or analytical works” (para. 3). In addition, many interpretative digital history sites contain significant numbers of primary sources to be used to facilitate historical inquiry (*ibid.*). Lastly, the sites tend to be organized around a theme, a time period, or an historical inquiry project. Though the organization, description, analysis, and overarching historical narrative of these websites are clear evidence of cooked digital history, the inclusion of multiple primary source documents provide a hint of the raw.

Considering the attributes of digital history, along with understandings of raw, cooked, and interpretative digital history materials, digital history textbooks are defined as Internet-based, repositories of primary source documents and original digital historical narratives bound together or structured chronologically, thematically, or interpretively. This definition is used to identify digital U. S. history textbooks analyzed in the study. Additionally, given the possibilities of a limitless number of primary source documents together with the other affordances of digital history, digital U. S. history textbooks have the potential to transform accounts of slavery by including multiple perspectives, discussions of race and racism, and recent historical scholarship. Consequently, a major part of this study is a content analysis of digital U. S. history textbooks to examine

whether that potential is realized. The next section of the literature review includes a history of content analysis for African American representation in U. S. history textbooks.

The History of Content Analysis of African American Representation in U. S. History Textbooks

Content analysis for the purposes of improving history textbook portrayals of African Americans has a long history in educational research. That history is part of the foundation for this current study about digital and traditional U. S. history textbook accounts of slavery.

As one of the first content analysis studies of African American representation in historical scholarship and textbooks, DuBois (1935) criticized White racism in the depictions of African Americans during the Reconstruction time period. Portrayals of African Americans as ignorant and unable to govern themselves were the predominant narratives in U. S. history textbooks from shortly after Reconstruction until the Civil Rights movement. Critical of this historical scholarship, DuBois (1935) stated that “[w]e shall never have a science of history until we have in our colleges men who regard the truth as more important than the defense of the White race, and who will not deliberately encourage students to gather thesis material in order to support a prejudice or buttress a lie” (p. 725). A few years later, in 1939, the National Association for the Advancement of Colored People (NAACP) wrote *Anti-Negro Propaganda in School Textbooks* to expose textbook bias (Alexander, 2002). According to Alexander (2002), “[t]his work highlighted negative portrayals of African Americans within textbooks . . . as inferior or in stereotypical roles” (p. 19). Applying this textual analysis on a broader scale, the American Council on Education in 1949 examined 300 elementary, secondary, and

postsecondary textbooks and found that “textbooks in use throughout the United States [were] distressingly inadequate, inappropriate and even damaging to intergroup relations” (as cited in Kane, 1970, p. 1). In this study, not only were the depictions of African Americans negative and inaccurate, so were the depictions of relationships between African Americans and Whites. Twenty years later, James Banks analyzed thirty-six elementary U. S. history textbooks for their treatment of African Americans and of race relations (Garcia, 1993). Banks (1969) found that many textbooks rarely depicted violence and often failed to explain prejudice and discrimination. In another study, Elson (1964) analyzed 1000 K-8 textbooks and found that the textbook accounts reproduced the status quo of White male superiority and omitted or distorted the achievements of minorities and women. Kane (1970) analyzed social studies textbooks and found that the quantity of African American representation in textbooks had improved, but “the treatment of the black man in most social studies textbooks [was] still far from adequate” (p. 104). More than half of the textbooks that Kane (1970) analyzed contained bias and stereotypes of African Americans.

More recent textbook analysis include Loewen’s (1995) *Lies My Teacher Told Me: Everything Your American History Textbook Got Wrong*, in which he criticized U. S. history textbooks for not addressing the role of White racism in shaping American history and perpetuating the traditional narrative. Addressing United States slavery, Loewen (1995) stated that textbooks “minimize white complicity in it . . . [and] present slavery virtually as uncaused, a tragedy, rather than a wrong perpetrated by some people on others” (p. 145). Gordy and Pritchard (1995) used a multicultural framework to conduct a content analysis of U.S. history textbook accounts of slavery. Their findings

indicate that textbooks address some of the injustices of slavery, but due to the marginalization of the perspectives of African Americans and women, textbooks still do not provide students with a “full understanding of racial and gender discrimination inherent in the slave system and the consequences of this discrimination on generations of Americans, both African American and White” (*ibid.*, p. 213). Sadker, Sadker, and Long (1997), in their study, found that textbooks avoid controversial topics like racial discrimination. The authors also found that textbooks tend to relegate minorities and women to the outskirts of the historical narrative, which they refer to as “fragmentation” (*ibid.*). For Sadker, Sadker, and Long (1997), “[f]ragmentation communicates to readers that women (and minorities) are an interesting diversion but that their contributions do not constitute the mainstream of history and literature” (*ibid.*, p. 134). Washburn (1997) analyzed accounts of slavery in U. S. history textbooks published from 1900 to 1992 and found that those accounts were largely influenced by ideologies dominant at the time of their writing. For Washburn (1997), five patterns emerged from the textbook accounts of slavery, four of which justified slavery’s existence, reflecting the racist ideologies present during the textbook’s construction. From 1900 to 1930, Washburn (1997) found a pattern of neutral presentations of slavery; from 1930 to 1950, she found a pattern justifying the slave system; from the mid-1940s to the mid-1950s, she found a pattern supporting slavery as a necessary evil; from the late 1960s to 1970s, she found a pattern supporting slavery as un-American; and from 1980 to 1992, she found a pattern supporting slavery as a reflection of Conservative values. Alridge (2006) examined U. S. history textbook narratives of Martin Luther King, Jr. and found that those narratives were prescribed, oversimplified, and uncontroversial. For example, the presentation of

King as a messiah highlights him as the one exceptional leader that initiated and gave vision to the Civil Rights Movement. However, that messianic master narrative “denies students an opportunity to see King as a real person and as a young man who develops into a leader over time. Students also lose the opportunity to study the community leadership in Birmingham before King . . . “ (*ibid.*, p. 667). These kinds of narratives do not present multiple perspectives or student-centered, critical thinking activities. Brown and Brown (2010) examined U. S. history textbooks for accounts of racial violence towards African Americans. While the authors found that incidents of racial violence against African Americans are included in more textbooks today than in the past, the institutional nature and implications of racial violence and privilege are still left unexamined (*ibid.*). Hilburn and Fitchett (2012) examined voluntary and involuntary immigration in North Carolina history textbooks and found negative stereotypes of African Americans in the early 20th century versions and evidence of “North Carolina slavery exceptionalism” in all of the versions. The false notion of the exceptionalism of North Carolina slavery refers to “the theme throughout the textbooks that North Carolina had few slaves, and that slaves were treated better in North Carolina than in other places” (*ibid.*, p. 56).

Regardless of the source, most content analysis of African American representation in U. S. history textbooks criticized three points: (1) the absence or marginalization of African Americans in the historical narrative; (2) the reinforcing of negative stereotypes through African American depictions; and (3) the near absence of discussions of racism and white privilege. Hughes (2007) emphasized the latter point when he stated that even in the late 1990s when “[t]extbooks were full of the

contributions and experiences of people of color . . . [they were] almost devoid of discussion of white privilege and its relation to the experiences of Americans” (p. 205).

This research study continues the trend of critique of African American portrayals in U. S. history textbooks. Analyzing both print and digital U. S. history textbooks, this study compares accounts of slavery in both mediums to determine whether the affordances of the digital medium makes a difference in the textbook historical narrative. In the next section of the literature review, I will examine the role of U. S. history textbooks in teaching about U. S. slavery.

Teaching United States Slavery

Given that United States history textbooks often sanitize accounts of slavery, the effects of those textbooks on teaching U. S. slavery are explored and recommendations for improvements are made in this section of the literature review. The “master script” (Swartz, 1992) of textbook accounts of slavery tends to highlight a few African-American role models in a biographical approach (*ibid.*), connect the history of slavery to the narrative of the Civil War (Berlin, 2004), treat slavery as a “temporary aberration” (Loewen, 1995, p. 142) in the progress of American democracy, ignore or minimize the violence of slavery (Ruffins, 2001), ignore the role of race and racism in slavery (Loewen, 1995), and simplify the historical research, debate, and complexity of slavery (Kolchin, 1998; Kotzin, 2007; Olwell, 2001). The historical development of this master script of textbook accounts of slavery and its influences on teaching are further examined below.

Ulrich B. Phillips (1929) in *Life and Labor in the Old South*, depicted slavery as a largely benevolent economic and social system involving “conscript labor” of docile and

content slaves. In Phillips' view, it did not make sense for an owner to abuse his slaves because that would damage property and reduce the efficiency of the labor force. Ruffin (2001) suggested that much of the research and scholarship on slavery today is a reaction and response to Phillips' account. It is important to note that many of the early United States history textbooks mirrored Phillip's views of slavery (Elson, 1964; Kane, 1970; Washburn, 1997). Teaching this account of slavery presents a simplistic morality lesson from a single perspective. In this moral saga of slavery, "the United States is always intrinsically and increasingly democratic, and slaveholding is merely a temporary aberration, not part of the big picture" (Loewen, 1995, p. 142). Denial of the lived reality of the enslaved Africans and emphasis on the democratic and economic progression of the nation are the central objectives of these teaching lessons on slavery.

Responding to Phillips' account as well as negative stereotypes about African Americans during Reconstruction in the U. S., DuBois (1935) challenged historians to write histories "as though Negroes were ordinary human beings" (p. 1). Approaching antebellum slavery as a problem faced by people, teachers can begin "to view the enslaved as individuals who laughed, loved, wept, and wondered—experiences to which all of us, including our students, can relate" (O'Donovan, 2009, p. 8). When this happens, a different history will unfold: "a story of profound oppression that is simultaneously a story of creativity, resilience, and above all, survival" (*ibid.*, p. 8). Viewing the slaves as human beings, Kotzin (2007) used Genovese's *Roll, Jordan, Roll* (1976) to teach that slaves were not passive victims; rather "they asserted their humanity within . . . a 'paternalistic' system in which they accepted white domination while demanding a degree of autonomy" (p. 62). To teach paternalism and slave autonomy,

Kotzin (2007) asked students to read primary sources describing slave courtship to compare to their own courtship and dating patterns. According to West (2004) in *Chains of Love: Slave Couples in Antebellum South Carolina*, masters arranged for couples on different plantations to meet, encouraged specific matches within their own plantation, required permission for marriages, rewarded marriages they liked, and presided over wedding ceremonies. With that in mind, Kotzin (2007) helped students emotionally connect with the slaves and better understand the complexities of the paternalistic master-slave relationship by asking them to imagine that their parents or other authority figures interfered in their dating relationships like slave masters did with the slaves.

Similar to the idea of slave autonomy, slave agency is a concept developed by historians to describe the enslaved African Americans as active agents in shaping their own lives (Penningroth, 2009). The agency framework is accurate in the sense that “it was slaves’ actions that launched rebellions, established families, passed down customs, created the ‘sorrow songs’ and field hollers, and did the everyday work that sustained the South’s economy” (p. 17). But, Penningroth (2009) joined Johnson (2003) in warning that slave agency with its “liberal notion of selfhood . . . risks downplaying the constraints of the system or even ‘whitewashing’ the horrors of slavery” (as cited in Penningroth, 2009, p. 17). Therefore, in teaching about slave agency, educators need to present a balance between the institutional and violent system of slavery and the resilience and creativity of the enslaved to endure and overcome.

With the tendency of U. S. history textbooks to ignore or minimize the violence of slavery, Ruffins (2001) suggested that lesson plans and content for K-12 students can emphasize the possibilities of freedom and justice over the horrors of slavery as long as

students understand that violence and racism were the norm. So, students can be taught “lessons about the Underground Railroad and the revolt on the Amistad slave ship . . . [which] involve interracial cooperation that successfully frees the slaves” (p. 26). But, they must also be informed that both moments are “highly atypical” (*ibid.*).

Ultimately, including evidence of racism and interracial cooperation, along with a balanced view of slave agency, helps students better understand the lived experiences of the enslaved. In this sense, comprehending the humanity of slavery does not mean minimizing the inhumanity of the system, rather it means “see[ing] the lives of enslaved people as powerfully conditioned by, though not reducible to, their slavery” (Johnson, 2003, p. 115). Additionally, by teaching students slavery from the perspective of the enslaved through primary source documents, “we are teaching them how to think and read critically, how to tease out meaning, identify assumptions, weigh evidence, and arrive at their own conclusions . . . [and] how to understand the past on its terms and not their own” (O’Donovan, 2009, p. 9).

Regarding the teaching of changes in the slave experience over time and the multiple perspectives of the slave experience, Ira Berlin’s (2003) book, *Generations of Captivity: A History of African American Slaves*, is a great example. From Berlin (2003), educators can learn to teach slavery from the perspective that slaves were not a monolithic or static group; they came from different places, had different experiences, and adapted differently over time in the U. S. In fact, “[s]laves were different people in 1650 than they would be in 1750 or 1850, but they always carried something of their forebears into the future” (p. 8). Educators can use Berlin’s (2003) five “generations of slavery” to unpack how slavery in the U. S. changes over time and how slavery can be

understood from multiple perspectives. Similarly, educators can place U. S. slavery

in the context of a much larger Atlantic world, where everything from individual identity to cultural stimuli stretched beyond the British colonies to include West Africa, Brazil, most Caribbean islands, western Europe, and the lands and waters in between. (Wright, 2003, p. 5)

By establishing the national and international context of slavery, educators can use primary sources and historical narratives to demonstrate to students that slavery and racism were prevalent beyond the borders of the U. S. southern region.

Shifting the focus of teaching slavery to issues of human rights, capitalist production, globalism, and contemporary implications, Singer (2008) challenged teachers to “think about slavery and racism as global systems shaping the world and creating the powerful institutions that govern today” (p. 6). Citing evidence that 19th century New York City bankers and merchants made huge profits from slavery, Singer (2008) questioned whether capitalist production for profit, both then and now, could be trusted to protect human rights. Additionally, he encouraged teachers to consider whether human rights violations like slavery, then, or child labor, now, are tragic mistakes or “underlying pillar[s] of capitalist industrial development” (p. 6).

Drawing on Eric Williams’ classic work, *Capitalism and Slavery* (1944), McCarthy and Sealy-Ruiz (2010) take a critical pedagogical stance towards teaching the connections between the past and present capitalist system and its consequences for enslaved Africans and their descendants today. This approach gives educators “possible points of departure to teach about an institution that systematically relied on the degradation of one group for the advancement of another, and how it shaped present-day society” (*ibid.*, p. 82). A critical examination of the race/class stratification in the larger societies and the structures of the plantation system that dehumanized African Americans

are key components of the pedagogical approach.

Explanations of Research Design: Qualitative Content Analysis

Analyzing digital and traditional U. S. history textbook content through an inductive and iterative process involving close reading and interpretation of texts is the general approach to content analysis taken in this study (Krippendorff, 2013). While most quantitative content analysis emphasize objectivity, systematic procedures, and replicability (Holsti, 1969; Krippendorff, 2013), qualitative content analysis purposefully takes into account the subjectivity of the analysts and attempts replicability by explicitly describing the procedural steps taken to reach conclusions (Krippendorff, 2013). Because the questions that analysts seek to answer are the analyst's questions, they are potentially at odds with whether others could answer them and how (*ibid.*). For this reason, the analyst's subjectivity and positionality are important to understand the findings of qualitative content analysis, even though the potential for replication of the study is limited.

Positionality. The role of the researcher/analyst in any study affects the questions asked, the research design used, and the way the results are interpreted (Hatch, 2002). Although quantitative content analysis is designed to be an unobtrusive technique that minimizes the researcher's influence on the data, qualitative content analysis acknowledges the analyst's social and cultural positioning or worldview and its effects on the process (Krippendorff, 2013).

Positionality to the researcher is the practice of delineating his or her own position in relation to the study, with the implication that the position may influence the information collected and the way in which it is interpreted (Salzman, 2002). Similarly, a

researcher's subjectivity is the part of his or her life or experiences that affect how he or she interprets and views the world. My positionality and subjectivity are important in this study for three reasons. First, as the researcher I need to examine and clearly state my subjectivity towards the history of slavery. Based on my years of teaching A. P. U. S. History and African American Studies, I believe that teaching and learning about slavery should emphasize the humanity, resistance, and empowerment of the enslaved. Second, I need to be aware of my subjectivity towards technology. My experiences interacting with technology, my awareness of issues related to the digital divide, and my beliefs about the transformative potential of technology in education all shape how I interpret the content. Third, I need an awareness of my subjectivity towards race and racism. As an African American male U. S. history teacher with direct and vicarious experiences of racial discrimination, my analysis of data about race and racism will be deeply personal. Since this study involves an analysis of textbook accounts of slavery, including an analysis of the presence, or lack thereof, of African American perspectives and race and racism, acknowledgement of the subjectivities and positionalities are critical. Being aware of my subjectivity and its influences on my interpretations, enables me to try to step outside of my subjectivity and take another view of the data, reducing the amount of bias I am consciously and unconsciously placing on the analysis. Additionally, by making my subjectivity explicit, other researchers who examine my study are able to understand my perspectives on the research.

Chiseri-Strater and Sunstein (1997) discuss the importance of fixed, subjective, and textual positions in qualitative research. For this content analysis, I will explore the effects of my fixed positions on the research. Though I acknowledge that the notion of

fixed positions are problematic because people have the power to change and notions of race, religion, age, and gender may change in a society (Geiger, 1990; Goodall, 2000), I still think it provides a good framework for analyzing the researcher's role in the research. Reflecting upon positionalities allows me to acknowledge the dynamics of where I am and how it affects my viewpoint and the production of knowledge without privileging one particular position over another (Geiger, 1990). All of my positionalities, both fixed and subjective, work together to form a unique lens with different aspects emerging at different times depending on the context of the research.

Fixed positions are “personal facts that might influence how you see your data—your age, gender, class, nationality, race—factors that will not change during the course of the study but are often taken for granted and unexamined in the research process” (p. 57). My fixed positions of race, gender, age, class, and religion will all come into play in the data collection. As an African American who loved learning about history at an early age, I was exposed to school curriculum emphasizing passivity and victimhood in African American slaves. Though I did not know how to articulate it then, the shame of those experiences extinguished my desire to learn African American history. After taking a U. S. history class in college and learning about the ways that African American slaves resisted oppression and forged a life for themselves, I eagerly embraced the empowering aspects of African American history. For the past eleven years, as an African American high school teacher of U. S. history, Latin American history, and African American history courses, I have embraced the narratives of marginalized people and the hidden stories of triumph for “oppressed” people. In the classroom, I also use the

concept of race as a social construction (Howard, 2003; Ladson-Billings & Tate, 1995) to frame my teaching about, and discussions of race.

Along with the fixed position of race, age and gender will also play a role in my content analysis. As a “digital immigrant” (Prensky, 2001), I may bring outdated sensibilities to the analysis of digital historical content. For example, while I enjoy using technological applications for learning, I have not yet read an e-book or registered for Facebook or Twitter. While those things are not necessarily functions of age, they do reveal my hesitancy to take a complete nose-dive into technology, which may be due to my age. In terms of gender, my maleness gives me an interpretive lens that sometimes neglects the contributions of women. When learning about, and teaching slavery, I privilege enslaved men’s experiences over enslaved women. Acknowledging this preference may make me overly critical of textbook accounts that reveal the same preference and do not include many experiences of enslaved women.

My fixed position of class will affect my content analysis due to my concerns about the digital divide. Though I belong to the middle class and can afford to do research on, and learn from, digital history textbooks, I have close family members who are in the lower-middle to lower class that have no access to broadband or dial-up Internet services. For this reason, I often wonder whether my research is relevant to the lives and experiences of low-income students in public schools. Where there are low-income students, there are poorly funded schools with obsolete and minimal technological resources. Even when there is an abundance of technology in schools serving lower class students of color, the technology-rich curriculum emphasizes monotonous “drill and practice” instead of innovative, collaborative, and inquiry-based

pedagogy (Carver, 1999). My disgust with the digital inequities caused by the digital divide may lead me to being overly critical in the content analysis of the digital history textbooks.

Theoretical positionality. In addition to the fixed positions, my position as it relates to theory shapes and informs my research questions, methods, and interpretations. As I conduct this research and attempt to situate myself within certain theoretical traditions concerning race, society, oppression, power, social justice, and education, I realize that my stances are more nuanced and may be better understood as a bricolage, with aspects of different scholars' thoughts as the building blocks of my own nascent theoretical understandings.

At this point in my growth as an intellectual, I am a critical theorist interested in critiquing and changing society rather than understanding and explaining it. While I am grateful for the United States and the privileges of citizenship that it confers, I do not like the overt and subtle designs of the societal system that advantages U. S. citizens over other citizens of the world and that marginalizes certain groups within the U. S. To expose the inequality and injustice of the system, I agree with Gramsci (1971) that the dominant structure and belief system must be delegitimized by transforming the consciousness of the people within the society. In this way, the privileged – like myself, a middle-class U. S. citizen – must be willing to acknowledge the privileges and work collaboratively with the less fortunate to create a system of greater equality and empowerment for all.

In alignment with some of the ideas of Apple (2012), I believe that this societal transformation can take place in spite of, not because of, traditional school structures and

schooling practices. For “[s]chools are an important part of a complex structure through which social groups are given legitimacy and through which social and cultural ideologies are re-created, maintained, and continuously built” (*ibid.*, p. 71). Within schools, the knowledge that is deemed to be of most value perpetuates inequality through its connection to unequal cultural, political, and economic structures in society at-large. Short of calling for a complete overhaul of the current manifestations of U. S. capitalism and democracy, I believe that institutions that render certain groups powerless should be critiqued and dismantled.

Drawing on the work of Ladson-Billings and Tate (1995), I believe that Critical Race Theory (CRT) provides a useful framework for understanding educational inequities between White and non-White students. The CRT notion of “whiteness as property” highlights whiteness as a privileged status with tangible benefits that can be exclusive and transferrable (*ibid.*; Harris, 1995). Believing that human rights are superior to property rights, my position is that human value should not be connected to property, property ownership, or assimilation to cultural norms that afford property privileges in a society. For example, quality schools and curriculum materials and high academic achievement should not be considered the exclusive property of any race. Rather, access to those things should be expectations of every human, not rewards for attaining a certain amount of wealth or being a certain color.

My position on race follows in the traditions of DuBois (1903), Woodson (1933), Omi and Winant (1993), Guinier and Torres (2002), and Noguera (2008). Woodson (1933) and DuBois (1935) were the first scholars to use race as a central tool for understanding social inequalities. Emphasizing race consciousness, DuBois (1903)

articulates the dual experiences of race and national identity for African Americans while Woodson (1933) deconstructs the role of schools in stifling African American student initiative and creativity. While race is not just an objective or subjective experience, I agree with Omi and Winant (1993) in a critical theory of the concept of race that “recognize(s) the importance of historical context and contingency in the framing of racial categories and the social construction of racially defined experiences” (p. 6). Regarding racism, I believe that it contaminates many aspects of society and education while continuing to disadvantage and oppress people of color. Like Guinier and Torres (2002), I believe that the experiences of racism by people of color should be used as diagnostic tools and not diversions away from an examination of our democratic society. For example, “the experience of those who have been left out can help us to understand the ways in which we need to change our pedagogy, our curriculum . . . “ (Guinier, 2005, para. 4) and our larger society. Consequently, in terms of educational inequities between White and non-White students, I reject deficit-based approaches focused on “blaming the victims” for their academic shortcomings. Instead, like Noguera (2008), I believe that non-White students should be held accountable for their learning while educators are simultaneously held accountable for addressing structural inequities that make the learning environment less conducive to the students’ success.

The social studies and my positionality. As a critical theorist, I view the teaching and practice of social studies as a way to transform, rather than transmit, the social order (Stanley, 2005). With this transformative view in mind, the social studies should help students “learn how powerful groups oppressed marginalized people and how marginalized groups resisted and fought against exploitation” (Epstein, 2009, p. 14).

This critique of oppression and resistance in past and present societies should be unto a purpose of creating a more socially-just and democratic society.

With social justice and democracy as the aim, I believe the social studies should emphasize globalization and participation. In the increasingly diverse and multicultural world, the social studies allow the celebration of differences and embracing of unity. It is a discipline grounded in an appreciation of the interconnectedness of all people on the planet (Merryfield & Kasai, 2004). The social studies also provide a framework for understanding the ethical requirements of citizenship and economic justice in a globalized world with sweatshops, dire poverty, and famine coexisting alongside wealthy multi-national corporations (*ibid.*). These ethical and moral requirements lead to action and participation in the creation of a more democratic economic and social order. In this way, students of the social studies are not just passive consumers, but are active participants in the ongoing struggle for democracy.

Explanation of Research Design: Methods and Theory

Because of multimedia content, hypertext links, and interactive images of digital history, a content analysis of digital U. S. history textbooks requires multiple methodological approaches. In this section of the literature review, I provide theoretical and research-based evidence for the analysis of primary source documents, written text, historical scholarship, hypertext links, images, and multimedia content in this study.

Primary source documents. Primary source documents on the Internet are now available to students at all levels in almost all places (Ayers, 1999). Considering the multiple primary sources involved in digital history, Lee (2002) stated that the digital historical resources are more accessible and they encourage archival activity.

Additionally, primary sources “significantly enhance the context and historical perspective textbooks offer” (Nava & Schmidtberger, 2011, p. 38). The documents “provide students with something even the best textbook just cannot—they inject students into the time and place they are learning about” (*ibid.*). Regarding this study of textbook accounts of slavery, primary sources give students exposure to the lived experiences of enslaved people in the U. S. In fact, “[u]sing primary documents gives students a sense of the reality and complexity of the past . . . [and, it gives students] an opportunity to go beyond the sterile, seamless quality of most textbook presentations to engage with real people and authentic problems” (Tally & Goldenberg, 2005, p. 3).

In addition to connecting students to the marginalized voices of enslaved people, primary sources can also make visible the connections between historical argument and historical evidence. Particularly with the potential of digital history to use hypertext to connect primary sources to historical arguments, new literacies and webometrics analysis is used in this study to examine the positioning and influence of links to primary sources on the historical narrative in the digital U. S. history textbooks.

Written text. Similar to Brown and Brown (2010) and Vasquez Heilig, Brown, and Brown (2012), textual analysis is used in this study to examine the centrality of race and racism in the textbook accounts of slavery. With Critical Race Theory (CRT) as the theoretical framework, both the print and digital versions of U. S. history textbooks are analyzed for whether the terms “race” and “racism” are included in the accounts of slavery and whether racism is depicted as structural or individual prejudice. A CRT lens can challenge notions of race-neutrality in U. S. history textbooks and help explain the limited representation of African Americans in the historical narrative (Vasquez Heilig,

Brown, & Brown, 2012).

According to CRT, because racism appears both normal and natural to people in this culture, it has to be unmasked and exposed in its various manifestations (Ladson-Billings, 1998). Textbook accounts of U. S. slavery provide a great opportunity for the foundations and continuation of racism to be discussed. Marri (2003) thought the same about online U. S. history lesson plans, but found that race and racism were only addressed when the lesson plans were about people of color. The colorblind perspective of the U. S. History lesson plan websites in Marri's (2003) study does not go beyond the race-neutral premise, thus rendering race and racism invisible (*ibid.*).

Similarly, textbook accounts of slavery tend to minimize or completely omit discussions of race and racism (Loewen, 1995). This treatment not only skews and distorts the accounts of slavery, but it allows history teachers to avoid addressing the social and economic legacies of racism present in contemporary society. According to Howard (2003),

[t]he sooner that . . . educators can begin to facilitate discussions around race and racism, the quicker old wounds begin to heal, honest dialogue occurs, and a more meaningful discussion can begin to take place about what it means to be a democratic citizen. (p. 39)

Historical scholarship. Loewen's (1995) *Lies My Teacher Told Me: Everything Your American History Textbook Got Wrong* and Leahy's (2010) *Whitewashing War: Historical Myth, Corporate Textbooks, and Possibilities for Democratic Education* use the historical record, including recent historical scholarship, as the standard upon which to measure U. S. history textbooks. This methodology, known as the historical narrative approach (Cramer, 2012; Leahy, 2010; Loewen, 1995), has two notable strengths with respect to this current study: (a) the historical record, rather than an arbitrary standard, is

the source of comparison; and (b) the contentious and changing nature of history is revealed through the additions of new evidence and different interpretations to the historical record. With the historical narrative approach, U. S. history textbooks are analyzed on whether they present stale, unchanging, and inaccurate narratives as opposed to new, dynamic, and historically accurate narratives. Regarding print and digital textbook accounts of slavery, Olwell (2001) writes that

[u]sing [recent scholarship on slavery], as well as newly available primary sources in both print and Internet form, college and secondary teachers can present a richer, more complex view of this subject, as well as use the subject of slavery to encourage students to ask more complex historical questions. (para. 5)

The use of hypertext in digital U. S. history textbooks creates an ideal environment for the addition of new scholarship to the historical narrative. Both hypertext and hypertext markup language (html) allow digital U. S. history textbooks to “become a place for new forms of collaboration, new modes of debate, and new modes of collecting evidence about the past” (Cohen & Rosenzweig, 2005, p. 7).

Hypertext links. Along with facilitating the addition of new scholarship to digital history textbooks, hypertext allows layering and integration of historical arguments and evidence. Addressing the potential use of hypertext in digital history, Ayers (1999) states that “[t]he historian who writes such texts will obviously have to think along several axes, offering coherent narratives and coherent analyses on several levels before creating elaborate links . . .” (Ayers, 1999, para. 18). Additionally, hypertext links to multiple historical arguments and pieces of evidence helps students develop a strong sense of the interconnectedness of history and a better understanding of historical causation (Kelly, 2000).

Digital history textbooks, through the use of hypertext links to create a web of associated texts and interpretations, have the potential to enhance the dominant historical narrative with multiple perspectives and marginalized voices. With that in mind, applying a hypertext theory framework to the present study would mean that digital U. S. history textbooks would be open with no texts, including texts about African American experiences in slavery, existing at the margins. In fact, with each text existing in relation to other texts, the margins are positioned and re-positioned according to the perspective of the reader (Landow, 1997). Consequently, the marginalized voices that are rarely heard in the traditional narrative of history have equal value and equal placement in the non-linear, non-hierarchical hypertext environment.

Images. As a feature in both traditional and digital U. S. history textbooks, images can be used in effective ways to convey the lived experiences of slavery. Too often “[t]here is an attitude that including pictures is enough—[but, it is] just gift wrapping, not the gift. In most textbooks, the authors do not even select the images, letting the job fall to some assistant development editor” (Masur, 1998, p. 1410). This indifference to the role and significance of images in the historical narrative is disturbing given that “[i]mages serve as primary sources that illuminate the past in ways speeches, sermons, letters, and laws may not” (*ibid.*, p. 1410). Regarding slavery, there are challenges to creating a link to the past. For

[t]here are no visual equivalents of *Incidents in the Life of a Slave Girl*. We have yet to discover a Frederick Douglass or Olaudah Equiano of the canvas. When it comes to the representation of the inner life of the enslaved, few of our sources are visual in nature. (Best, 2011, p. 151)

Even though most of the visual sources and textbook illustrations of slavery are not records of the actual event of slavery (*ibid.*), those images still are meaningful in the understanding of slavery.

Using the new literacies and hypertext theory as frameworks, this study seeks to build on students' predisposition for the visual to develop analytical and historical thinking skills. Those skills are enhanced by hypertext links enabling students to visually situate an image in its own history and in the larger historical narrative.

Multimedia content. Reading, learning, and creating in digital environments requires knowledge of multiple modes of expression and meaning, and newer literacies to understand those meanings (Albers et al., 2008). According to Miller (2010),

[i]n the technological and cultural contexts of the past two decades, that movement toward non-print and print-mixed texts has accelerated due to the accessible digital affordances for creating and mixing print, images, sounds, video, and music. The underlying trend toward multimodality is not local and adolescent, but global and multigenerational. (p. 255)

Rather than reflect this shift to thinking about literacy as a visual and digital expression, some K-12 schools still emphasize literacy as only verbal and written. In fact, a school's "preference for print may preclude teachers from even noticing their students' competence with multi- and digital literacies" (King & O'Brien, 2002, p. 41).

Digital history facilitates the presentation of the past in multiple formats. According to Cohen and Rosenzweig (2005), "[o]nline digital archives can contain images, sounds, and moving pictures as well as text. And you can present the past in multiple media that combine sounds, images, and moving pictures with words" (p. 5). From layered or interweaving narratives (Ayers, 1999) to historical geographic information system [GIS] (Knowles, 2002) to podcasts and vodcasts (Lipscomb et al.,

2007), digital history can be flexible in the way the past is presented to students. With multimedia content, the combination of images, sound, written text, and other moving pictures can facilitate a greater understanding of a topic. Given that digital U. S. history textbooks allow the additions of multimedia content, new literacies approaches are necessary in the creation of the content to ensure its effectiveness as a learning tool.

Multimedia message design is a new literacies approach built on the premise that individuals learn better with words and pictures rather than with words alone (Mayer, 2008). For multimedia literacy and clear communication of topics and ideas, videos and other multimedia content in digital U. S. history textbooks should follow ten research-based principals developed by Mayer (2008):

1. Coherence principle: Weed out extraneous words, sounds, and pictures;
2. Signaling principle: Highlight the essential material;
3. Spatial contiguity principle: Place corresponding words and pictures near each other on the page or screen;
4. Temporal contiguity principle: Present corresponding narration and pictures simultaneously;
5. Redundancy principle: Do not add printed on-screen text to a narrated animation;
6. Segmenting principle: Break an explanation into bite-size parts;
7. Pretraining principle: Begin by explaining the operation of each part;
8. Modality principle: Present words in spoken form rather than printed form;
9. Personalization principle: Present words in conversation style rather than formal style; and
10. Voice principle: Present narration with a standard-accented human voice. (*ibid.*, p. 373)

Summary

In this literature review, I addressed the development and role of U. S. history textbooks in history classes. Additionally, I explored the field and methods of digital history as a potential tool to address the inherent problems of textbook accounts of history. I then situated the current study amid historical research on representations of

African Americans and slavery in U. S. history textbooks. Lastly, I provided a theoretical and research-based justification for the research design of this study.

In this next chapter, I will provide more details about the methodological framework for this study.

Chapter 3: METHODS

Methods for content analysis of school textbooks are quite nebulous. According to Nicholls (2003), “[t]his is due to the fact that surprisingly little work has been done in terms of setting out clear generic guidelines for analyzing texts” (p. 1). Even though there are many important quantitative and qualitative studies in textbook research, most of the studies do not include explicit methodological details about theoretical underpinnings, analytical instruments, definitions of samples, and collection of data. Pingel (1999) provides generic guidelines for textbook analysis in the *UNESCO Guidebook on Textbook Research and Textbook Revision*. Stradling (2001) offers an analytical framework for textbook analysis that considers a textbook’s content, its pedagogical value, and its intrinsic and extrinsic qualities. Without a theory grounding the methodology of textbook analysis (Weinbrenner, 1992), the guidelines for textbook research will remain scattered with the researcher creating his own analytical instrument to fit the purpose of the researcher. The methods for this textbook research study builds on past textbook studies related to the representation of minorities and the representation of U. S. slavery (i.e. Banks, 1969; Brown & Brown, 2010; Council on Interracial Books for Children, 1977; Cramer, 2012; Gordy & Pritchard, 1995; Heilig, Brown & Brown, 2012; Kane, 1970; Kochlin, 1998), uses multiple methods for analyzing the U. S. history textbooks, and uses a foundation of Critical Race Theory (CRT), hypertext theory, and new literacies to guide the data collection.

As discussed in Chapters 1 and 2, digital history allows increased accessibility of primary source documents (Lee, 2002), multiple perspectives of historical narratives (Ayers, 1999), flexibility in presentation forms (Cohen & Rosenzweig, 2005), integration of formerly marginalized historical accounts (Bolick, 2006), student-centered pedagogical approaches (Cohen et al., 2008; Lee, 2002), greater opportunities for historical thinking (Brush & Saye, 2007), and more opportunities for collaboration (Burton, 2005). Due to these affordances, digital history has the potential to transform the K-12 history classroom into a more culturally-inclusive, intellectually-engaging environment for teachers and students. Researchers claim that digital history will “democratize the doing of history” (Bolick, 2006; Cohen & Rosenzweig, 2005; Friedman, 2005) through the accessible primary source documents, multiple presentation formats, and collaboration opportunities.

The literature with respect to U. S. history textbooks (Fitzgerald, 1979; Leahy, 2010; Loewen, 1995) suggests that we should be skeptical of such claims, especially in regards to U. S. history textbook accounts of slavery that are whitewashed and sanitized to eliminate discussions of controversial topics like racism, racial violence, and white supremacy (Brown & Brown, 2010; Loewen, 1995).

While the distortions and omissions in U. S. history textbook accounts of slavery have been well documented (Alexander, 2002; Banks, 1969; Brown & Brown, 2010; Council on Interracial Books for Children, 1977; Elson, 1964; Gordy & Pritchard, 1995; Kane, 1970; Kochlin, 1998; Washburn, 1997), no study has analyzed digital U. S. history textbooks for those same distortions. Given the promises of digital history, it should follow that digital U. S. history textbook accounts of slavery eliminate, or at least

minimize, the stereotypes, distortions, and omissions. For example, if the experiences and stories of the enslaved are integrated into the narrative of U. S. history through hyperlinks to primary sources and recent historical scholarship, the digital textbook accounts of slavery may be more historically complex and inclusive. The accessibility and freedom to use many primary sources and historical scholarship may also lead to the addition of discussions of race and racism in the textbook accounts of slavery. Additionally, the multimedia format of some digital history presentations may be more appropriate to the new literacies of the twenty-first century, as well as more inclusive of multiple student learning styles. This study is the first to test those claims.

Research Questions

Prompted by the claims of digital history and its potential to transform textbook accounts of slavery and the current trend of replacing traditional, print textbooks with digital textbooks in K-12 classrooms, this study seeks to submit digital U. S. history textbooks to critical inquiry and analysis. Comparing the digital textbooks to traditional, print textbooks, the following research questions and related sub-questions guide the study:

1. How do digital U. S. history textbooks and traditional U. S. history textbooks describe slavery?
 - a. How are primary sources from enslaved African Americans used in the digital and traditional textbook accounts of slavery?
 - i. Do digital U. S. history textbooks have more primary source documents than traditional U. S. history textbooks?
 - ii. Do digital U. S. history textbooks have different primary source

documents than traditional U. S. history textbooks?

iii. In both the digital and traditional U. S. history textbook, are the primary source documents located within the main historical narrative text or are they located on the margins of the history textbook page?

b. How is the Critical Race Theory tenet of the centrality of race and racism represented in the digital and traditional textbook accounts of slavery?

c. How is recent historical scholarship about slavery used in the digital and traditional textbook accounts of slavery?

2. Do digital U. S. history textbooks take advantage of the accessibility of primary sources, hypertext links, images, and multimedia presentations to tell a story of the African American slave experience that reflects the marginalized voices of the enslaved, the centrality of race and racism, and the recent historical scholarship on slavery?

Methodology

To address the research questions, variations of qualitative content analysis were used in the study. While content analysis is a “research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use” (Krippendorff, 2013, p. 24), qualitative content analysis is an inductive and iterative process involving close reading and interpretation of texts (*ibid.*). The multiple facets of digital U. S. history textbooks, such as audio and video content, hypertext links, and interactive images, necessitate multiple approaches to analyzing its content. With that in mind, the methods of this content analysis are divided into six sections. The sections are:

1. Primary source document analysis – a comparative frequency count of the number of primary source documents about slavery used in the digital versus print U. S. history textbook. The content presented in the primary source documents are also analyzed based on a problem-driven analysis (Krippendorff, 2013). The problem, in this study, revolves around the descriptions of slavery and whether “untold stories” of the enslaved are told. Additionally, the location and framing of the primary source documents is analyzed. For example, are the primary sources integrated into the historical narrative or are they located on the margins of the textbook page?
2. Critical Race Theory textual analysis (Brown & Brown, 2010; Heilig, Brown & Brown, 2012) – a problem-driven analysis (Krippendorff, 2013) centered on whether race or racism was discussed in the textbook accounts of slavery. In this section, the textbook content is coded according to whether the terms “race” and “racism” were directly and indirectly used and for “whether racism was positioned as structural/institutional in nature or as individual bias and/or prejudice” (Heilig, Brown, & Brown, 2013, p. 409).
3. Historical narrative approach (Cramer, 2012) – an evaluative standards-based analysis (Krippendorff, 2013) using “leading histories and recent scholarship as a base to critique textbooks” (Cramer, 2012, p. 115).
4. Webometrics analysis (Ingwersen, 1998; Park & Thelwall, 2003) – a metric designed to assess the influence of a website through counting the number of hyperlinks to it. In this section, webometrics, which examines the relationship

between academic web sites (Park & Thelwall, 2003), is used to identify the number of links to the digital textbooks as well as the internal and external links within the textbooks. Given that history is not linear, but multilayered (Ayers, 1999; Rommel-Ruiz, 2006), the presence, or lack of, internal and external links within digital textbook accounts of slavery reveal the extent to which those accounts are interweaving and multi-layered.

5. Image analysis (Masur, 1998) – a comparative examination of the inclusion and discussion of visual sources related to slavery in both the digital and print U. S. history textbooks. In this section, the textbooks are examined for the contextual information provided about the images, the way the images are connected to the historical narrative, and the ways that students/readers are invited to participate in the image. Interactive images in digital history textbooks will be examined in the same way.
6. Multimedia message analysis (Mayer, 2008) – an analytical process based on ten principles of multimedia message design. In this study, the video content about slavery in digital textbooks is analyzed to ensure that it encourages comprehension of the central message.

Components of Content Analysis

All six sections of the methods for this study follow the basic design and guidelines for content analysis as developed by Krippendorff (2013). The components of content analysis include unitizing, sampling, recording/coding, reducing data to manageable representations, abductively inferring contextual phenomena, and narrating

the answer to the research question (*ibid.*). The following sections include a description of each component as it relates to the study in general.

Unitizing. The overall units analyzed in this study are the digital and traditional history textbook accounts of slavery. As an example of recording units, these accounts of slavery are distinguished from other units in the text (Krippendorff, 2013) through their relation to the topic of slavery. Reviewing the indices and the table of contents for content related to slavery, in addition to using my background knowledge of U. S. history gained from twelve years of teaching the subject, I distinguished the textbooks accounts of slavery from the other textbook readings. In the six sections of the methods for this study, the units of analysis include primary source documents, the textbook accounts of slavery, images, and videos.

Sampling. Sampling allows researchers to economize research efforts with a manageable subset (Krippendorff, 2013). Since this content analysis is qualitative and generalizability is not a major concern, the content being analyzed does not have to be selected in a way that ensures equal probability of being in the sample. With that in mind, the sampling is purposive, leading me to purposefully sample the data by scanning the digital and traditional history textbooks for content about U. S. slavery.

In terms of the selection of U. S. history textbooks for this study, I used criterion sampling (Patton, 2002), which requires each member of the sample to meet predetermined criteria of importance. For the traditional, print U. S. history textbooks, the criteria for selection was the adoption rates for the textbooks. The textbooks analyzed in this study are three of the most widely adopted and used eleventh grade U. S. history textbooks: *American Vision* authored by Appleby and published by Glencoe/McGraw

Hill, *American Anthem* authored by Ayers and published by Holt McDougal, and *America: Pathways to the Present* authored by Cayton and published by Prentice Hall/Pearson (American Textbook Council, 2011). The criteria used to select the digital U. S. history textbooks analyzed in the study were based on my definition of digital history textbooks as Internet-based, repositories of primary source documents and original digital historical narratives bound together or structured chronologically, thematically, or interpretively. Through an Internet search, using terms such as “digital history,” “online U. S. history textbook,” and “digital U. S. history textbook,” I found thirteen textbooks that were “free” to use and were not connected to a traditional U. S. history textbook publishing company. From the original list of thirteen “free” digital U. S. history textbooks (see Appendix A), six “free” digital U. S. history textbooks were selected after applying the definition criteria and ensuring that each digital book had an established author. Using online textbook publishing catalogs, I also chose digital textbooks that were connected to the top three traditional textbook publishing companies – Prentice Hall, McGraw-Hill, and Holt McDougal. I purchased one-year subscriptions for the latter digital U. S. history textbooks. A total of nine (six free and three publisher-produced) digital U. S. history textbooks, identified in Table 1 below, were selected as the criterion sample (Patton, 2002).

Table 1

The Sample of Digital U. S. History Textbooks Used in the Study

Selected Digital U. S. History Textbooks
<p>Title: <i>U. S. History: Pre-Columbian to the New Millennium</i> Publisher: Independence Hall Association Address: http://www.ushistory.org/ Cost: Free Overview: First published online in 2008 by the Independence Hall Association in Philadelphia, PA, this digital U. S. history textbook provides a chronological historical narrative with primary source documents and transcripts of lectures and interviews by prominent historians. The authors of the content are two electronic publishing experts—in fact, one of the authors is the director of content for Apex Learning, Inc., a private online course content provider. While I am concerned about the history credentials of the authors, the Independence Hall Association has a special advisory board member who is a historian. Though the historian (Mr. Edward Lawler, Jr.) does not have a Ph.D. in history, he has published articles about enslaved Africans living in President George Washington’s house in Philadelphia (Lawler, 2002). I am still unsure about how much influence this historian had on the writing of the content for the digital history textbook. Nonetheless, I selected this textbook due to the potential influence of the historian.</p>
<p>Title: <i>A Biography of America</i> Publisher: WGBH Interactive for Annenberg Media Address: http://www.learner.org/biographyofamerica/ Cost: Free Overview: First published online in 2000, this digital U. S. history textbook is a companion website to the video series, <i>A Biography of America</i>, which is a production of WGBH Interactive for Annenberg Media. The textbook provides a chronological narrative that includes videos, transcripts of videos, art, maps, and other primary source documents. The textbook describes the authors of the content as the “academic team”. This “academic team” included two professors of history (Dr. Louis Masur and Dr. Virginia Scharff) and a former historian of the U. S. House of Representatives (Mr. Raymond Smock).</p>
<p>Title: <i>North Carolina History: A Digital Textbook</i> Publisher: LEARN NC Address: http://www.learnnc.org/nchistory/ Cost: Free Overview: First published online in 2008, this digital U. S. history textbook, <i>North Carolina History: A Digital Textbook</i>, sponsored by LearnNC, a program of the University of North Carolina at Chapel Hill’s School of Education, consists of a chronological narrative with videos, images, music, and primary source documents. The</p>

content of the digital textbook comes from other historical websites and professional historians (Dr. David Walpert and Dr. Katherine Walpert) on the LearnNC staff.

Title: *Digital History: Using new technologies to enhance teaching and research*
Publisher: College of Education, University of Houston
Address: <http://www.digitalhistory.uh.edu/>
Cost: Free
Overview: First published online in 2007, this digital U. S. history textbook, sponsored by the University of Houston, consists of a chronological narrative with primary sources, videos of lectures by prominent historians, audio recordings, images, maps, movie trailers, quizzes, and historical inquiry projects. Dr. Steven Mintz of the University of Houston is the primary author of the narrative content of the digital textbook.

Title: *Academic American History: A Survey of America's Past*
Publisher: Henry J. Sage
Address: <http://academicamerican.com/>
Cost: Free
Overview: First published online in 1996, this digital history textbook, written by Mr. Henry Sage, consists of a chronological narrative with primary sources. While the author of the site, Mr. Sage, does not have a Ph.D. in history, he has taught American history for over twenty years at Northern Virginia Community College.

Title: *HistoryCentral.com: History's Home on the Web*
Publisher: MultiEducator, Inc.
Address: <http://historycentral.com/>
Cost: Free
Overview: First published online in 1996, this digital history textbook, created by MultiEducator Inc., consists of a chronological narrative with primary sources. The primary author of the textbook content, Mr. Marc Schulman, does not have a Ph.D. in history, but has authored twenty CD-Roms on American and World history and has taught history at the middle school and collegiate levels.

Title: *United States History (Survey)*
Publisher: Prentice Hall/Pearson
Address: school.pearsoned.com
Cost: \$20.47 for a one-year subscription
Overview: Published by Prentice Hall in 2010, this online student edition of a U. S. history textbook with digital courseware includes up to date issues like the 2008 Presidential Election, Iraq War, the international credit crisis, the global economy, and environmental issues. The textbook is authored by Emma Lapsansky-Warner, Ph.D. History at Haverford College; Peter Levy, Ph.D. History at York College of Pennsylvania; Randy Roberts, Ph.D. History at Purdue

University; Alan Taylor, Pulitzer-Winning, Historian in residence at Washington College; and Grant Wiggins, co-author of *Understanding by Design*. The ISBN number is: 013318966X.

The textbook features a glossary, a highlighter tool, a note-taking tool, a bookmarking tool, and an audio recording of each page being read aloud for visually impaired students.

Title: *United States History and Geography* (Student Edition)

Publisher: McGraw-Hill

Address: <http://connected.mcgraw-hill.com>

Cost: \$16.18 for a one-year subscription

Overview: Published by McGraw-Hill in 2012, this online U. S. history textbook is a fully integrated print and digital curriculum authored by McGraw-Hill Networks. Because McGraw-Hill is one of the top textbook publishing companies for K-12 education, this textbook is a credible source even though there are no authors mentioned. The ISBN number is: 9780078935688.

The textbook features graphic novels, graphic organizers and note-taking tools, helpful links, maps, quizzes and tests, reference material, video content, geography skills assessments, games, economic skills assessment, critical thinking skills assessment, art and photography slideshows, twenty-first century skills assessment, and activities and worksheets.

Title: *The Americans* (Student Edition)

Publisher: Holt-McDougal

Address: my.hrw.com

Cost: \$18.40 for a one-year subscription

Overview: Published by Holt-McDougal in 2012, this online U. S. history textbook provides lessons and narratives that are relevant to students' everyday lives. The authors of the textbook are Dr. Gerald A. Danzer, professor of History at the University of Illinois at Chicago, Dr. J. Jorge Klor de Alva, former president of the University of Phoenix and professor of comparative ethnic studies and anthropology, Larry S. Krieger, Social Studies Supervisor for Montgomery Township Public Schools in New Jersey, and Dr. Louis E. Wilson, Associate Professor and Chair of Afro-American and African Studies Department at Smith College. The ISBN number is: 9780547521312.

The textbook features video content, notetaking skills builders, current events, maps, test-taking strategies, vocabulary flip cards, and audio recording of each page for visually impaired students.

Recording/coding. According to Krippendorff (2013), “[r]ecording takes place when observers, readers, or analysis interpret what they see, read, or find and then state their experiences in the formal terms of an analysis” (p. 127). For this study, I recorded observations and descriptive notes using *Microsoft Word* or *Evernote*. Coding refers to what “content analysts use when this process is carried out according to observer-independent rules” (*ibid.*). For this study, the reliability of the coding was determined through intra-coder reliability, which requires the same content to be coded by the same coder at two different time intervals (Krippendorff, 2013). I used coding in the primary source document and the Critical Race Theory methods section of this study.

Reducing data to manageable representations. This stage in the content analysis process involves simplifying data down to manageable representations. This step may not be necessary if there is not a large volume of data. For this study, the coding process and the creation of data displays helped simplify the data. But, due to number of textbooks, this step was eliminated.

Abductively inferring contextual phenomena. This step in the content analysis process moves analysis outside of the data by bridging “the gap between descriptive accounts of texts and what they mean, refer to, entail, provoke, or cause” (Krippendorff, 2013, p. 86). Abduction is reasoning that moves from texts, through context-sensitive explanations of these texts, to answers to research questions (*ibid.*). In this study, abduction started with the data—digital and traditional history textbook accounts of slavery. The analytical construct, “the inferential step from text to the answer to a research question” (*ibid.*, p. 170) was the hypothesis for each of the research questions. The analytical constructs or hypotheses relied on established research and theories about

digital history as the source of certainty. For Krippendorff (2013), “[i]f a context is well researched and theorized, especially including the role that available texts play in it and the research questions the analyst seeks to answer, then the analyst may derive analytical constructs from available generalizations about that context” (p. 175).

Narrating the answer to the research question. In this section, I made the results of the content analysis comprehensible to others by discussing its practical significance and contribution to the field. I included a summary of the findings about the digital and traditional U. S. history textbook accounts of slavery. I also used tables and other data displays to convey the findings of this study.

Primary Source Document Analysis

Primary sources are the raw materials upon which historians build. According to Rodeheaver (2009), “[p]rimary sources [are] sources originating from the time period examined [that] provide the historian with direct and unmediated information about the object of study” (Rodeheaver, 2009, p. 6). In her dissertation study analyzing the treatment of primary sources in traditional U. S. history textbooks, she finds that most primary sources were used as “page fillers” (*ibid.*) rather than as opportunities to present multiple perspectives and advance historical thinking. Using Krippendorff’s (2013) problem-driven analysis, the following methods are applied: unitizing, sampling, recording, reducing data to manageable representations, abductively inferring contextual phenomena, and narrating the answer to the research question.

The units of analysis were the written primary source documents, such as letters, diaries, speeches, and other manuscripts. Political cartoons, works of art, maps, photographs, images of artifacts, and illustrations were not included in this analysis.

Because the primary sources were used to answer the first research question of this study, relevance or purposeful sampling was employed (Krippendorff, 2013). After a page-by-page review of the chapters in the digital and print textbooks, I counted and recorded my description of each primary source related to slavery. Counting the number of primary sources and comparing those numbers between digital and print textbooks is important because of the claim that digital history allows more access to primary source documents. The primary sources were recorded and not coded in this section because I was more interested in whether there were duplicate primary sources across the textbooks. Following Krippendorff's (2013) data analysis process of "abductively inferring contextual phenomena" (p. 85), I made initial inferences about the claims that digital history opens the vault of untold stories through primary source accessibility. After the primary source data was coded and evaluated with the rest of the textbook accounts of slavery in the succeeding sections of the study, those inferences were further substantiated or disproven.

Related to the positioning and contextualization of the primary source documents, I recorded whether each document was integrated into the main text on the page or whether it was on the margins. I coded an "I" for primary source documents that were integrated into the main historical narrative and an "M" for primary sources that were on the margins of the narrative. Through abductive inferencing, I drew conclusions about differences or similarities in positioning of primary sources in digital and traditional U. S. history textbooks. To complete this section, I developed a data display to present each primary source's description, frequency, and "marginal" or "integrated" position.

Critical Race Theory Textual Analysis

To examine the centrality of race and racism in the digital and traditional U. S. history textbook accounts of slavery, I purposefully sampled the textbook data by reviewing the table of contents and indices for all information related to slavery. With my twelve years of experience teaching high school U. S. history and using U. S. history textbooks, I also knew that, in general, slavery should be discussed from the first chapter on pre-colonial and colonial America to the chapter on the U. S. Civil War. A page-by-page review of the textbooks was conducted with sentences as the unit of analysis. I read and analyzed how race and racism were presented in the textbooks.

This “problem-driven” data analysis involved three phases and used a constant-comparative method (Strauss & Corbin, 1990). In the first phase, I read the textbook accounts and recorded each sentence or group of sentences that addressed race or racism. CRT provided a framework as I read and made meaning of the racialized knowledge in the textbooks. During the second phase, I read through the data again to code for specific mentions of race (R), racism (RS), racism based on structural or institutional factors (S/I) and racism based on individual bias and/or prejudice (IBP) (Brown & Brown, 2010; Heilig, Brown, & Brown, 2012). Additionally, for indirect references to race and racism, I added race-indirect (R-indirect), and racism-indirect (RS-indirect) codes, respectively. In the third phase of data analysis, I reviewed the data and codes again and developed some initial themes related to the presence of race and racism in the textbook accounts of slavery. Using abductive inferencing, I moved from the particular texts within the textbook accounts, through the CRT explanations of these texts, to particular answers to the second sub-question of the first research question of the study (Krippendorff, 2013).

The reliability of this content analysis depends on the ability of the coder to consistently categorize data in the same way over a period of time. Though the subjectivity of coding can be minimized through the use of multiple coders (inter-coder reliability) and through checks on the same coders over time (intra-coder reliability), its effects can never be completely eliminated (Krippendorff, 2013). I was the only coder used to analyze the digital and traditional history textbooks in this study. To determine the reliability of the coding, one of the traditional U. S. history textbooks and two of the digital U. S. history textbooks examined are reexamined at a later time. Additionally, I reread and reanalyzed inconsistent findings across each phase and determined whether the data fit into previous patterns or whether new patterns were needed (Strauss & Corbin, 1990). This iterative process of qualitative content analysis, which Krippendorff (2013) calls the “hermeneutic circle” (p. 89), involves redefining and reinterpreting research until a satisfactory conclusion is reached. So, while theory drives the initial analysis, evidence plays a substantial role in the ensuring inquiry and analysis.

Historical Narrative Approach

The historical narrative approach draws on the historical record and scholarship to evaluate textbook narratives (Cramer, 2012; Leahy, 2010; Loewen, 1995). Stated another way, this method uses the most recent and established historical arguments as the standard to base analysis of textbooks. According to Krippendorff (2013), “Humans measure observed phenomena against standards to establish (a) the kinds of phenomena they are (identifications), (b) how good or bad the phenomena are (evaluations), and (c) how close the phenomena come to expectations (judgments)” (p. 58).

The methodological details of the historical narrative approach involved a search for recent and mainstream scholarship related to United States slavery. To do this, I used two comprehensive studies of the topic, *From Slavery to Freedom: A History of African Americans* (Franklin & Moss, 2005) and *The Historical Encyclopedia of World Slavery, Volume I, A-K* (Rodriguez, 1997) to inform my analysis. Those reference books, in addition to *Stereotypes, Distortions, and Omissions in U. S. History Textbooks* (The Council on Interracial Books for Children, 1977) and *New York and Slavery: Time To Teach The Truth* (Singer, 2008) were used to create an evaluation instrument highlighting thirteen key ideas and essential understandings about U. S. slavery. Those thirteen ideas are:

1. African, as well as European, culture forms an integral part of the U. S. heritage (Council on Interracial Books for Children, Inc., 1977; Franklin & Moss, 2005).
2. The North American slave trade created enormous profits and the enslaved were treated as commodities (Council on Interracial Books for Children, 1977; Franklin & Moss, 2005; Williams, 1944).
3. American democracy was predicated on American slavery. The development of equal rights among white men was based on stripping rights away from African slaves (Brown & Webb, 2007; Morgan, 1975).
4. The significance of the Revolution, to Blacks, goes beyond participation in combat (Council on Interracial Books for Children, 1977; Franklin & Moss, 2005; Nash, 1990).
5. Slavery and racism are connected in the history of the United States (Brown & Webb, 2007; Degler, 1959; Handlin & Handlin, 1950; Loewen, 1995).

6. Slavery was inherently cruel and inhuman (Council on Interracial Books for Children, 1977; Davis, 2006; Patterson, 1982).
7. While racism was prominent in the United States during slavery, anti-racist ideas and activities were present (Aptheker, 1993; Loewen, 1995; Singer, 2008).
8. African Americans covertly resisted slavery in many different ways, including building families, communities, and religious institutions (Franklin & Moss, 2005; Genovese, 1972; Singer, 2008).
9. Rebellion and slavery went hand in hand (Council on Interracial Books for Children, 1977; Davis, 2006; Rucker, 2006).
10. Slavery was a national, rather than just a regional institution (Franklin & Moss, 2005; Loewen, 1995; Singer, 2008).
11. Free blacks during the antebellum era faced severe political, economic, and social discrimination (Berlin, 1974; Franklin & Moss, 2005).
12. The economic and social legacies of slavery have national and global consequences in contemporary society (Hartman, 2007; Singer, 2008; Zueske, 2012).
13. The U. S. Civil war was not only a war to preserve the Union, but it was a part of an African American liberation movement (Franklin & Moss, 2005; Singer, 2008).

Similar to the analytical instrument developed by the Council on Interracial Books for Children (1977), the instrument for this study features a point scale of -2 for incorrect information, -1 for no information, 0 for omitting the period, +1 for limited information,

and +2 for full information that is applied to the textbooks as it relates to the thirteen ideas above. The analytical instrument is shown in Appendix B.

Applying the instrument to the digital and traditional U. S. history textbooks in the study, I ranked each textbook according to its point value given through the instrument. The higher scores ranked higher as a U. S. history textbook in terms of its depiction of slavery. Through adduction, I made inferences about the answers to the third sub-question of the first research question of the study. I displayed the results of the analysis in a table.

The development of the historical narrative analytical instrument. To develop the analytical instrument, I read several historiographical essays about U. S. slavery. Zueske's (2012) essay, *Historiography and Research Problems of Slavery and the Slave Trade in a Global-Historical Perspective*, proposes a focus on "smaller" slaveries throughout the world rather than the "hegemonic" slaveries of American plantations. Zueske's (2012) work suggests that textbooks should focus on placing U. S. slavery in a global context. Vincent Brown's (2009) essay, *Social Death and Political Life in the Study of Slavery*, uses Orlando Patterson's (1982) metaphorical "social death" to both describe the brutal condition of slavery and the enslaved person's ability to overcome it. Citing classic and recent scholarship on the conditions of slavery, Brown (2009) challenges historians to strike a balance between the overwhelming horror of slavery and the agency and resistance of the enslaved. For Brown (2009), "[t]o see social death as a productive peril entails a subtle but significant shift in perspective, from seeing slavery as a condition to viewing enslavement as a predicament, in which enslaved Africans and their descendants never ceased to pursue a politics of belonging, mourning,

accounting, and regeneration” (p. 1248). Walter Johnson’s (2003), *On Agency*, critiques the New Social History trope of “agency” as applied to the experiences of enslaved African Americans. Challenging classical and recent works of historical scholarship on slavery, Johnson (2003) seeks to disentangle notions of humanity from notions of agency and notions of resistance. In essence, an African American slave could experience different manifestations of humanity, resistance, and compliance shaped by the lived experience and conditions of slavery. To describe enslaved humanity “is to try to imagine a history of slavery which sees the lives of enslaved people as powerfully conditioned by, though not reducible to, their slavery. For enslaved people the most basic features of their lives—feeling hungry, cold, tired, needing to go to the bathroom—revealed the extent to which even the bare life sensations of their physical bodies were sedimented with their enslavement” (*ibid.*, p. 115).

In addition to collecting relevant books and articles mentioned in the reference books and the historiographic essays, I conducted a search through the online scholarly database *ProQuest* through the University of North Carolina at Chapel Hill library catalog system for recent scholarly articles about slavery. I confined the search, using terms like “slavery”, “race”, and “racism” to the content type of journal articles, the subject terms of “history”, “African Americans”, and “slavery”, the language of English, and the publication date of “2000 to the present”. I collected print and electronic copies of the articles that resulted from the search.

After the collection of books and articles related to slavery, I wrote brief, but descriptive notes on salient passages from the scholarly works. Passages were deemed salient if they addressed one of the thirteen key ideas about U. S. slavery mentioned

above. Although there were other important ideas addressed in the historical scholarship on slavery, the thirteen ideas above were broad and general enough to be inclusive of other arguments and findings. I recorded my brief notes using the word processing features of *Microsoft Word* and *Evernote*.

Thirteen key ideas and essential understandings about U. S. slavery. This section of the methods for the historical narrative approach further explains the thirteen ideas and understandings of U. S. slavery used to evaluate the digital and traditional textbook accounts. My recorded notes about the historical scholarship along with quotations from the books and articles are used to validate the ideas. The thirteen ideas are presented in italics below followed by their justifications in the historical record.

African, as well as European, culture forms an integral part of the U. S. heritage. This idea stems from the traditional exclusion of non-European cultural traditions in the narrative of the United States. According to Franklin and Moss (2005), “the interaction of African and Western cultures doubtless changed the cultural patterns of both groups” (p. 32). Similar to American Indian culture, African American culture persisted in the New World despite oppressive conditions. In U. S. language, religion, work, play, social organizations, music, art, and other cultural manifestations, there are evidences of African influences (*ibid.*).

The North American slave trade created enormous profits and the enslaved were treated as commodities. Williams (1944) argues that the slave trade ignited and financed the Industrial Revolution in the British Empire. The slave trade “gave a triple stimulus to British industry. The Negroes were purchased with British manufactures; transported to the plantations, they produced sugar, cotton, indigo, molasses and other tropical products,

the processing of which created new industries in England; while the maintenance of the Negroes and their owners on the plantations provided another market for British industry, New England agriculture and the Newfoundland fisheries” (*ibid.*, p. 52). Believing the capitalist economic system to be more important than societal and cultural mores, Williams (1944) argues that African American slavery was driven by labor needs and not racist ideologies. Franklin and Moss (2005) place the slave trade in the context of the Renaissance and the Commercial Revolution: “The spirit of the Renaissance, with its sanction of ruthless freedom, and the practices of the Commercial Revolution, with its new techniques of exploitation, conspired to bring forth new approaches to the acquisition of wealth and power” (p. 35). These new approaches commoditized the enslaved African Americans.

American democracy was predicated on American slavery. The development of equal rights among white men was based on stripping rights away from African slaves. According to Edmund S. Morgan in *American Slavery, American Freedom: The Ordeal of Colonial Virginia* (1975), “As Virginians nourished an increasing contempt for blacks and Indians, they began to raise the status of lower class whites. The two movements were complementary. The status of poor whites rose not merely in relation to blacks but also in relation to their white superiors” (p. 338). In other words, equal rights in the British North American colonies were a zero-sum game, as more rights were granted to all white men, all rights were taken away from African Americans. Making reference to Bacon’s Rebellion in Virginia in 1676 and its role in the formation of the unique racial democracy, Brown and Webb (2007) state:

Bacon's Rebellion scared the Virginia elite. This class conflict threatened their power and continued security. In the aftermath, the great planters consciously

sought to raise the status of all white men while at the same time continuing to tighten the restrictions on blacks. Thus began a concerted attempt to provide whiteness with substance and tangible rewards. (p. 31)

The significance of the Revolution, to Blacks, goes beyond participation in combat. The institution of slavery was incompatible with the ideals of the Revolution. According to Nash (1990), the North, rather than the South, bore the responsibility of allowing anti-slavery momentum to end because of its reluctance to take a strong anti-slavery stance in the framing of the Constitution. Economic interest, more than the need for a strong central government, outweighed Northerner's thoughts about political ideology and the immorality of slavery (*ibid.*). Despite the continued presence of the institution of slavery, for some African Americans the Revolution led to freedom. According to Berlin (1974), "[i]n the years following the Revolution, the number of free Negroes increased manyfold, so that by the end of the first decade of the nineteenth century there were over 100,000 free Negroes in the Southern states and they composed almost 5 percent of the free population and nearly 9 percent of the Black population" (p. 15).

Slavery and racism are connected in the history of the United States. From the fact that some of the Founding Fathers of the U. S. were slave-owners to the development of Abraham Lincoln's ideas of racial equality, slavery can never be divorced from racism, including white complicity in the institution and white thoughts of racial superiority over blacks (Loewen, 1995). Given the connection of slavery and racism, scholars have long debated which one preceded the other. Williams (1944) and Handlin and Handlin (1950) assert that African American slavery resulted from a labor problem not a race problem. In this view, racism was a product of slavery. Degler (1959) argues

that the Negro was never treated as an equal, and thus, racism led Europeans to look to Africans as an enslaved labor supply.

Slavery was inherently cruel and inhuman. In his book, *Inhuman Bondage* (2006), David Brion Davis discusses U. S. slavery in the context of the Atlantic Slave system and New World slavery. For Davis (2006), the term “inhuman” refers to both “the inconsiderable and unsuccessful goal of bestializing (in the form of pets as well as beasts of burden) a class of human beings . . .” (p. 3) and “the special harshness of New World slavery, which white colonist almost always confined, from the very beginning, to Native Americans and then overwhelmingly to black Africans . . .” (*ibid.*). Expounding on the cruelty and inhumanity of slavery, Patterson (1982) describes the lived experience of slavery as a social death. For Patterson (1982), social death meant that the slave had no meaningful links to the past, being “formally isolated in his social relations with those who lived . . . [and] culturally isolated from the social heritage of his ancestors” (p. 5-6).

While racism was prominent in the United States during slavery, anti-racist ideas and activities were present. Aptheker (1993) perhaps provides one of the seminal works documenting anti-racist activity during the pre-Civil War period in U. S. history. Through the words of preachers, teachers, and other citizens, Aptheker (1993) documents affirmations of black equality and criticism of racism. Loewen (1995) goes so far as to state that “[a]nti-racism is one of America’s great gifts to the world” (p. 198) because it ignites a democratic spirit that leads to liberation movements of oppressed people around the world. Faulkner (2007) examines the anti-slavery and anti-racist actions of activists in the nineteenth century who refused to buy products made by slaves. This movement, called the free produce movement, “helped provide the first calls for immediate abolition

by forcing reformers to confront the profound connection between northern consumers and slaves” (p. 379).

African Americans covertly resisted slavery in many different ways, including building families, communities, and religious institutions. According to Singer (2008), the Black church was a key institution in the abolition of slavery because it “nurtured internal community relationships, promoted numeracy, literacy, and oratory skills, offered financial support for ministers . . . ” (p. 102). Genovese (1972) focuses on the accommodation and resistance of the enslaved African Americans as a response to the paternalism of the slave-owners. For Genovese (1972), the covert resistance to slavery, including the “stealing, lying, dissembling, shirking, murder, infanticide, suicide, arson—qualify at best as prepolitical and at worst as apolitical” (*ibid.*, p. 598).

Rebellion and slavery went hand in hand. Arguing that African culture facilitated North American slave resistance during the pre-Civil War era, Rucker (2006) places resistance movements at the center of the enslaved African American identity.

Resistance was “a crucible in which African people actively created a collective identity centered on unifying principles” (*ibid.*, p. 6-7). Through slave rebellion it became clear to see that “tyranny is a central theme of American history, that racial exploitation and racial conflict have been part of the DNA of American culture” (Davis, 2006, p. 226).

Slavery was a national, rather than just a regional institution. According to Singer (2008), “there was limited slavery in the North until 1840 and prosperity in the North rested on the slave trade and the processing of slave-produced raw materials” (p. 24). Through complicity to the institution through silence, through economic profits generated by the slave trade or slave-produced materials, and through the direct

ownership of human beings, slavery was a powerful presence in the North before the Civil War. The debates over the extension of slavery, the “Bleeding Kansas” incident, and the *Dred Scott* decision also made slavery a western and a national issue (Franklin & Moss, 2005).

Free blacks during the antebellum era faced severe political, economic, and social discrimination. Even though the experiences of free blacks, on the surface, does not directly speak to the experiences of the enslaved, Berlin (1974) documents their experiences as those of “slaves without masters”. For Berlin (1974), “[w]hites had pushed free Negroes into a place of permanent legal inferiority. Like slaves, free Negroes were generally without political rights, were unable to move freely, were prohibited from testifying against whites, and were often punished with the lash. Indeed, the free Negro’s only right that escaped unscathed was his ability to hold property—a striking commentary on the American idea of liberty” (p. 97). Additionally, within the African American race, free blacks experienced intra-race violence over integration in Boston in 1851 (Moss, 2007). So, free blacks were both the victims of discrimination from whites and other blacks.

The economic and social legacies of slavery have national and global consequences in contemporary society. For Loewen (1995), “[s]lavery’s twin legacies to the present are the social and economic inferiority it conferred upon blacks and the cultural racism it instilled in whites” (p. 143). Connecting slavery to racism, Foster (2004) argues that

racism is the everlasting legacy of American slavery that with ruthless intentionality oppresses, represses and commits cultural genocide against people of color but particularly black Americans . . . evidence of racism is seen daily in

substandard housing, haphazard healthcare, mis-education, discrimination criminal sentencing and symbolic political patronizing. (p. 417)

The U. S. Civil war was not only a war to preserve the Union, but it was a part of an African American liberation movement. Discussing the impact of the Civil War on Cuba and Brazil, Davis (2006) argues that the “emancipationist meaning of the American Civil War, symbolized by the hundreds of thousands of Southern slaves who escaped to freedom, and permanently embodied in the Thirteenth Amendment, had a strong impact on both Cuba and Brazil, where slave still flourished” (p. 322). Franklin and Moss (2005) capture the significance of the Civil War for African Americans:

The end of the war brought to a close a period of enslavement that had lasted for almost 250 years. The desire for freedom had been kept alive through the centuries by those blacks who demonstrated by their conduct that freedom and the right to it transcended racial lines. The victory was won in part by their struggles through the centuries as well as by their service in the final battles. (p. 244)

Webometrics Analysis

According to Bjorneborn (2004), webometrics is defined as “the study of the qualitative aspects of the construction and use of information resources, structures and technologies on the Web drawing on bibliometric and informetric approaches” (as cited in Bjorneborn and Ingwerson, 2004, p. 1217). This definition includes webpage content analysis, hypertext link analysis, web use analysis, and search engine performance analysis (ibid.). The bibliometric aspect of the definition includes “the quantitative aspects of the production, dissemination and use of recorded information” (Tague-Sutcliffe, 1992, p. 1), while the informetric aspects refer to “the quantitative aspects of information in any form, not just records or bibliographies” (ibid.).

With one of its uses as a measure of the online presence of universities, webometrics has confirmed the value of the academic web as a source of expertise and a

means of communicating cultural and scientific achievements and innovations (Aguillo, Granadino, Ortega, and Prieto, 2005). In fact, “[t]he impact of electronic publications is far larger than that obtained by traditional journals and books on paper. Websites are the most efficient and cheapest way for boosting all three academic missions [of universities]: teaching, research and transfer” (Aguillo, Ortega, and Fernandez, 2008, p. 233). Given its use as a metric for ranking the web presence of universities (*ibid.*), I used webometric analysis in this current study to measure the degree to which the digital history textbooks were linked from other websites. Webometrics analyses were also used to measure the hypertext linking within the digital textbooks.

To measure the web “popularity” of each digital textbook (excluding the publisher textbooks because they are not a part of the free, open web), I used the “Link Popularity Check Tool” of the *Submit Express* website. I entered the web address of each “free” digital U. S. history textbook into the tool and recorded the resulting total number of links listed. I then reviewed the first fifty websites (if there were less than fifty, I reviewed all of the websites) listed and recorded the names and web locations of the academic websites. For this study, academic websites were university, library, and professional historical association websites. Because of the potential inconsistency of the *Submit Express* website –“commercial search engines . . . have limitations, including inconsistent and rounded results, biases in geographical and linguistic coverage. . . “ (Aguillo, Ortega, & Fernandez, 2008, p. 235) -- I also used *Google* and *Yahoo!* search engines to check for the number of links to each digital textbook. For *Google*, I typed: link: “web address of digital textbook” and for *Yahoo!*, I typed: linkdomain: “web address of digital textbook”.

To count the number of internal and external links within the textbooks, I used the “link counter” tool of the *Submit Express* website. I entered the web address of each “free” digital U. S. history textbook into the link counter. I used the resulting list of links to count the internal and external links of the digital textbooks that were related to slavery, and also to go to the relevant academic linked pages to describe how the links were used. To check the results of *Submit Express*, I also conducted a review of each page of the textbooks and counted the links related to slavery. To describe the internal and external links, I identified the topics that were connected with the links. Though the *Submit Express* website is not used with the publisher digital U. S. books, I used a page-by-page review of the digital pages to count and describe the links used. The data gathered was used to abductively infer answers to the second part of the second research question in the study.

Image Analysis

An image analysis was used to examine the ways that interactive and static images were employed in the digital and traditional U. S. history textbook accounts of slavery. A page-by-page review of the textbooks was conducted with images related to slavery as the unit of analysis. For each image, I recorded notes describing the image and answered the following questions:

1. Does the author include an accompanying caption with the image/graphic? If so, describe.
2. Does the author discuss the image/graphic within the textbook narrative (Masur, 1998)? If so, describe.

3. Does the author interpret the images/graphics and suggest how to read them as texts (Masur, 1998)? If so, describe.
4. Does the author include information on who created the images/graphics and why they were created (Masur, 1998)? If so, describe.

I recorded the data about the images in a table like the one below.

Table 2

Table for Recording Image Analysis Data

Number	Name and Description of Image/Graphic	Is there an accompanying caption with image?	Is there a discussion of image/graphic in the textbook narrative?	Does the author interpret the image/graphic?	Is there an inclusion of who created the image/graphic and why it was created?
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The data was used to compare the digital and print U. S. history textbook accounts of slavery and whether the digital textbook takes advantage of its affordances by including more images and interactive graphics than traditional graphics. The number of images/graphics and descriptions of how the images/graphics are used in the textbooks helped answer the third part of the second research question in the study.

Multimedia Analysis

Using a multimedia checklist developed from the principles of multimedia message design (Mayer, 2008), I analyzed the video content related to slavery in the digital U. S. history textbooks. The checklist allowed me to describe how the videos presented the content. The ten research-based principles of multimedia message design

upon which the checklist was based, provided the tools to both analyze the videos and assess how they facilitate the attaining of the new literacies.

For each video, I applied the checklist, found in Appendix C. I recorded a check in the “yes” or “no” column for each principle to address whether the video adhered to the principle. If “yes” was checked, I recorded a brief description of how the video aligned with the principle. From the data gathered, I made inferences about the digital U. S. history textbook that answered the fourth part of the second research question in the study.

Chapter 4: RESULTS

The previous chapter provided the framework and outline for the study's multidimensional methodological approaches. This chapter will discuss the results of the six different methods applied to the textbook data. First, a general overview of the results from each of the six methods will be provided. Then, an overview of the statistical methods used to make inferences about the results will be described. Lastly, each method will be reported in more detail with corresponding visual data representations and analysis.

General Overview

The primary source document analysis reveals that there is statistically no difference in the total number of primary source documents in traditional and digital U. S. history textbook accounts of slavery. Similarly, applying a Critical Race Theory textual analysis to the textbooks, there is no statistical difference between traditional and digital U. S. history textbook accounts of slavery in terms of direct or indirect references to race and racism or references to racism based on structural/institutional factors and individual bias/prejudice. Regarding the Historical Narrative approach and the resulting textbook score, there is no statistical difference between traditional and digital U. S. history textbook accounts of slavery. The webometrics analysis, applied only to the free digital U. S. history textbooks, led to the findings that *Digital History: Using new technologies to enhance teaching and research* was the most linked to digital textbook, while

North Carolina History: A Digital Textbook contained the most links within the textbook accounts of slavery. The data gathered during the image analysis led to no significant differences between traditional and digital U. S. history textbook accounts of slavery. Lastly, the multimedia message design analysis of videos in the digital U. S. history textbooks led to data revealing that most of the videos followed the coherence principle, the temporal contiguity principle, the modality principle, the personalization principle, and the voice principle, but lacked interactivity and diverse visualization techniques.

Statistical Methods

Because of the quantitative results of the methodological approaches conducted in this study, I performed statistical analysis to compare the different sets of resulting numbers. The primary source analysis, Critical Race Theory textual analysis, historical narrative approach analysis, and image analysis were subjected to a statistical test to measure whether there was significant difference between traditional and digital U. S. history textbooks and between free digital U. S. history textbooks and publisher-produced digital U. S. history textbooks.

Due to the small sample sizes of textbooks used in the study, conducting a two-sample t-Test on each data set comparison between traditional U. S. history textbooks and digital U. S. history textbooks and between free digital U. S. history textbooks and publisher-produced digital U. S. history textbooks is the best approach. In order for the conditions of inference to be met for the two-sample t-Test, there must be a simple random sample, normality, and independence of the numbers.

1. Simple Random Sample: This condition was violated as the textbooks were purposely chosen for study.

2. Normality: Box Plots and Normal Probability Plots of the data were checked and found to be Normal. Where confirmed outliers were present, they were withdrawn from consideration with the data. I am otherwise using proper t-procedures for small sample sizes.
3. Independence: The number of items of interest in one kind of textbook will not be influenced by the number in another textbook.

In spite of the conditions for inference being violated, I will proceed with caution with the two-sample t-Tests.

Primary Source Document Analysis

Table 3 below displays the title of each textbook in the study along with the corresponding total number of primary sources in their accounts of slavery including the number of integrated and marginal primary sources.

Table 3

Total, Marginal, and Integrated Primary Sources for Each Textbook

Textbook	Integrated	Marginal	Total
<i>American Vision</i> (Traditional)	13	13	26
<i>American Anthem</i> (Traditional)	12	3	15
<i>America: Pathways to the Present</i> (Traditional)	25	2	26
<i>U. S. History: Pre-Columbian to the New Millennium</i> (Digital--Free)	4	25	29
<i>A Biography of America</i> (Digital--Free)	0	0	0
<i>North Carolina History: A Digital Textbook</i> (Digital--Free)	51	2	53

<i>Digital History: Using new technologies to enhance teaching and research (Digital--Free)</i>	0	135	135
<i>Academic American History: A Survey of America's Past (Digital--Free)</i>	0	11	11
<i>HistoryCentral.com: History's Home on the Web (Digital--Free)</i>	0	1	1
<i>United States History (Digital--Cost)</i>	5	7	12
<i>United States History and Geography (Digital--Cost)</i>	12	0	12
<i>The Americans (Digital—Cost)</i>	13	8	21

Integrated primary source documents: digital versus traditional. To compare the number of integrated primary sources in traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (Integrated Primary Sources): 13, 12, 25
Mean = 16.666, s = 7.2342
- Digital Textbooks (Integrated Primary Sources): 4, 0, 51, 0, 0, 0, 5, 12, 13
Mean = 4.25, s = 5.5707

51 was confirmed to be an outlier as it lies more than 1.5 times the Interquartile Range beyond the 3rd Quartile of the set of data. It was therefore not considered in the calculations below.

The Null Hypothesis is that the Mean number of integrated primary sources in traditional textbooks should equal the Mean number of integrated primary sources in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean number of integrated primary sources in traditional textbooks will be less than the Mean number of integrated primary sources in digital textbooks. $H_a : \mu_1 < \mu_2$

t = 2.6976

df = 2.9115

P-Value = 0.9618

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean number of integrated primary sources.

Discussion. Instead of seamlessly weaving between historical narrative and historical evidence in the U. S. history textbooks, both the traditional and the digital textbooks kept the narrative separate from the primary sources. This unique opportunity to promote and uncover the historical thinking process by connecting historical arguments to historical evidence was never realized, even with the hyperlinking possibilities of digital textbooks. In fact, it was a traditional textbook, *America: Pathways to the Present* that contained the best examples of integrated primary sources. For example, after stating that “[p]lanters found the low country ideal for growing rice and indigo. Slaves there labored under especially brutal conditions” (Cayton et al., 2007, p. 85), the textbook includes an 1837 slave narrative excerpt from an enslaved man, Charles Ball, which stated: “The general features of slavery are the same every where;

but the utmost rigor [strictness] of the system, is only to be met with on the cotton plantations of Carolina and Georgia, or in the rice fields which skirt the deep swamps and morasses of the southern rivers” (*ibid.*).

Integrated primary source documents: free versus publisher-produced. To compare the number of integrated primary sources in free digital U. S. history textbook accounts of slavery to the number of integrated primary sources in publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (Integrated Primary Sources): 4, 0, 51, 0, 0, 0

Mean = 0.8, s = 1.7889

51 was confirmed to be an outlier as it lies more than 1.5 times the Interquartile Range beyond the 3rd Quartile of the set of data. It was therefore not considered in the calculations below.

- Publisher-Produced Digital Textbooks (Integrated Primary Sources): 5, 12, 13

Mean = 10, s = 4.3589

The Null Hypothesis is that the Mean number of integrated primary sources in free digital textbooks should equal the Mean number of integrated primary sources in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean number of integrated primary sources in free digital textbooks will be less than the Mean number of integrated primary sources in publisher-produced digital textbooks. $H_a : \mu_1 < \mu_2$

t = -3.4839

df = 2.4123

P-Value = 0.0279

I can reject the Null Hypothesis at the 5% level of significance in favor of the alternate that free digital textbooks will have a lower Mean number of integrated primary sources than publisher-produced digital textbooks.

Discussion. The design and lay-out of most of the free digital U. S. history textbooks include separate pages for the historical narrative and the primary sources. While this design looks professional, I believe that aesthetics should be sacrificed for authentic historical thinking opportunity. Linking and layering primary sources around the historical arguments makes the construction of those arguments more visible.

Marginal primary sources: digital versus traditional. To compare the number of marginalized primary sources in the traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (Marginal Primary Sources): 13, 3, 2

Mean = 6, s = 6.0828

- Digital Textbooks (Marginal Primary Sources): 25, 0, 2, 135, 11, 1, 7, 0, 8

Mean = 6.75, s = 8.4473

135 was confirmed to be an outlier as it lies more than 1.5 times the Interquartile Range beyond the 3rd Quartile of the set of data. It was therefore not considered in the calculations below.

The Null Hypothesis is that the Mean number of marginal primary sources in traditional textbooks should equal the Mean number of marginal primary sources in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean number of marginal primary sources in traditional textbooks will be less than the Mean number of marginal primary sources in digital textbooks. $H_a : \mu_1 < \mu_2$

$$t = -0.1627$$

$$df = 5.1668$$

$$P\text{-Value} = 0.4385$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean number of marginal primary sources.

Marginal primary sources: free versus publisher-produced. To compare the number of marginalized primary sources in the free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (Marginal Primary Sources): 25, 0, 2, 135, 11, 1

$$\text{Mean} = 7.8, s = 10.5688$$

135 was confirmed to be an outlier as it lies more than 1.5 times the Interquartile Range beyond the 3rd Quartile of the set of data. It was therefore not considered in the calculations below.

- Publisher-Produced Digital Textbooks (Marginal Primary Sources): 7, 0, 8

$$\text{Mean} = 5, s = 4.3589$$

The Null Hypothesis is that the Mean number of marginal primary sources in free digital textbooks should equal the Mean number of marginal primary sources in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean number of marginal primary sources in free digital textbooks will be less than the Mean number of marginal primary sources in publisher-produced digital textbooks. $H_a : \mu_1 < \mu_2$

$$t = 0.5229$$

$$df = 5.6769$$

$$P\text{-Value} = 0.6896$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean number of marginal primary sources.

Total number of primary sources: traditional versus digital. To compare the total number of primary sources in traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (Total=Integrated + Marginal): 26, 15, 26
Mean = 22.333, $s = 6.3509$
- Digital Textbooks (Total=Integrated + Marginal): 29, 0, 53, 135, 11, 1, 12, 12, 21
Mean = 30.444, $s = 42.4032$

135 was confirmed to be an outlier as it lies more than 1.5 times the Interquartile Range beyond the 3rd Quartile of the set of data. It was therefore not considered in the calculations below.

The Null Hypothesis is that the Mean total number of primary sources in traditional textbooks should equal the Mean total number of primary sources in digital textbooks.

$$H_0 : \mu_1 = \mu_2$$

The Alternate Hypothesis is that the Mean total number of primary sources in traditional textbooks will be less than the Mean total number of primary sources in digital textbooks.

$$H_a : \mu_1 < \mu_2$$

$$t = -0.5555$$

$$df = 8.9508$$

$$P\text{-Value} = 0.2961$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of primary sources.

Discussion. This finding seems to directly refute the claim that digital history opens up access to more primary sources documents. But, even though the numbers of primary sources are statistically the same, the variety of those sources is vastly different. For example, in *North Carolina History: A Digital Textbook* the primary sources include: African folktales, an enslaved female preacher's diary, a newspaper article of a free black man operating an integrated school in 1808, and a petition to free a "white" slave. A similar variety of documents are found in *Digital History: Using new technologies to enhance teaching and research*. The primary sources in that textbook include: a John Adams letter on slavery, a Thomas Jefferson letter about slavery, a letter from Madison Hemings discussing his father Thomas Jefferson, and 1831 newspaper articles about Nat Turner's rebellion, to name a few. This variety and diversity of primary source documents was not found in traditional textbooks or the publisher-produced digital textbooks.

Total number of primary sources: free versus publisher-produced. To compare the total number of primary sources in free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (Total=Integrated + Marginal): 29, 0, 53, 135, 11, 1

Mean = 18.8, s = 22.3875

135 was confirmed to be an outlier as it lies more than 1.5 times the Interquartile Range beyond the 3rd Quartile of the set of data. It was therefore not considered in the calculations below.

- Publisher-Produced Digital Textbooks (Total=Integrated + Marginal): 12, 12, 21

Mean = 15, s = 5.1962

The Null Hypothesis is that the Mean total number of primary sources in free digital textbooks should equal the Mean total number of primary sources in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of primary sources in free digital textbooks will be less than the Mean total number of primary sources in publisher-produced digital textbooks. $H_a : \mu_1 < \mu_2$

t = 0.3636

df = 4.6751

P-Value = 0.6340

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of primary sources.

Critical Race Theory

Table 4 below displays the number of direct and indirect references to race and racism in each of the textbook accounts of slavery. The table also displays the number of references to structural/institutional racism and individual bias/prejudice.

Table 4

Critical Race Theory Textual Analysis Results for Each Textbook

Textbook	R (Race)	R/S (Racism)	R (Race- Indirect)	R/S (Racism- Indirect)	S/I (Structural/In- stitutional Racism)	IBP (Individual Bias/Prejudice)
<i>American Vision</i> (Traditional)	2	1	0	4	7	0
<i>American Anthem</i> (Traditional)	0	0	2	4	5	0
<i>America: Pathways to the Present</i> (Traditional)	2	0	0	6	6	0
<i>U. S. History Pre- Columbian to the New Millenium</i> (Digital--Free)	0	2	0	2	3	1
<i>A Biography of America</i> (Digital--Free)	4	3	0	3	6	0
<i>North Carolina History: A Digital Textbook</i> (Digital--Free)	4	1	0	6	7	0
<i>Digital History: Using new technologies to enhance teaching and</i>	7	3	2	11	11	4

<i>research</i> (Digital--Free)						
<i>Academic</i> <i>American</i> <i>History: A</i> <i>Survey of</i> <i>America's</i> <i>Past</i> (Digital-- Free)	1	0	0	4	2	3
<i>HistoryCentra</i> <i>l.com:</i> <i>History's</i> <i>Home on the</i> <i>Web</i> (Digital-- Free)	3	3	0	3	6	0
<i>United States</i> <i>History</i> (Digital-- Cost)	1	1	0	3	4	0
<i>United States</i> <i>History and</i> <i>Geography</i> (Digital-- Cost)	0	0	0	4	4	0
<i>The</i> <i>Americans</i> (Digital-- Cost)	1	0	2	4	4	0

Explicit references to race: traditional versus digital. To compare explicit references to race in the traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (explicit references to Race): 2, 0, 2

Mean = 1.333, s = 1.1547

- Digital Textbooks (explicit references Race): 0, 4, 4, 7, 1, 3, 1, 0, 1

Mean = 2.333, s = 2.3452

The Null Hypothesis is that the Mean total number of explicit references to race in traditional textbooks should equal the Mean total number of explicit references to race in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of explicit references to race in traditional textbooks will differ from the Mean total number of explicit references to race in digital textbooks. $H_a : \mu_1 \neq \mu_2$

t = -0.9733

df = 7.6605

P-Value = 0.3601

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of explicit references to race.

Explicit references to race: free versus publisher-produced. To compare the explicit references to race in the free and publisher-produced digital textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (explicit references to Race): 0, 4, 4, 7, 1, 3

Mean = 3.1667, s = 2.4833

- Publisher-Produced Digital Textbooks (explicit references to Race): 1, 0, 1

Mean = 0.667, s = 0.5774

The Null Hypothesis is that the Mean total number of explicit references to race in free digital textbooks should equal the Mean total number of explicit references to race in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of explicit references to race in free digital textbooks will differ from the Mean total number of explicit references to race in publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 2.3426$$

$$df = 5.9652$$

$$P\text{-Value} = 0.0579$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of explicit references to race.

Explicit references to racism: traditional versus digital. To compare the explicit references to racism in the traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (explicit references to Racism): 1, 0, 0
Mean = 0.3333, $s = 0.5774$
- Digital Textbooks (explicit references to Racism): 2, 3, 1, 3, 0, 3, 1, 0, 0
Mean = 1.4444, $s = 1.3333$

The Null Hypothesis is that the Mean total number of explicit references to racism in traditional textbooks should equal the Mean total number of explicit references to racism in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of explicit references to racism in traditional textbooks will differ from the Mean total number of explicit references to racism in digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = -2$$

$$df = 8.6207$$

$$P\text{-Value} = 0.0779$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of explicit references to racism.

Explicit references to racism: free versus publisher-produced. To compare the explicit references to racism in the free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (explicit reference to Racism): 2, 3, 1, 3, 0, 3

$$\text{Mean} = 2, \quad s = 1.2649$$

- Publisher-Produced Digital Textbooks (explicit reference to Racism): 1, 0, 0

$$\text{Mean} = 0.3333, \quad s = 0.5774$$

The Null Hypothesis is that the Mean total number of explicit references to racism in free digital textbooks should equal the Mean total number of explicit references to racism in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of explicit references to racism in free digital textbooks will differ from the Mean total number of explicit references to racism in publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 2.7116$$

$$df = 6.9976$$

$$P\text{-Value} = 0.0301$$

The results are significant at the 5% level.

I therefore reject the Null Hypothesis and conclude that there is a difference in the Mean total number of explicit references to racism in free digital versus publisher-produced digital textbooks.

Discussion. On the whole, very few of the textbooks confront the issue of racism and thus continue the whitewashing trend of U. S. history textbooks. Most of the few exceptions to this trend are in the free digital textbooks. For example,

HistoryCentral.com: History's Home on the Web explicitly discusses the racism against African Americans in the northern states during the post-revolutionary period:

Unfortunately, the end of slavery in the North did not lead to the end of racist attitudes toward African-Americans. The presence of a growing population of free blacks in northern cities and towns became a source of racially-based social friction. (Shulman, 1996, par. 1)

Indirect references to race: traditional versus digital. To compare the indirect references to race in the traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (indirect references to Race): 0, 2, 0
Mean = 0.6666, s = 1.1547
- Digital Textbooks (indirect references to Race): 0, 0, 0, 2, 0, 0, 0, 0, 2
Mean = 0.4444, s = 0.8819

The Null Hypothesis is that the Mean total number of indirect references to race in traditional textbooks should equal the Mean total number of indirect references to race in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of indirect references to race in traditional textbooks will differ from the Mean total number of indirect references to race in digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 0.3050$$

$$df = 2.8267$$

$$P\text{-Value} = 0.7814$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of indirect references to race.

Indirect references to race: free versus publisher-produced. To compare the indirect references to race in the free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (indirect references to Race): 0, 0, 0, 2, 0, 0,
Mean = 0.3333, $s = 0.8165$
- Publisher-Produced Digital Textbooks (indirect references to Race): 0, 0, 2
Mean = 0.6667, $s = 1.1547$

The Null Hypothesis is that the Mean total number of indirect references to race in free digital textbooks should equal the Mean total number of indirect references to race in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of indirect references to race in free digital textbooks will differ from the Mean total number of indirect references to race in publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = -0.4472$$

$$df = 3.0488$$

$$P\text{-Value} = 0.6846$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of indirect references to race.

Indirect references to racism: traditional versus digital. To compare the indirect references to racism in the traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (indirect references to Racism): 4, 4, 6
Mean = 4.6667, $s = 1.1547$
- Digital Textbooks (indirect references to Racism): 2, 3, 6, 11, 4, 3, 3, 4, 4
Mean = 4.4444, $s = 2.6977$

The Null Hypothesis is that the Mean total number of indirect references to racism in traditional textbooks should equal the Mean total number of indirect references to racism in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of indirect references to racism in traditional textbooks will differ from the Mean total number of indirect references to racism in digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 0.1985$$

$$df = 8.6992$$

$$P\text{-Value} = 0.8472$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of indirect references to racism.

Indirect references to racism: free versus publisher-produced. To compare the indirect references to racism in the free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (indirect references to Racism): 2, 3, 6, 11, 4, 3
Mean = 4.8333, s = 3.3116
- Publisher-Produced Digital Textbooks (indirect references to Racism): 3, 4, 4
Mean = 3.6667, s = 0.5774

The Null Hypothesis is that the Mean total number of indirect references to racism in free digital textbooks should equal the Mean total number of indirect references to racism in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of indirect references to racism in free digital textbooks will differ from the Mean total number of indirect references to racism in publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 0.8379$$

$$df = 5.5749$$

$$P\text{-Value} = 0.4365$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of indirect references to racism.

References to structural/institutional racism: traditional versus digital. To compare the references to structural/institutional racism in traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (references to racism that is Structural/Institutional): 7, 5, 6
Mean = 6, s = 1
- Digital Textbooks (references to racism that is Structural/Institutional): 3, 6, 7, 11, 2, 6, 4, 4, 4
Mean = 5.2222, s = 2.6822

The Null Hypothesis is that the Mean total number of references to racism that are structural/institutional in traditional textbooks should equal the Mean total number of references to racism that are structural/institutional in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of references to racism that are structural/institutional in traditional textbooks will differ from the Mean total number of references to racism that are structural/institutional in digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 0.7308$$

$$df = 9.4737$$

$$P\text{-Value} = 0.4826$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of references to racism that are structural/institutional.

References to structural/institutional racism: free versus publisher-produced. To compare the references to structural/institutional racism in free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (references to racism that is Structural/Institutional): 3, 6, 7, 11, 2, 6,
Mean = 5.8333, s = 3.1885
- Publisher-Produced Digital Textbooks (references to racism that is Structural/Institutional): 4, 4, 4
Mean = 4, s = 0

The Null Hypothesis is that the Mean total number of references to racism that are structural/institutional in free digital textbooks should equal the Mean total number of references to racism that are structural/institutional in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of references to racism that are structural/institutional in free digital textbooks will differ from the Mean total number of references to racism that are structural/institutional in publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 1.4084$$

$$df = 5$$

$$P\text{-Value} = 0.2180$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of references to racism that are structural/institutional.

References to individual bias/prejudice: traditional versus digital. To compare references to individual bias/prejudice in traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (Individual Bias/Prejudice): 0, 0, 0

Mean = 0, $s = 0$

- Digital Textbooks (Individual Bias/Prejudice): 1, 0, 0, 4, 3, 0, 0, 0, 0

Mean = 0.8889, $s = 1.5366$

The Null Hypothesis is that the Mean total number of references to racism that are individual bias/prejudice in traditional textbooks should equal the Mean total number of references to racism that are individual bias/prejudice in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis that the Mean total number of references to racism that are individual bias/prejudice in traditional textbooks will differ from the Mean total number of references to racism that are individual bias/prejudice in digital textbooks.

$$H_a : \mu_1 \neq \mu_2$$

$$t = -1.7354$$

$$df = 8$$

$$P\text{-Value} = 0.1209$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of references to racism that are individual bias/prejudice.

References to individual bias/prejudice: free versus publisher-produced. To compare references to individual bias/prejudice in free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (Individual Bias/Prejudice): 1, 0, 0, 4, 3, 0

Mean = 1.3333, $s = 1.7512$

- Publisher-Produced Digital Textbooks (Individual Bias/Prejudice): 0, 0, 0

Mean = 0, $s = 0$

The Null Hypothesis is that the Mean total number of references to racism that are individual bias/prejudice in free digital textbooks should equal the Mean total number of references to racism that are individual bias/prejudice in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of references to racism that are individual bias/prejudice in free digital textbooks will differ from the Mean total number of references to racism that are individual bias/prejudice in publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$t = 1.8650$

$df = 5$

P-Value = 0.1212

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of references to racism that are individual bias/prejudice.

Historical Narrative Approach

Table 5 below displays the scores each textbook received using the historical narrative approach evaluation tool.

Table 5

Historical Narrative Approach Scores for Each Textbook

Textbook	Historical Narrative Approach Score
<i>American Vision</i> (Traditional)	16
<i>American Anthem</i> (Traditional)	18
<i>America: Pathways to the Present</i> (Traditional)	15
<i>U. S. History Pre-Columbian to the New Millenium</i> (Digital--Free)	21
<i>A Biography of America</i> (Digital--Free)	19
<i>North Carolina History: A Digital Textbook</i> (Digital--Free)	15
<i>Digital History: Using new technologies to enhance teaching and research</i> (Digital-- Free)	23
<i>Academic American History: A Survey of America's Past</i> (Digital--Free)	1
<i>HistoryCentral.com: History's Home on the Web</i> (Digital--Free)	9
<i>United States History</i> (Digital--Cost)	17
<i>United States History and Geography</i> (Digital--Cost)	10
<i>The Americans</i> (Digital--Cost)	15

Historical narrative approach: traditional versus digital. To compare the historical narrative approach scores of the traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Traditional Textbooks (Historical Narrative): 18, 15, 16

Mean = 16.333, s = 1.5275

- Digital Textbooks (Historical Narrative): 19, 1, 23, 9, 15, 15, 21, 17, 10

Mean = 13.333, s = 6.8191

The Null Hypothesis that the Mean historical narrative approach ranking of traditional textbooks should equal the Mean historical narrative approach ranking of digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis that the Mean historical narrative approach ranking of traditional textbooks will be less than the Mean historical narrative approach ranking of digital textbooks. $H_a : \mu_1 < \mu_2$

t = 1.2305

df = 9.7097

P-Value = 0.8762

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean historical narrative approach ranking.

Discussion. I expected the digital textbooks to have up-to-date historical scholarship because of the ease to which those textbooks can be edited. Given that some of the digital textbooks have been dormant for at least ten years, it is not surprising that recent historical scholarship is not reflected in the narratives. *Digital History: Using new technologies to enhance teaching and research* and *U. S. History Pre-Columbian to the New Millenium* stand out among all of the textbooks as receiving particularly strong

scores. *North Carolina History: A Digital Textbook* is usually equally strong or stronger than the others, but since it is primarily a regional textbook and most of the historical narrative approach standards are national in focus, it did not score as high.

Historical narrative approach: free versus publisher-produced. To compare the historical narrative approach scores of the free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following pair of data:

- Free Digital Textbooks (Historical Narrative): 19, 1, 23, 9, 15, 21

Mean = 14.6667, $s = 8.3347$

- Publisher-Produced Digital Textbooks (Historical Narrative): 15, 17, 10

Mean = 14, $s = 3.6056$

The Null Hypothesis is that the Mean historical narrative approach ranking of free digital textbooks should equal the Mean historical narrative approach ranking of publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean historical narrative approach ranking of free digital textbooks will differ from the historical narrative approach ranking of publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$t = 0.1671$

$df = 6.9939$

P-Value = 0.8720

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean historical narrative approach ranking.

Webometrics

Because the publisher digital textbooks were self-contained, containing no links to or from them, the webometrics analysis was performed on the six free U. S. history digital textbooks. The findings of the analysis for each textbook are listed below:

Textbook: *U. S. History: Pre-Columbian to the New Millenium*. According to the “Link Counter Tool” of *SubmitExpress.com*, the total number of links is eighty-five (85), with all of them being external links. Because *SubmitExpress.com* examines the entire textbook instead of just the textbook pages dealing with slavery, I conducted a page-by-page review of each textbook page for links and found that the total number of links used in all of the textbook pages related to slavery was 124. Two of the 124 links were internal links.

According to the “Link Popularity Check Tool” of *SubmitExpress.com*, the total number of websites that link to the digital textbook is listed in Table 6 below, along with the academic/educational websites that link to the page.

Table 6

Academic Web Popularity of U. S. History: Pre-Columbian to the New Millennium

Textbook	Number of websites that link to the page	List of academic/educational websites that link to the page (9)
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<i>U. S. History: Pre-Columbian to the New Millennium</i>	22	<p>Winthrop University (SC)—Department of History -- http://www.winthrop.edu/cas/history/default.aspx?id=18236</p> <p>Trinity University—Department of Political Science -- http://www.trinity.edu/departments/political_science/Pages/Resources.htm</p> <p>Arizona Department of Education – Homework Resource Center -- http://www.azed.gov/resource-center/homework-help/</p> <p>The Kansas City Public Library – Research resources -- http://www.kclibrary.org/research/ushistoryorg</p> <p>Illinois State Board of Education – Social Science Resources -- http://www.isbe.net/ils/social_science/resources.htm</p> <p>Orcas Island Public Library -- http://www.orcaslibrary.org/pathfinder.html</p> <p>Northside Independent School District -- http://www.nisd.net/scarborough/social-studies</p> <p>Teachinghistory.org – Online U. S. History Textbooks - - http://teachinghistory.org/teaching-materials/ask-a-master-teacher/22276</p> <p>Cleveland Public Library – American history -- http://cpl.org/Research/PopularTopics/AmericanHistory.aspx</p>
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Using Google’s backlink tool, there were 442 results given and all of the first results were a part of the ushistory.org domain.

Using Yahoo’s backlink tool, there were eight (8) results given and only three (3) of them worked and were from established educational institutions.

1. Library of Congress --

<http://www.loc.gov/teachers/additionalresources/relatedresources/ushist/chrono/revoluti.html>

2. Indiana University of Pennsylvania—Department of History—US History--

<http://www.iup.edu/page.aspx?id=36645>

3. James White Library--Andrews University--

<http://www.andrews.edu/library/screens/databases/siteindexH.html?vm=r&s=1>

Textbook: *A Biography of America*. According to the “Link Counter Tool” of *SubmitExpress.com*, the total number of links in the digital textbook is thirty-nine (39), with thirty-eight (38) of them being internal and only one (1) being an external link. Because *SubmitExpress.com* examines the entire textbook instead of just the textbook pages dealing with slavery, I conducted a page-by-page review of each textbook page for links and found that the total number of links used in all of the textbook pages related to slavery was zero.

According to “Link Popularity Check Tool” of *SubmitExpress.com*, the total number of websites that link to the digital textbook is listed in Table 7 below, along with the academic/educational websites that link to the page.

Table 7

Academic Web Popularity of A Biography of America

Textbook	Number of websites that link to the page	List of academic/educational websites that link to the page (9)
<i>A Biography of America</i>	79	<p>The New York Times – A Biography of America – nytimes.com/learning/parents/siteofday/20010629.html</p> <p>Worcester Public Library – worcpublib.org/resources/history.htm</p> <p>Virtual Library – Mount Mercy University – History – http://www.mtmercy.edu/virtual-library-history</p> <p>California State University Northridge—Online Activities – http://www.csun.edu/~hcedu013/onlineactivities.html</p> <p>Northeastern State University Libraries – U. S. History Resources – http://library.nsuok.edu/collegela/Soc/histres.html</p> <p>James Madison University – Research Guide – History Internet Resources – http://www.lib.jmu.edu/history/internet.aspx</p> <p>Southwestern Christian University – Online Student Learning Resources – http://www.swcu.edu/online-student-learning-resources</p> <p>Lafayette Public Library – http://lafayettepubliclibrary.org/?page_id=1853</p> <p>Duluth Public Library -- http://duluth.lib.mn.us/CRInternet/History.html</p>

Using Google’s backlink tool, there were 457 results given and all of the first results were a part of the learner.org domain.

Using Yahoo’s backlink tool, there were no results given.

Textbook: *North Carolina History: A Digital Textbook*. According to the “Link Counter Tool” of *SubmitExpress.com*, the total number of links in the textbook is 138, consisting of 135 internal links and only three (3) external links. Because SubmitExpress.com examines the entire textbook instead of just the textbook pages dealing with slavery, I conducted a page-by-page review of each textbook page for links and found that the total number of links used in all of the textbook pages related to slavery was 1813. Sixteen (16) of the 1813 links were external links.

According to “Link Popularity Check Tool” of *SubmitExpress.com*, the total number of websites that link to the digital textbook is listed in Table 8 below, along with the academic/educational websites that link to the page.

Table 8

Academic Web Popularity of North Carolina History: A Digital Textbook

Textbook	Number of websites that link to the page	List of academic/educational websites that link to the page (1)
<i>North Carolina History: A Digital Textbook</i>	14	Teachinghistory.org: National History Education Clearinghouse - http://teachinghistory.org/teaching-materials/ask-a-master-teacher/25263

Using Google's backlink tool, there were 56 results given and included the following academic/educational websites:

1. Fourth Grade Social Studies from North Carolina Department of Public Instruction -- <http://www.livebinders.com/play/play?id=699151>
2. Internet2 K20 Educational Resources -- <https://www.mcnc.org/content/internet2-k20-educational-resources>
3. Moyock Middle School -- <http://currituck.schoolwires.net/site/default.aspx?PageType=3&ModuleInstanceID=4295&ViewID=5C8B25C6-C8F8-4BD5-923B-8A7C70A93DDA&RenderLoc=0&FlexDataID=4621&PageID=1543>

Using Yahoo's backlink tool, there were no results given.

Textbook: *Digital History: using new technologies to enhance teaching and research*. According to the "Link Counter Tool" of *SubmitExpress.com*, the total number of links in the textbook is eighty-two (82), with eighty-one (81) internal links and one (1) external link. Because *SubmitExpress.com* examines the entire textbook instead of just the textbook pages dealing with slavery, I conducted a page-by-page review of each textbook page for links and found that the total number of links used in all of the textbook pages related to slavery was 4. All four of the links were external links.

According to "Link Popularity Check Tool" of *SubmitExpress.com*, the total number of websites that link to the digital textbook is listed in Table 9 below, along with the academic/educational websites that link to the page.

Table 9

Academic Web Popularity of Digital History: Using New Technologies to Enhance Teaching and Research

Text book	Number of websites that link to the page	List of academic/educational websites that link to the page (41) ^a
<i>Digital History: using new technologies to enhance teaching and research</i>	480	<p>The History Guide: Resources for Historians -- http://www.historyguide.org/resources.html</p> <p>Web Library -- http://www.common-place.org/web-library/2009-01.shtml</p> <p>Best of History Websites: an EdTechTeacher Resource -- http://www.besthistorysites.net/index.php/american-history</p> <p>Educational Technology Clearinghouse: Social Studies Resources-- http://etc.usf.edu/ss/index.htm</p> <p>Mount Marty College Library (South Dakota) -- https://www.mtmc.edu/academics/library/departamental_resources.aspx</p> <p>Idaho Secretary of State: Student and Teacher Resources and Services -- http://www.sos.idaho.gov/Civics/civics6.htm</p> <p>State of New Jersey Department of Education: Curriculum and Instruction -- http://www.nj.gov/education/aps/cccs/ss/resources.htm</p> <p>Louisiana Tech University – Global Campus Faculty Resources -- http://www.latech.edu/globalcampus/facultyonlineresources.shtml</p> <p>University of Washington, United State History: Research Guides and Websites -- http://faculty.washington.edu/qtaylor/a_us_history/us_hist_resources.htm</p>

St. Mary's College of Maryland, History Department --
<http://www.smcm.edu/history/student.html>

The Journal of American History, "Interchange: The Promise of Digital History" --
<http://www.journalofamericanhistory.org/issues/952/interchange/index.html>

Mount Mercy University – Virtual Library: History --
<http://www.mtmercy.edu/virtual-library-history>

Arizona Department of Education --
<http://www.ade.az.gov/sa/sdi/socstudies.asp>

America's History in the Making --
<http://www.learner.org/courses/amerhistory/units/7/addtlResources/>

Southern History Database --
<http://www2.vcdh.virginia.edu/SHD/primary.html>

New York Public Library --
<http://www.nypl.org/locations/tid/36/node/111981>

Ushistory.org --
<http://www.ushistory.org/links/index.htm>

Thomas University (GA) Library --
<https://www.thomasu.edu/Content/Default/14/738/0/library/history.html>

St. Cloud State University (MN), Social Sciences Department --
<http://www.stcloudstate.edu/ctc/online/SocialScienceEducation.asp>

Arcadia University (PA) Resources for Teachers --
<http://www.arcadia.edu/academic/default.aspx?id=17400>

Texas State Historical Association: A Digital Gateway to Texas History -- <http://www.tshaonline.org/lone-star-history-links/1056>

Soka University of America: Ikeda Library --

http://ikedalibrary.soka.edu/web_list.html

Florida Christian College Library, History Resources --
<http://www.fcc.edu/library/subjectguides/history.asp>

New Jersey City University, Congressman Frank J.
Guarini Library --
<http://www.njcu.edu/guarini/OnlineResources/HistoryL.htm>

Social Studies Central --
<http://www.socialstudiescentral.com/?q=content/primary-sources>

Patrick Henry College --
<http://www.phc.edu/eresindex.php?ShowGroup=All&ShowAll=1&GroupByType=1&Descriptions=1&FullText=0&PublicAccess=0>

Angelo State University Library (TX) --
<http://www.angelo.edu/services/library/govdocs/hispanic05.php>

Hamilton-Wenham Public Library (MA) --
http://hwlibrary.org/Suggested_Web_Sites.html

Worcester State University Library (MA) --
<http://www.worcester.edu/Library/Shared%20Documents/DatabasesSubjectHistoryPoliticalSci.aspx?PageView=Shared>

Smithsonian's History Explorer --
<http://historyexplorer.si.edu/resource/?key=2146&lp=weblinks>

Orcas Island Public Library: American History
Pathfinder (WA) --
<http://orcaslibrary.org/pathfinder.html>

Library of Congress: Virtual Reference Shelf --
<http://loc.gov/rr/askalib/virtualref.html>

Florida Center for Instructional Technology: Social
Studies -- <http://fcit.usf.edu/startingpoints/social-studies/338/digital-history>

History Matters: The U. S. Survey Course on the Web -
- <http://historymatters.gmu.edu/d/1886/>

American Studies at the University of Virginia --
<http://xroads.virginia.edu/~YP/hist.html>

Palomar College Library (CA) --
<http://palomar.edu/library/subjects/history.htm>

The American Historical Association Guide to Teaching
and Learning with New Media --
<http://historians.org/pubs/Free/mcclymer/acknowledgements.cfm>

Southern Oregon University Library --
http://hanlib.sou.edu/reference/reference_resources.html

Solano Community College Library (CA) --
<http://solano.edu/library/research/history17.php>

Downers Grove Public Library (IL) --
http://downersgrovelibrary.org/books/databases_website/s/history_us.php

Quincy College Library (MA) --
<http://quincycollegelibrary.org/ushistory.html>

^a After checking 36 of the pages with 10 results per page, *SubmitExpress* did not allow a continued search.

Using Google's backlink tool, there were 499 results given and all of the first results were a part of the digitalhistory.uh.edu domain.

Using Yahoo's backlink tool, there were 5 results given and only 2 of them worked and were from established educational institutions.

1. Teaching American History – Resources --

<http://tah.oaisd.org/9999Resources?vm=r&s=1>

2. James White library of Andrews University --

<http://www.andrews.edu/library/screens/databases/siteindexH.html?vm=r&s=1>

Textbook: *Academic American History: A Survey of America's Past*.

According to the “Link Counter Tool” of *SubmitExpress.com*, the total number of links in the textbook is twenty (20), with seventeen (17) internal links and three (3) external links. Because *SubmitExpress.com* examines the entire textbook instead of just the textbook pages dealing with slavery, I conducted a page-by-page review of each textbook page for links and found that the total number of links used in all of the textbook pages related to slavery was 7. Six of the seven links are internal links.

According to “Link Popularity Check Tool” of *SubmitExpress.com*, the total number of websites that link to the digital textbook is listed in Table 10 below, along with the academic/educational websites that link to the page.

Table 10

Academic Web Popularity of Academic American History: A Survey of America's Past.

Textbook	Number of websites that link to the page	List of academic/educational websites that link to the page
<i>Academic American History: A Survey of America's Past</i>	0	0

Using Google's backlink tool, there were 367 results given and all of the first results were a part of the *academicamerican.com* domain.

Using Yahoo's backlink tool, there were no results given.

Textbook: *HistoryCentral.com: History's Home on the Web*. According to the “Link Counter Tool” of *SubmitExpress.com*, the total number of links in the textbook is 142, with 136 internal links and six (6) external links. Because *SubmitExpress.com* examines the entire textbook instead of just the textbook pages dealing with slavery, I conducted a page-by-page review of each textbook page for links and found that the total number of links used in all of the textbook pages related to slavery was 6. All six of the links were internal links.

According to “Link Popularity Check Tool” of *SubmitExpress.com*, the total number of websites that link to the digital textbook is listed in Table 11 below, along with the academic/educational websites that link to the page.

Table 11

Academic Web Popularity of HistoryCentral.com: History's Home on the Web

Textbook	Number of websites that link to the page	List of academic/educational websites that link to the page
<i>HistoryCentral.com: History's Home on the Web</i>	7	0

Using Google’s backlink tool, there was 1 result given and it was a part of the historycentral.com domain.

Using Yahoo’s backlink tool, there were no results given.

Image Analysis

Table 12 displays the total number of images in each traditional and digital U. S. history textbook account of slavery. The table also displays the number of captions with images, discussions with images, and authors with images of each textbook account of slavery.

Table 12

Image Analysis of Each Textbook in the Study

Textbook	Caption	Discussion	Author	Total number of images
<i>American Vision</i> (Traditional)	44	0	10	66
<i>American Anthem</i> (Traditional)	32	0	0	43
<i>America: Pathways to the Present</i> (Traditional)	45	1	0	62
<i>U. S. History: Pre-Columbian to the New Millennium</i> (Digital—Free)	73	0	2	73
<i>A Biography of America</i> (Digital—Free)	0	0	0	0
<i>North Carolina History: A Digital Textbook</i> (Digital—Free)	53	10	52	53
<i>Digital History: Using new</i>	27	0	4	45

<i>technologies to enhance teaching and research (Digital—Free)</i>				
<i>Academic American History: A Survey of America's Past (Digital—Free)</i>	3	0	0	5
<i>HistoryCentral.org: History's Home on the Web (Digital— Free)</i>	0	0	0	11
<i>United States History (Digital—Cost)</i>	59	0	0	60
<i>United States History and Geography (Digital—Cost)</i>	35	0	0	35
<i>The Americans (Digital—Cost)</i>	60	5	2	62

Total number of images: traditional versus digital. To compare the total number of images in the traditional and digital U. S. history textbook account of slavery, I applied the two-sample t-Test to the following set of data:

- Traditional Textbooks (Total # of Images): 66, 43, 62

Mean = 57, s = 12.2882

- Digital Textbooks (Total # of Images): 73, 0, 53, 45, 5, 11, 60, 35, 62

Mean = 37.8889, s = 26.5257

The Null Hypothesis is that the Mean total number of images in traditional textbooks should equal the Mean total number of images in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of images in traditional textbooks is different from the Mean total number of images in digital textbooks. $H_a : \mu_1 \neq \mu_2$

$t = 1.6858$

$df = 8.1328$

P-Value = 0.1297

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of images.

Discussion. This finding suggests that digital history textbooks are not living up to their full potential by including more images than traditional books. Though quantity matters, it is quality that counts most with the use of images in the historical narrative (Masur, 1998). While traditional textbooks may carelessly “toss” an image of a cotton crop on a page, a digital textbook would carefully include Eli Whitney’s original schematic for the design of the cotton gin. My observations have revealed, on the whole, that digital textbooks are a lot more deliberate in their image selection and provide more historical context than traditional textbooks.

Total number of images: free versus publisher-produced. To compare the total number of images in the free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following set of data:

- Free Digital Textbooks (Total # of Images): 73, 0, 53, 45, 5, 11

Mean = 31.1667, $s = 29.9360$

- Publisher-produced Digital Textbooks (Total # of Images): 60, 35, 62

$$\text{Mean} = 52.3333, s = 15.0444$$

The Null Hypothesis that the Mean total number of images in free digital textbooks should equal the Mean total number of images in publisher-produced digital textbooks.

$$H_0 : \mu_1 = \mu_2$$

The Alternate Hypothesis that the Mean total number of images in free digital textbooks will differ from the Mean total number of images in publisher-produced digital textbooks.

$$H_a : \mu_1 \neq \mu_2$$

$$t = -1.4117$$

$$df = 6.9157$$

$$P\text{-Value} = 0.2014$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of images.

Number of image captions: traditional versus digital. To compare the number of image captions in the traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following set of data:

- Traditional Textbooks (Captions): 44, 32, 45

$$\text{Mean} = 40.3333, s = 7.2342$$

- Digital Textbooks (Captions): 73, 0, 53, 27, 3, 0, 59, 35, 60

$$\text{Mean} = 34.4444, s = 28.5136$$

The Null Hypothesis is that the Mean total number of captions accompanying images in traditional textbooks should equal the Mean total number of captions accompanying images in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of captions accompanying images in traditional textbooks is different from the Mean total number of captions accompanying images in digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 0.5672$$

$$df = 9.9099$$

$$P\text{-Value} = 0.5832$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of captions accompanying images.

Number of image captions: free versus publisher-produced. To compare the number of image captions in the free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following set of data:

- Free Digital Textbooks (Captions): 73, 0, 53, 27, 3, 0

$$\text{Mean} = 26, s = 31.0483$$

- Publisher-produced Digital Textbooks (Captions): 59, 35, 60

$$\text{Mean} = 51.3333, s = 14.1539$$

The Null Hypothesis is that the Mean total number of captions accompanying images in free digital textbooks should equal the Mean total number of captions accompanying images in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of captions accompanying images in free digital textbooks will differ from the Mean total number of captions accompanying images in publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = -1.6798$$

$$df = 6.9979$$

$$P\text{-Value} = 0.1369$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of captions accompanying images.

Discussions of images: traditional versus digital. To compare the number of discussions of images in the traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following set of data:

- Traditional Textbooks (Discussion of images): 0, 0, 1

$$\text{Mean} = 0.3333, s = 0.5774$$

- Digital Textbooks (Discussion of images): 0, 0, 10, 0, 0, 0, 0, 0, 5

$$\text{Mean} = 1.6667, s = 3.5366$$

The Null Hypothesis is that the Mean total number of discussions of images in traditional textbooks should equal the Mean total number of discussions of images in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of discussions of images in traditional textbooks is different from the Mean total number of discussions of images in digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = -1.0887$$

$$df = 9.0983$$

$$P\text{-Value} = 0.3043$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of discussions of images.

Discussions of images: free versus publisher-produced. To compare the number of discussions of images in the free and publisher-produced U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following set of data:

- Free Digital Textbooks (Discussion of images): 0, 0, 10, 0, 0, 0

$$\text{Mean} = 1.6667, s = 4.0825$$

- Publisher-produced Digital Textbooks (Discussion of images): 0, 0, 5

$$\text{Mean} = 1.6667, s = 2.8868$$

The Null Hypothesis is that the Mean total number of discussions of images in free digital textbooks should equal the Mean total number of discussions of images in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of discussions of images in free digital textbooks will differ from the Mean total number of discussions of images in publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 0$$

$$df = 5.7143$$

$$P\text{-Value} = 1.000$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of discussions of images.

Authors mentioned: traditional versus digital. To compare the number of times authors are mentioned with images in traditional and digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following set of data:

- Traditional Textbooks (Author of image mentioned): 10, 0, 0
Mean = 3.3333, s = 5.7735
- Digital Textbooks (Author of image mentioned): 2, 0, 52, 4, 0, 0, 0, 0, 2
Mean = 1, s = 1.5119

52 was confirmed to be an outlier as it lies more than 1.5 times the Interquartile Range beyond the 3rd Quartile of the set of data. It was therefore not considered in the calculations below.

The Null Hypothesis is that the Mean total number of times the author of an image is mentioned in traditional textbooks should equal the Mean total number of times the author of an image is mentioned in digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number times the author of an image is mentioned in traditional textbooks is different from the Mean total number times the author of an image is mentioned in digital textbooks. $H_a : \mu_1 \neq \mu_2$

$$t = 0.6912$$

$$df = 2.1038$$

$$P\text{-Value} = 0.5578$$

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of textbooks should have the same Mean total number of times the author of an image is mentioned.

Authors mentioned: free versus publisher-produced. To compare the number of times authors are mentioned with images in free and publisher-produced digital U. S. history textbook accounts of slavery, I applied the two-sample t-Test to the following set of data:

- Free Digital Textbooks (Author of image mentioned): 2, 0, 52, 4, 0, 0

Mean = 1.2, $s = 1.7889$

52 was confirmed to be an outlier as it lies more than 1.5 times the Interquartile Range beyond the 3rd Quartile of the set of data. It was therefore not considered in the calculations below.

- Publisher-produced Digital Textbooks (Author of image mentioned): 0, 0, 2

Mean = 0.6666, $s = 1.1547$

The Null Hypothesis is that the Mean total number of times the author of an image is mentioned in free digital textbooks should equal the Mean total number of times the author of an image is mentioned in publisher-produced digital textbooks. $H_0 : \mu_1 = \mu_2$

The Alternate Hypothesis is that the Mean total number of times the author of an image is mentioned in free digital textbooks will differ from the Mean total number of times the author of an image is mentioned in publisher-produced digital textbooks. $H_a : \mu_1 \neq \mu_2$

$t = 0.5121$

$df = 5.8460$

P-Value = 0.6273

The results are not significant at either the 1% or 5% levels.

I therefore fail to reject the Null Hypothesis and conclude that the two different types of digital textbooks should have the same Mean total number of times the author of an image is mentioned.

Discussion. Even though there were no statistical differences in the use of images between the traditional and digital U. S. history textbook accounts of slavery, all of the digital textbook images included more details and historical context than the traditional ones. Rather than serve as an attention-grabber, the images in the digital U. S. history textbooks serve to advance student learning. Because most of the image annotations were provided through hypertext link, the digital textbooks effectively used new literacies to scaffold and support student learning (Robertson, 2006).

Interactive Images

One of the six free digital U. S. history textbooks, and one of the three publisher-produced digital U. S. history textbooks included interactive images in its account of slavery. Table 13 below describes the images and their interactivity.

Table 13

Interactive Images and Digital Textbooks

Textbook: <i>North Carolina History: A Digital Textbook</i>
1. Nat Turner's Rebellion (Google Map). This image was an image of a modern Google map of the state of Virginia with locations labeled that were affected by Nat Turner's Rebellion. The caption underneath the empty space (where the image was once located), reads, "The major events of Nat Turner's Rebellion and others discussed in this chapter are marked on this map. For reference, the map shows major towns and roads as they exist today — but be warned that some of them did not exist in 1831." Textbook page address is: http://www.learnnc.org/lp/editions/nchist-newnation/5257
2. James Curry escapes from slavery (Google Map). This image is a google map of directions from Person County, North Carolina to Philadelphia, Pennsylvania noting all

of the locations mention by James Curry on his escape route out of slavery. The caption beneath the map reads, “Locations mentioned by James Curry are marked on this map. We don’t know the exact route he took, but the roads from Petersburg, Virginia, to Chambersburg, Pennsylvania, probably followed about the same route they do today.”

Topic 3.11: James Curry escapes from slavery

Textbook page address is: <http://www.learnnc.org/lp/editions/nchist-antebellum/5335>

Textbook: *United States History and Geography* (McGraw-Hill)

1. African Fort. This image is an interactive photograph of Sao Jorge da Mina (Elmina Castle) in Ghana. The caption beneath the image says that the fort was built in 1482 “by the Portuguese to control the gold trade and later became a depot for the slave trade.” The interactivity of the image allows the reader to click on one of six buttons to read about a feature of the fort or the slave trade. For example, one pop-up text box states, “The captives were forced to walk in chains, often for up to 1000 miles (1,609 km). About half died along the way.” Another text box states: “The cells in the dungeon often held as many as 200 captives at one time. The conditions were filthy and crowded. Some captives waited as long as a year before boarding a ship.”

2. The Middle Passage. This image is an interactive illustration of enslaved Africans aboard a slave ship. The interactivity of the image allows the reader to click on one of five buttons to read about a feature of the Middle Passage. One text box reads, “Historians estimate that millions more African enslaved people were transported than were documented in ships’ records.”

3. Slave Trade Map. This image is an interactive map showing the places of origin and the destinations for enslaved Africans. The interactivity of the map allows the reader to zoom in and out, and also allows the reader to use a drawing tool to write on the map.

4. Triangle Trade Map. This image is an interactive map showing the trade routes along the triangle trade. The interactivity of the map allows the reader to zoom in and out, and also allows the reader to use a drawing tool to write on the map.

5. Emancipation after Independence Map. This image is an interactive map showing the states that abolished, gradually abolished, or did not abolish slavery after the Revolutionary War. The interactivity of the map allows the reader to zoom in and out, and also allows the reader to use a drawing tool to write on the map.

6. Dinah Morris. This image is an interactive illustration of Dinah Morris, one of the first African Americans to be freed after the Revolutionary War. The interactivity of the image allows the reader to click on one of five buttons to read about Dinah Morris and manumission. One text box reads, “As part of her freedom, Dinah Morris received a house, a half-acre of land, and firewood rent-free for eight years.”

7. Plantation. This image is an interactive photograph of enslaved African Americans in front of slave quarters on a plantation. The interactivity of the image allows the reader to click on one of two buttons to read about the conditions of the enslaved on southern

plantations. One button switches the image to a map of the southern states and reads, “The greatest densities of enslaved people were in the rice-, cotton-, and tobacco-growing areas of the South.”

8. Eli Whitney. This image is a portrait painting of Eli Whitney the inventor of the cotton gin. When the reader clicks on his image, a brief biography appears beside the image.

9. Cotton Production and Enslaved Population. This image is an interactive map showing the amount of cotton production in each southern state and the corresponding percentage of enslaved African Americans in each state. The interactivity of the map allows the reader to zoom in and out, and also allows the reader to use a drawing tool to write on the map.

10. Enslaved Man with Scars. This image is an interactive photograph of an African American with many scars (from a whip) on his back. The interactivity of the image allows the reader to click on one of three buttons to read about the brutal conditions of the enslaved. One text caption reads, “Enslaved people were completely at the mercy of the slaveholders or their overseers. Not working hard enough, stealing, trying to run away, or killing a white person could result in whatever punishment the slaveholder chose.”

11. Enslaved Slave Poster. This image is an interactive facsimile of a runaway slave advertisement from 1860. The advertisement offers a \$100 reward for “a Negro boy named Sandy, about 35 years of age. . . .” The interactivity of the image allows the reader to click on one of three buttons to learn more about the conditions of the enslaved. One button reads, “In 1850, only about 1000 out of 3 million enslaved people attempted the escape to freedom. For enslaved people who might never have traveled more than a few miles away from a plantation, escape was a very dangerous plan.” Another button reads, “In 1860 one enslaved person costs the equivalent of about \$130,000 in today’s dollars. This represented a huge investment for slaveholders, which encouraged them to offer generous rewards for the return of runaways.” The final button with text read, “The large investment is one main reason that very few Southerners owned people in slavery. The ones that did, however, were wealthy and influential in politics.”

12. Missouri Compromise. This image is an interactive map of the United States in 1820, showing the states affected by the compromise. The interactivity of the map allows the reader to zoom in and out and to draw.

13. American Anti-Slavery Society. This image is an interactive photograph of members of the American Anti-Slavery Society at a rally. The interactivity of the image allows the reader to click on one of four buttons that displays text about the anti-slavery society.

14. Sojourner Truth. This image is an interactive portrait photograph of Sojourner Truth. The interactivity of the photograph allows the reader to click on one of four buttons to read text about Truth’s life. One of the text bubbles reads, “After being set free, Truth

waged a successful court battle to regain custody of her son. He had been sold into slavery, illegally, in the South. In fact most of her children were sold into slavery.” Another text bubble reads, “In 1864 Truth traveled to Washington, D. C., where she played a role in integrating the District’s streetcars. Having heard about her work, President Lincoln invited her to the White House.”

15. United States, 1819-1854. This interactive map of the United States shows the free, slave, and popular sovereignty territories. The interactivity of the map allows the reader to zoom in and out and draw.

16. “Caution!” Poster. This image is an interactive facsimile of a broadside from 1851 giving African Americans in Boston a warning to watch out for slave-catchers. The text of the poster is as follows: “Caution!! Colored People of Boston, One & All, You are hereby respectfully CAUTIONED and advised, to avoid conversing with the Watchmen and Police Officers of Boston, for since the recent Order of the Mayor & Aldermen, they are empowered to act as KIDNAPPERS and SLAVE CATCHERS, and they have already been actually employed in KIDNAPPING, CATCHING, and KEEPING SLAVES. Therefore, if you value your LIBERTY and the Welfare of the Fugitives among you, Shun them in every possible manner, as so many HOUNDS on the track of the most unfortunate of your race. KEEP A SHARP LOOK OUT FOR KIDNAPPERS, and have TOP EYE open. April 24, 1851.” The interactivity of the image allows the reader to click on one of three buttons to read more about the “Caution” poster. One text bubble reads, “The 1850 act was so onerous it actually had the opposite of its intended effect. The ranks of the abolitionists swelled, and the Underground Railroad became more effective.”

17. John Brown. This image is an interactive political cartoon of John Brown’s execution. The interactivity of the image allows the reader to click a right-arrow button to have three different features of the cartoon labeled and described. One text box reads, “Brown’s jailers look malevolent, with angry snarls and hands on weapons.”

18. Emancipation Proclamation. This image is an interactive painting of Lincoln and his cabinet deciding on the Emancipation Proclamation. The interactive part of the image allows the reader to click on one of two buttons to read more about the proclamation. The first button takes the reader to a text box that reads, “The painting, *First Reading*, by Francis Bicknel Carpenter was painted in 1864 and donated to the U. S. Congress. It hangs today in the Senate wing of the U. S. Capitol.” The second button takes the reader to a text box with the words of the Emancipation Proclamation.

19. 4th Colored Regiment. This image is an interactive photograph of the 4th Colored Regiment. The interactivity of the image allows the reader to click on one of two buttons to find out more about regiment. One button takes the reader to a text box that reads, “This 1865 photograph by William Morris Smith shows Company E, Fourth Colored Infantry, stationed at Fort Lincoln in Maryland. African American units such as this one bravely demonstrated that they could fight as well as white soldiers.”

20. 4th Colored Regiment. This image is a part of an interactive image of the 4th Colored Regiment. In this part of the image, the reader clicks on a second button that takes him/her to an image of the 54th Massachusetts regiment with a painting of the Battle at Fort Wagner and a map of Charleston, SC where the battle took place. The text underneath the image reads, “The Battle of Fort Wagner took place on July 18, 1863. The African American 54th Massachusetts Infantry Regiment led the attack. It was the regiment’s first major battle. The 54th fought their way to the heavily defended Confederate fort’s parapet and held their position for an hour before being pushed back. The 54th suffered 25 percent casualties. Although they did not capture the fort, their valor and willingness to die for the Union underscored the worth of African American soldiers to the Union.”

Multimedia Message Design Analysis

Table 14 below presents the videos in the digital U. S. history textbooks along with the multimedia message design principles of which it adheres and a general overview of the video from a new literacies perspective. None of the videos followed all ten principles of Mayer’s (2008) multimedia message design. Most of the videos followed the coherence principle, the temporal contiguity principle, the modality principle, the personalization principle, and the voice principle.

Table 14

Videos in the Digital History Textbooks

Textbook/Video	Multimedia Message Design and Overview
<i>A Biography of America/”An English Settlement”</i> (26 minutes, 39 seconds)	Coherence principle – good use of sounds, words, and images throughout the video. Temporal Contiguity principle—the narrators discuss geographic places like the Virginia and Massachusetts colonies while showing them on a map. Modality principle—the narration is provided in spoken form throughout the video. Personalization principle-- Professor Donald Miller and Professor Pauline Maier lead the narration in an informal way.

	<p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<i>A Biography of America/”Growth and Empire”</i> (26 minutes, 40 seconds)	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle—the words of Crevecoeur’s letter are presented while the narrator reads them.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Donald Miller leads the narration in an informal way.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country. The video was intended for a broad audience, not just a narrow audience of historians.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<i>A Biography of America/”A New System of Government”</i> (26 minutes, 40 seconds)	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle—a John Adams’ quote is presented visually, while being spoken.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Pauline Maier lead the narration in an informal way.</p>

	<p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>A Biography of America/”Westward Expansion”</i> (26 minutes, 40 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle—the video shows a map of the Louisiana Territory while talking about it.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Donald Miller leads the narration of this chapter. There was a broader discussion of the Louisiana territory and the Lewis and Clark expedition by Professors Stephen Ambrose, Pauline Maier, and Donald Miller.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>A Biography of America/”The Rise of Capitalism”</i> (26 minutes, 40 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle—illustrations of Alexander Hamilton, Thomas Jefferson, and Samuel Slater are provided while they are discussed.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p>

	<p>Personalization principle-- Professor Donald Miller leads the narration of this chapter.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<i>A Biography of America/”The Reform Impulse”</i> (26 minutes, 39 seconds)	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle—the video shows the growth of the more populous areas of the country.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Louis Masur leads the narration of this chapter.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<i>A Biography of America/”Slavery”</i> (26 minutes, 40 seconds)	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle—the video shows a quote of Frederick Douglass while it is being recited.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Louis Masur leads the narration of this chapter.</p> <p>Voice principle—the accent of the</p>

	<p>narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>A Biography of America/”The Coming of the Civil War”</i> (26 minutes, 40 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle— The video shows images of Abraham Lincoln, John C. Calhoun, and Frederick Douglass while discussing their importance to the coming of the Civil War.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Waldo E. Martin, Jr. leads the narration of this chapter.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>A Biography of America/”The Civil War”</i> (26 minutes, 40 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle— The video shows pictures of Civil War battles, generals, and locations while discussing them.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Donald Miller led the narration of the chapter.</p>

	<p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>Digital History: using new technologies to enhance teaching and research/”NightJohn” [1996] (1 minute, 14 seconds)</i></p>	<p>There is no audio for the video. The video does show a variety of scenes from the movie.</p> <p>The video adheres to no multimedia message design principles or any other new literacies.</p>
<p><i>The Americans/”Freedom’s Road and the Opposition” (44 minutes, 25 seconds)</i></p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Many images are used throughout the video. The video also included some dramatizations.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Nell Painter of Princeton University, Professor Edna Green Medford of Howard University, and Professor James I. Robertson, Jr. of Virginia Tech are the principal narrators.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007). The content for the video is dated because the video was created in 1995.</p>
<p><i>The Americans/”Frederick Douglass” (42 minutes, 39 seconds)</i></p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p>

	<p>Temporal Contiguity principle -- Many images are used throughout the video. The video also included some dramatizations.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor John F. Marszalek, of Mississippi University, Thomas Battle of the Moorland-Spingarn Research Center of Howard University, Professor James McPherson of Princeton University, and Professor Edna Medford of Howard University add their insights to the life of Frederick Douglass.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007). The content for the video is a little dated because the video was created in 1994.</p>
<p><i>The Americans’</i> “Abolitionists and the Underground Railroad” (2 minutes, 57 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Many images are used throughout the video. The video also included some dramatizations.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor H. W. Brands of the University of Texas explaining the Underground Railroad</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization,</p>

	<p>narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>The Americans</i>/"House Divided Speech" (2 minutes, 33 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Many images are used throughout the video. The video also included some dramatizations.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Richard Norton Smith of George Mason University provides the narration for this video.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations ("Ken Burns Effect"). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>The Americans</i>/"Emancipation Proclamation" (2 minutes, 14 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Many images are used throughout the video. The video also included some dramatizations.</p> <p>Modality principle—the narration is provided in spoken form throughout the video.</p> <p>Personalization principle-- Professor Doris Kearns Goodwin provides the narration for this video.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations ("Ken Burns Effect"). But, it lacks the combination of visualization, narrative, and opportunities for student</p>

<i>United States History & Geography</i> /"The Costs of the Revolution to Loyalists, African Slaves, and Native Americans" (4 minutes, 31 seconds)	<p>engagement that are important in the new literacies (Miller & Borowicz, 2007).</p> <p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Dramatization, paintings, drawings, and narration offered throughout the video.</p> <p>Modality principle— the narration is presented in conversational tone.</p> <p>Personalization principle— Professor Ira Berlin of the University of Maryland, Professor Alfred Moss of the University of Maryland, and Professor Daniel Rodgers of Princeton University provide some of the narration of the video. There is also a male and female narrator voice in the video.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations ("Ken Burns Effect"). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<i>United States History & Geography</i> /"Social Classes on Southern Plantations" (5 minutes, 20 seconds)	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Dramatization, images, and paintings are included in the video. Female narration of a letter written by a southern white lady about plantation life.</p> <p>Modality principle— the narration is presented in conversational tone.</p> <p>Personalization principle— Professor Christopher Clarke of the University of Warwick, Professor Joan Waugh of the University of California at Los Angeles, and Professor Emory Thomas of The Citadel provide the narration for the video.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good</p>

	<p>content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>United States History & Geography</i>’’Abolitionism’’ (7 minutes, 27 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video. Temporal Contiguity principle -- Political cartoons, dramatizations, art, and photography used in the video. Male voice representative of Frederick Douglas gives speech, “What to the Negro is the 4th of July?” Modality principle— the narration is presented in conversational tone. Personalization principle -- Professor Bertram Wyatt-Brown of the University of Florida, Professor Joan Waugh of the University of California at Los Angeles, and Professor Daniel Rodgers of Princeton University provide the narration. Voice principle—the accent of the narrators does not strongly favor one region of the country. Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>United States History & Geography</i>’’The Compromise of 1850’’ (4 minutes, 11 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video. Temporal Contiguity principle -- Political cartoons, dramatizations, art, and photography used in the video. Modality principle— the narration is presented in conversational tone. Personalization principle -- Professor Emory Thomas of The Citadel and Professor Joan Waugh of the University of California at Los Angeles present the narration.</p>

	<p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>United States History & Geography</i>”John Brown” (5 minutes, 08 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Political cartoons, dramatizations, art, and photography used in the video.</p> <p>Modality principle—the narration is presented in conversational tone.</p> <p>Personalization principle -- Professor Paul Finkelman of the University of Tulsa provides the primary narrative. Female narrator and male voice reenacting the voice of John Brown during the video.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>United States History & Geography</i>”The Battle of Antietam and the Emancipation Proclamation” (7 minutes and 12 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Political cartoons, dramatizations, art, and photography used in the video.</p> <p>Modality principle—the narration is presented in conversational tone.</p> <p>Personalization principle -- Professor Emory Thomas of The Citadel, Professor Joan Waugh of the University of California at Los Angeles, and Professor Ira Berlin of the University of Maryland provide the</p>

	<p>narration for the video.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>United States History & Geography</i>”The Effects of the Civil War on Women, Family, and Slavery on the Home Front” (2 minutes, 50 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Political cartoons, dramatizations, art, and photography used in the video.</p> <p>Modality principle— the narration is presented in conversational tone.</p> <p>Personalization principle -- Professor Emory Thomas of The Citadel and Professor Ira Berlin provide the main narration. There is also a male narrator.</p> <p>Voice principle—the accent of the narrators does not strongly favor one region of the country.</p> <p>Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).</p>
<p><i>United States History & Geography</i>”The Presidential Election of 1864, the Thirteenth Amendment, and the Final Battles of the Civil War” (8 minutes, 53 seconds)</p>	<p>Coherence principle – good use of sounds, words, and images throughout the video.</p> <p>Temporal Contiguity principle -- Political cartoons, dramatizations, art, and photography used in the video.</p> <p>Modality principle— the narration is presented in conversational tone.</p> <p>Personalization principle -- Professor Julie Waugh of the University of California at Los Angeles and Professor Emory Thomas of The Citadel provide the main narration.</p> <p>Voice principle—the accent of the</p>

narrators does not strongly favor one region of the country.

Overview: The video provides good content and uses the slow scanning and tracing over many photographs and illustrations (“Ken Burns Effect”). But, it lacks the combination of visualization, narrative, and opportunities for student engagement that are important in the new literacies (Miller & Borowicz, 2007).

Chapter 5: DISCUSSION

The previous chapter presented the results from the six methods applied during the study's data collection. In this chapter, I will discuss and interpret the data based on the claims of digital history. The chapter will begin with a review of the research questions and hypothesis and then proceed to an analysis of the results. The analysis will be followed by a more in-depth discussion of the results. The chapter will then address the surprises and limitations in the research. Lastly, suggestions for future research and recommendations to publishers, historians, and K-12 history teachers will be offered.

Review of the Study

The research questions that guided my study were:

1. How do digital U. S. history textbooks and traditional U. S. history textbooks describe slavery?
 - d. How are primary sources from enslaved African Americans used in the digital and traditional textbook accounts of slavery?
 - i. Do digital U. S. history textbooks have more primary source documents than traditional U. S. history textbooks?
 - ii. Do digital U. S. history textbooks have different primary source documents than traditional U. S. history textbooks?
 - iii. In both the digital and traditional U. S. history textbook, are the primary source documents located within the main historical

narrative text or are they located on the margins of the history textbook page?

- e. How is the Critical Race Theory tenet of the centrality of race and racism represented in the digital and traditional textbook accounts of slavery?
- f. How is recent historical scholarship about slavery used in the digital and traditional textbook accounts of slavery?

2. Do digital U. S. history textbooks take advantage of the accessibility of primary sources, hypertextual links, images, and multimedia presentations to tell a story of the African American slave experience that reflects the marginalized voices of the enslaved, the centrality of race and racism, and the recent historical scholarship on slavery?

Given the affordances of digital history, I hypothesized that the number of primary sources would be greater and more integrated in the digital U. S. history textbook than the traditional textbooks. I also hypothesized that the inclusion of more documents from different perspectives in the digital U. S. history textbooks would make the topics of race and racism more visible than in the traditional textbooks. Regarding the historical narrative approach, I hypothesized that the digital U. S. history textbooks would be more reflective of the most recent historical scholarship than traditional textbooks. For the hypertext links, I hypothesized that all of the digital U. S. textbook accounts of slavery would have many internal and external links. In terms of images, I hypothesized that the digital U. S. history textbook accounts of slavery would have more images related to slavery than traditional U. S. history textbooks. For multimedia content, I hypothesized that all of the digital U. S. history textbook accounts of slavery would have multimedia content.

Analysis of the Results

Primary source document analysis. Comparing the number of integrated primary sources in the traditional and digital U. S. history textbook accounts of slavery revealed no statistical difference in the mean number of integrated primary sources. Especially given my preconceived notion of separate “blue box” sections in traditional textbooks with primary sources and my notion that digital textbook narratives would contain internal hypertext links to primary source documents, this information was surprising. Comparing the number of integrated primary sources in the free and publisher-produced digital textbooks revealed that the free digital textbooks had a lower mean number of integrated primary sources. This was not surprising given that most of the publisher-produced digital U. S. history textbooks were almost exact replicas of traditional textbooks. So, the placement of primary sources in the digital publisher-produced U. S. history textbook accounts of slavery were well integrated in the narrative in a similar fashion to the traditional textbooks.

In terms of the number of marginal primary source documents, there was no statistical difference between the traditional and digital U. S. history textbook accounts of slavery. Additionally, there was no statistical difference between the number of marginal primary source documents in the free and publisher-produced digital U. S. history textbook accounts of slavery. Given that digital history can allow the integration of primary sources into a historical narrative, it is surprising that the digital history textbooks do not have less marginalized primary sources.

Lastly, the total number of primary sources in the traditional and digital U. S. history textbook accounts of slavery was not statistically different. Also, the total

number of primary sources in the free and publisher-produced digital U. S. history textbook accounts of slavery was not statistically different. With the increased accessibility of primary source documents being one of the key claims of digital history (Lee, 2002), it is clear that digital U. S. history textbooks are not living up to that claim.

Historical empathy and digital history textbooks. Though failing to deliver on the claim of increased accessibility of primary sources, some digital U. S. history textbooks in this study demonstrate flexibility in presentation forms (Cohen & Rosenzweig, 2005) and the integration of formerly marginalized historical accounts (Bolick, 2006) that contribute to the cognitive act of historical empathy. In opposition to the dry, monotone, and boring traditional history textbooks (Loewen, 1995), some of the digital textbooks, through the format and medium choices and the primary source document content, enliven the historical narrative by facilitating historical empathy.

Adding an emotive dimension to the predictable, detached, and impersonal narrative that often dominates the traditional history textbook, historical empathy, similar to VanSledright's (2001) notion of "positionality," can be described as "the current, socioculturally permeated deportment or stance any historical thinker brings to the task of making sense of the past" (p. 57). This role of the affective in historical empathy is often debated among historians. For example, some historians argue that historical empathy should focus on close examination of evidence and historical perspectives, with very little or no emotional involvement with past actors (Bryant and Clark, 2006; Foster, 1999). Because emotions necessarily are subjective and involve contemporary thoughts and views, the objectivity of the historical study would be lost (*ibid.*). On the other hand, some historians argue that to be empathetic, one must explore their own perspectives

rigorously and embrace their own emotional involvement to understand how their perspectives influence their interpretations of the past (Barton and Levstik, 2004; Blake, 1998; VanSledright, 2001). I embrace the latter arguments with specific reference to Barton and Levstik's (2004) definition of historical empathy as perspective recognition and caring. Perspective recognition establishes the historical context of the attitudes and values of past actors along with the historical context of the historian's (student's) views. Caring as a tool of historical empathy establishes how historians (students) feel about history (*ibid.*). Through the flexibility of content presentation and the inclusion of primary source documents from enslaved African Americans, digital U. S. history textbooks in this study can facilitate the development of both perspective recognition and caring.

An example of the enabling of historical empathy in textbooks is the inclusion of the January 1, 1831 abolitionist writings of William Lloyd Garrison. Six of the twelve U. S. history textbooks in the study include the written text of Garrison's statements in the *Liberator*:

I am aware that many object to the severity of my language; but is there not cause for severity? I will be as harsh as truth and as uncompromising as justice. On this subject, I do not wish to think, or speak, or write, with moderation. No! No! Tell a man whose house is on fire, to give a moderate alarm; tell him to moderately rescue his wife from the hands of the ravisher; tell the mother to gradually [remove] her babe from the fire into which it has fallen—but urge me not to use moderation in a cause like the present. I am in earnest—I will not equivocate—I will not excuse—I will not retreat a single inch—AND I WILL BE HEARD. (Appleby et al., p. 244)

When these words are recited by Professor Louis Masur in a video for the textbook, *A Biography of America*, another perspective on the emotion and conviction behind the words is conveyed. Through the audio and video presentation, the textbook readers not

only get a greater sense of the perspective and emotion of Garrison, but they also get a sense of how the historian, Professor Masur, feels about the history. Similarly, three of the twelve U. S. history textbooks in the study contain Frederick Douglass' "What, to the American slave, is your 4th of July?" speech. Only the *U. S. History & Geography* (McGraw-Hill) digital textbook includes a recitation of the speech in a video on "Abolitionism". Again, the power, emotion, and conviction of the speech is conveyed in the video. Lastly, two of the twelve textbooks in the study include African American spirituals as a primary source. The digital textbook, *North Carolina History: A Digital Textbook*, which includes the lyrics as well as audio recordings of the songs, elicits historical empathy through the emotion expressed in the recordings.

In terms of the integration of formerly marginalized historical accounts (Bolick, 2006), three of the nine digital U. S. history textbooks included primary sources that were different from the primary sources in the traditional textbooks. All three of the textbooks, *Digital History: Using new technologies to enhance teaching and research*, *North Carolina History: A Digital Textbook*, and *U. S. History: Pre-Columbian to the New Millennium* are free textbooks, open and accessible to the public. The primary source documents in these textbooks, though in written form only, can also foster historical empathy. For example, the *Digital History* textbook discusses the horrors of slavery by including this 1876 account of a mother attempting to kill her child rather than permit her to be returned to slavery:

Margaret, the mother of the four children, declared that she would kill herself and her children before she would return to bondage. The slave men were armed and fought bravely. The window was first battered down with a stick of wood, and one of the deputy marshals attempted to enter, but a pistol shot from within made a flesh wound on his arm and caused him to abandon the attempt. The pursuers then battered down the door with some timber and rushed in. The husband of

Margaret fired several shots, and wounded one of the officers, but was soon overpowered and dragged out of the house. At this moment, Margaret Garner, seeing that their hopes of freedom were in vain, seized a butcher knife that lay on the table, and with one stroke cut the throat of her little daughter, whom she probably loved the best. She then attempted to take the life of the other children and to kill herself, but she was overpowered and hampered before she could complete her desperate work. The whole party was then arrested and lodged in jail. (Mintz & McNeil, 2012a, para. 3)

Critical race theory textual analysis. Comparing the numbers of explicit and indirect mentions of race in the traditional and digital U. S. history textbook accounts of slavery reveal no statistical differences. Additionally, comparing the numbers of explicit and indirect mentions of race in the free and publisher-produced digital U. S. history textbook accounts of slavery show no statistical differences. This is surprising given that digital textbooks can contain more diverse and varied documents that include more race-centered content. Also, I did not think that digital textbooks would mirror traditional textbooks in ignoring race in discussions of slavery.

The numbers of explicit mentions of racism in the traditional and digital U. S. history textbook accounts of slavery reveal no statistical difference. The number of explicit mentions of racism in the free and publisher-produced digital U. S. history textbook accounts of slavery, however, reveals that there is a statistical difference. This is not too surprising because the free digital U. S. history textbooks are not confined by state adoption policies or state social studies standards. The authors of the free digital history textbooks enjoy an academic freedom akin to academia. With that in mind, those authors are more willing to address controversial issues like racism in their accounts of slavery. Publisher-produced digital U. S. history textbooks, on the other hand, are still tied to the large publishing companies that cater to the regional history standards of states.

In terms of indirect mentions of racism in the traditional and digital U. S. history textbook accounts of slavery, there is no statistical difference. Additionally, the numbers of indirect mentions of racism in free and publisher-produced digital U. S. history textbook accounts of slavery reveal no statistical difference. Similar to the mentions of race, this finding was surprising because digital history textbooks can include more varied and diverse documents that may discuss racism as it relates to slavery. Also, because traditional U. S. history textbooks and publisher-produced digital U. S. history textbooks are tied to markets and making profits, it makes sense that they are less prone to tackle a controversial issue like racism.

Concerning the number of references to structural and institutional racism in traditional and digital U. S. history textbook accounts of slavery, there was no statistically difference. Additionally, the number of references to structural and institutional racism in the free and publisher-produced U. S. history textbook accounts of slavery was not statistically different. Similar to the discussions of references to race and racism, this is a surprising revelation given that free digital textbooks can offer a larger variety of sources and do not have to cater to particular audiences for profitability.

Comparing the number of references to individual bias and prejudice in the traditional and digital U. S. history accounts of slavery reveal no statistical differences. Likewise, comparing the number of references to individual bias and prejudice in the free and publisher-produced U. S. history textbook accounts of slavery reveal no statistical differences.

Despite the lack of statistical distinction between the textbooks in the study with regards to the CRT textual analysis, there are some notable common themes and differences. The themes are listed below:

1. All twelve of the textbooks have limited use of the actual terms *race* and *racism*.

In actual numbers, *Digital History: Using new technologies to enhance teaching and research* and *North Carolina History: A Digital Textbook* have the most mentions of the term *race*, with 7 and 4, respectively. *Digital History: Using new technologies to enhance teaching and research*, *A Biography of America*, and *HistoryCentral.org: History's Home on the Web* have the most mentions of the term *racism*, with 3 each.

2. Most of the racism present in all of the textbooks is structural and institutional in nature.

Given the emphasis in Critical Race Theory of the structural and institutional nature of racism in the United States, the fact that all of the textbooks in the study reflect that stance represents a major advancement. Still, there is a long way to go because racism is barely mentioned in all of the textbook accounts of slavery.

3. There is tendency to discuss race and racism only in regards to free blacks during the antebellum period.

This tendency is especially the case for the traditional U. S. history textbooks. For example, *America: Pathways to the Present* states:

Schools frequently excluded free black students. In places where African Americans could enroll, such as Boston and New York City, students often were segregated, or separated according to race, and African Americans were placed in inferior schools. Opportunities for women and African Americans in higher education were even more limited. (Cayton et al., 2007, p. 315)

While this discussion of racism is good, it glosses over the role of racism in slavery. One of the free digital textbooks, *A Biography of America*, also addresses the racism against free blacks and indirectly suggests that there is racism in slavery:

The greatest difference between the regions, of course, was slavery. But we must take care not to characterize the North as progressive on the issue of race. Even as slavery was coming under attack, some 200,000 free blacks were losing their rights. Tocqueville, always the acute commentator, observed that "the prejudice of race appears to be stronger in the states that have abolished slavery than in those where it still exists. And nowhere is it so intolerant as in those states where servitude has never been known. (WGBH Interactive for Annenberg, 2000a, para. 1)

One of the publisher-produced digital textbooks, *U. S. History* (Pearson), is an exception to this tendency. In a discussion of racism and slavery, *U. S. History* (Pearson) states:

All classes of whites also believed that they shared a racial bond. Even the poorest whites felt a sense of racial superiority. They also reasoned that southern whites enjoyed an equality of rights impossible in the North, where poor men depended on wage labor from rich mill owners. Southern farmers took pride in their independence. They credited that independence to a social structure that kept slaves at the bottom. (Lapsansky-Werner et al., 2013, p. 238)

This excerpt includes an explicit reference to race, an indirect reference to racism, and a description of the structural and institutional nature of racism. Two free digital textbooks also make the connection between racism and slavery more explicit. *North Carolina History: A Digital Textbook* states:

To control slaves, plantation owners created harsh slave codes. They made slavery hereditary, a condition passed from a mother to her children. To keep the races separate, they also made it illegal for a white person to marry a black person, although this was usually only enforced when a black man tried to marry a white woman. If a slave committed a crime, he or she was punished more severely than a white person. It was also impossible to convict a slave owner of murder; they reasoned that no person would willfully destroy his property. (LEARN NC, 2009a, para. 19)

Digital History: Using new technologies to enhance teaching and research states:

During the 1840s, more and more Southerners defended slavery on explicitly racial grounds. In doing so, they drew on new pseudoscientific theories of racial inferiority. Some of these theories came from Europe, which was seeking justification of imperial expansion over nonwhite peoples in Africa and Asia. Other racist ideas were drawn from northern scientists, who employed an elaborate theory of “polygenesis,” which claimed that Africans and whites were separate species. (Mintz & McNeil, 2012b, para. 5)

Both of these excerpts make clear the structural and institutional nature of racism against African Americans in the development of American slavery.

4. All of the textbooks, with two exceptions, fail to discuss the relationship of the Founding Fathers to racism and slavery.

Digital History: Using new technologies to enhance teaching and research, and *U. S.*

History: Pre-Columbian to the New Millennium address how the Founding Fathers dealt with racism and slavery. Commenting on Jefferson, *U. S. History: Pre-Columbian to the New Millennium* states:

. . . Jefferson's celebration of agriculture disturbingly ignored the fact that slaves worked the richest farm land in the United States. Slavery was obviously incompatible with true democratic values. Jefferson's explanation of slaves within the republic argued that African Americans' racial inferiority barred them from becoming full and equal citizens . . . For all his greatness, Jefferson did not transcend the pervasive racism of his day. (Independence Hall Association, 2012, para. 9, para. 11)

In conclusion, while references to race and racism are made in all twelve of the textbooks in the study, the role of race and racism is still depicted as tangential and peripheral to the textbook narrative accounts of slavery.

Historical narrative approach analysis. Comparing the historical narrative approach scores of traditional and digital U. S. history textbook accounts of slavery reveal no statistical difference. Additionally, the historical narrative approach scores of the free and publisher-produced digital U. S. history textbook accounts of slavery show

no statistical difference. These findings are surprising given the ability of digital history textbooks, through html and hypertext links, to easily add new content to reflect the most recent historical scholarship. Also, the static nature of print textbooks should be a distinct disadvantage to the dynamic nature of digital textbooks in terms of the ability to reflect recent scholarship.

Despite the statistical similarity of historical narrative approach scores between the traditional and digital U. S. history textbook accounts of slavery, there are some advantages of the digital textbooks over the traditional ones. In general, the digital U. S. history textbook accounts of slavery included more social, cultural, and economic details than the concise and generic traditional textbook accounts.

The thirteen key ideas and essential understandings about slavery from the historical narrative approach are discussed below with excerpts mostly from the digital textbooks:

- Africans, as well as European, culture forms an integral part of the U. S. heritage.

While the traditional U. S. history textbooks addressed the West African cultural heritage of the slaves in detail, many of them only spent one or more sentences discussing the interaction between European and African culture. *Digital History: Using new technologies to enhance teaching and research* discussed this interaction in this way:

The American language is filled with Africanisms. Such words as bogus, bug, phony, yam, tote, gumbo, jamboree, jazz, and funky all have African roots. Our cuisine, too, is heavily influenced by African practices. Deep-fat frying, gumbos, and fricassees stem from West and Central Africa. Our music is heavily dependent on African traditions. Sea chanties and yodeling, as well as spirituals and the use of falsetto were heavily influenced by African traditions. The frame construction of houses; the "call and response" pattern in sermons; the stress on the Holy Spirit and an emotional conversion experience--these too appear to derive at least partly from African customs. Finally, Africans played a critical role

in the production of such crops as rice or sweet potatoes that the English had not previously encountered. (Mintz & McNeil, 2012c, para. 2)

- The North American slave trade created enormous profits and the enslaved were treated as commodities.

The traditional textbooks discuss the triangle trade in one to two pages. Again,

Digital History: Using new technologies to enhance teaching and research provides

a fuller social, cultural, and economic analysis. The excerpt below also provides

evidence of the economic and social legacies of slavery:

Although slavery did not create a major share of the capital that financed the industrial revolution (profits from the slave trade and New World plantations added up to about five percent of Britain's national income in the mid-eighteenth century), slaves did produce the major consumer goods that were the basis of world trade during the seventeenth, eighteenth, and nineteenth centuries. These slave-grown products stimulated a consumer revolution, enticing the masses of Britain and then Western Europe to work harder and more continuously in order to enjoy the pleasures of sugar, tobacco, rum, coffee, and eventually, cotton clothing. It was New World slave labor that ushered in the consumer culture we know today. In addition, the slave trade provided stimulus to shipbuilding, banking, and insurance; and Africa became a major market for iron, textiles, firearms, and rum. (Mintz & McNeil, 2012d, para. 3)

- American democracy was predicated on American slavery. The development of equal rights among white men was based on stripping rights away from African slaves.

While most of the traditional textbooks dealt with this issue indirectly through a

discussion of Bacon's Rebellion, the digital textbook, *U. S. History: Pre-Columbian to*

the New Millennium tackles the issue head on:

This democratic triumph, however, also had sharp limitations that today seem quite shocking. At the same time that state legislatures opened SUFFRAGE (that is, the right to vote) to all white men, they simultaneously closed the door firmly on white women and free African Americans. This movement was especially disappointing since it represented a retreat from a broader sense of political rights

that had been included in some early state constitutions. (Independence Hall Association, 2012b, para. 5)

- The significance of the Revolution, to Blacks, goes beyond participation in combat.

The traditional textbooks primarily discuss Chrispus Attucks and Lord Dunmore's Proclamation. The digital history textbooks provide additional content and details about African Americans during the Revolutionary War period. For example, *North Carolina History: A Digital Textbook* states:

Aroused perhaps by British promises of freedom, slaves in Pitt and Beaufort counties tried to break the chains of bondage. In July 1775 the Pitt County Committee of Safety discovered a slave plot for an insurrection just before it was to start. A posse of one hundred men captured the suspected leaders and jailed more than forty blacks. The same month other blacks were captured along the Pitt-Craven county line. (LEARN NC, 2009b, para. 7)

- Slavery and racism are connected in the history of the United States.

While most of the traditional and digital textbooks do not include this idea, *A Biography of America*, a digital textbook, states:

And slavery is a system built on the fundamental premise that the worst white man can own the best black man. And that's wrong. And even the most fanatic John C. Calhoun supporters, in their heart, knew that. It was wrong, morally wrong . . . Can you imagine the United States going into the 20th Century with slavery intact? Just leave aside that there had been a Civil War or that..." (WGBH Interactive Media, 2000b, para. 14)

- Slavery was inherently cruel and inhuman.

On this point, both traditional and digital textbooks did well conveying this idea.

American Anthem, a traditional U. S. history textbook stated that: "Slaveholders and dealers routinely separated children from their parents, brothers from their sisters, and husbands from their wives, selling them to different slaveholders" (p. 286). The main difference in the digital textbook accounts is that at least two of the free digital textbooks,

Digital History: Using new technologies to enhance teaching and research and *North Carolina History: A Digital Textbook* used a primary source document to also convey the point.

- While racism was prominent in the United States during slavery, anti-racist ideas and activities were present.

Most traditional and digital textbooks made this point well. However, *Academic American History*, a digital textbook, was the only book to make an explicit connection between the growth of anti-racist ideas and the growth of a defense of slavery:

Although one cannot fault the abolitionists for their desire to see slavery ended, it has been claimed that their agitation did have a negative effect on the overall circumstances of slavery. By declaring that slave owners were unchristian sinners, if not downright devils, they placed the Southern slave owners in a difficult position. They either had to agree with the charges and give up their slaves, which a few did, or they had to come to the defense of slavery in a way that had until then not been necessary. In 1800 there were few Southerners who would have claimed that slavery was a good thing. But by 1850, after decades of agitation, the South had begun to argue that the institution was a positive good. (Sage, 2010, para. 75)

- African Americans covertly resisted slavery in many different ways, including building families, communities, and religious institutions.

Most traditional and digital textbooks did well on this point. *American Anthem*, a traditional textbook, states that “[r]eligion was a major source of comfort for enslaved people . . . Drawing on their rich African oral tradition, enslaved people found pleasure in storytelling. Songs, too, provided inspiration and a brief respite from their hard lives”. (Ayers et al., 2008, p. 286).

- Rebellion and slavery went hand in hand.

The traditional and digital textbook accounts of slavery discuss this issue well. But, the digital accounts of slavery, particularly *Digital History: Using new technologies to*

enhance teaching and research and *North Carolina History: A Digital Textbook*, include many primary source documents from the rebellions. For example, *North Carolina History: A Digital Textbook* includes four newspaper articles, one excerpt from a book, one excerpt from a diary, one personal letter, and one poem from the time period about Nat Turner's rebellion in 1831.

- Slavery was a national, rather than just a regional institution.

Most of the traditional textbooks in the study focus on slavery in the southern region of the United States. While the digital textbooks do the same, there are some exceptions.

For example, *Digital History: Using new technologies to enhance teaching and research* states:

In the North, slaves were used in both agricultural and non-agricultural employment, especially in highly productive farming and stock-raising for the West Indian market in southern Rhode Island, Long Island, and New Jersey. Slaves not only served as household servants for an urban elite--cooking, doing laundry, and cleaning stables--they also worked in rural industry, in salt works, iron works, and tanneries. (Mintz & McNeil, 2012e, para. 2)

- Free blacks during the antebellum era faced severe political, economic, and social discrimination.

Both traditional and digital textbooks convey this point well. For example, *America:*

Pathways to the Present, the traditional textbook, states:

Free blacks endured poorer living conditions and more severe discrimination than slaves who were identified with specific white households. Free blacks also faced limited rights compared to whites. They could not vote, testify in court against whites, or marry whites. (Cayton et al., 2007, p. 87)

- The economic and social legacies of slavery have national and global consequences in contemporary society.

This point was the weakest of all the points in all twelve of the U. S. history textbooks in this study. *Academic American History* attempts to convey the economic and social legacies of slavery in the following excerpt:

It is distressing to note that even in the early 21st century there are those who would make the case that in its time slavery wasn't all that bad. And while it is true that people of African descent in America were not the only ones to suffer under the yoke of slavery, it must be said that in a nation founded on the principle that all men are created equal, and on Christian principles, the notion that slavery was a positive good is unsustainable. (Sage, 2010, para. 54)

- The U. S. Civil war was not only a war to preserve the Union, but it was a part of an African American liberation movement.

While both traditional and digital textbooks convey this point well, it was *A Biography of America*, a digital textbook, that express this point most clearly and concisely:

The Emancipation Proclamation freed slaves only in the unconquered portions of the Confederacy. This made it look like an extremely ineffective document. But there was dynamite in it. It turned the Union Army into an army of liberation. From now on, wherever it went slavery was dead. (WGBH Interactive for Annenberg Media, 2000c, para. 14)

Webometrics analysis. One of the most surprising findings of this analysis was discovered before the analysis began. None of the publisher-produced digital U. S. history textbooks contain links directly related to slavery. Instead, those digital textbooks link to generic and broad sites like “The United States Supreme Court,” “The White House,” “The United States Department of State: Office of the Historian,” and “The United States Senate.” Perhaps it is because of copyright issues and the for-profit motivation of the publishing companies that their digital textbooks cannot connect to the larger Internet. For example, since the publishing companies charge a fee for use of their digital textbooks, if those textbooks use other resources on the Internet, the companies would be obligated to share the profits with the owners of those other Internet resources.

By closing the system in their digital history textbooks, the publishing companies keep all profits within the company.

This design of publisher-produced digital textbooks does not take advantage of the accessibility to multiple and varied primary sources that digital history affords. In fact, by eliminating the great repository of online primary sources and the connectivity of hypertext links, these digital textbooks are just the traditional textbooks on a computer screen.

In addition to these flaws in publisher-produced digital textbooks, the webometrics analysis of the six free digital textbooks reveals some disappointing and promising trends. Only one of the textbooks, *North Carolina History: A Digital Textbook*, included a large number of internal links. While this finding is disappointing, that particular textbook is a shining example of the use of hypertext links to support student learning. *North Carolina History: A Digital Textbook* contained many links within passages that connected to a glossary at the bottom of the page. The textbook also included highlighted words and phrases that would link to either a footnote at the bottom of the page or a pop-up window explanation of the word or phrase. The textbook also had a “Related Topics” category on the right side of each page connecting readers to other textbook pages about similar topics. In addition, the textbook provides links for every image used that connects readers to copyright and credit information along with brief annotated notes about the image.

Though only one of the free digital textbooks takes advantage of internal links, most of the textbooks make use of external links. For example, *U. S. History Pre-Columbian to the New Millennium* uses external links extensively to add more in-depth

details and analysis to the accounts of slavery. In the chapter entitled, “African Americans in the British New World,” there is an external link to audio clips of WPA slave narratives and a link to “A Slave Ship speaks – the wreck of Henrietta Marie.” In the chapter on the Middle Passage, there is a link to the autobiography of an African Prince, an art gallery with works about the Middle Passage, an analysis of the slave trade, and an analysis of the trans-Atlantic economy in 1800. Clearly, *U. S. History Pre-Columbian to the New Millennium* takes advantage of the many online resources and documents about slavery. *Digital History: Using new technologies to enhance teaching and research* uses external links to connect to a PBS website entitled, “John Brown’s Holy War,” the PBS website entitled “Africans in America: The Terrible Transformation,” the “African American Mosaic” website, and the National Archives site entitled, “Teaching with Documents: The Fight for Equal Rights: Black Soldiers in the Civil War.”

In addition to the extensive use of external links from the free digital history textbooks, there were also promising trends related to the number of backlinks to the textbooks. Both *Digital History: Using new technologies to enhance teaching and research* and *U. S. History: Pre-Columbian to the New Millennium* had the most number of backlinks from educational sources. The historians contributing to the textbook as well as the professional design of the webpage may contribute to its popularity as an academic source. Figures 1 and 2 below are screen captures of the two textbooks.

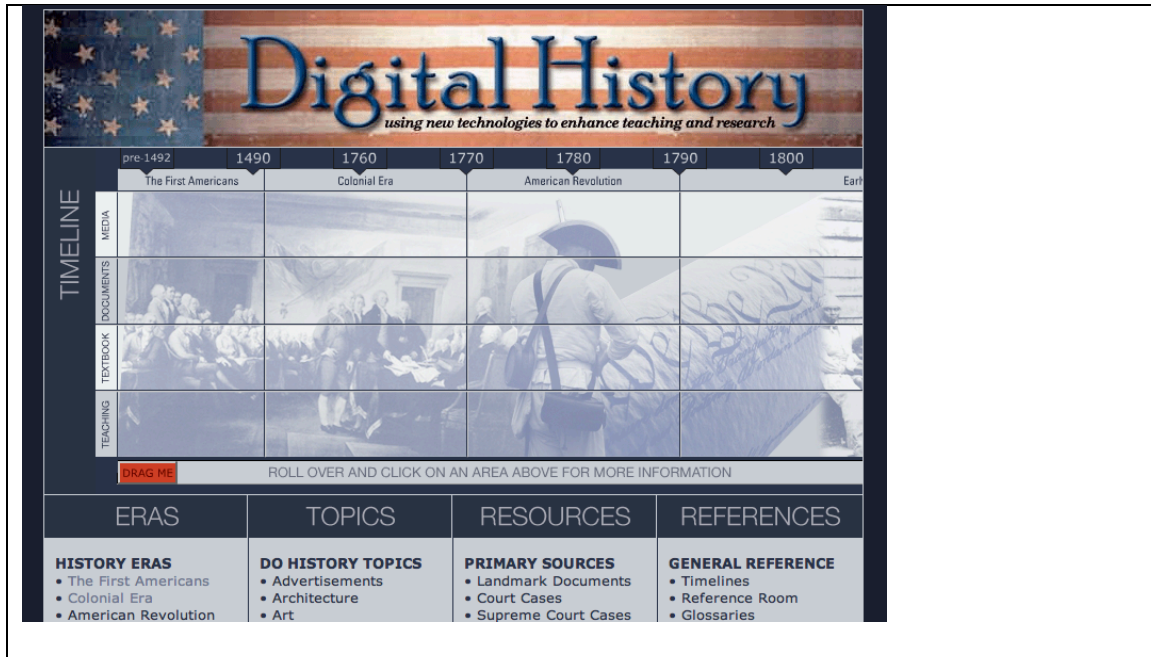


Figure 1. The “front page” of *Digital History: Using new technologies to enhance teaching and research* textbook

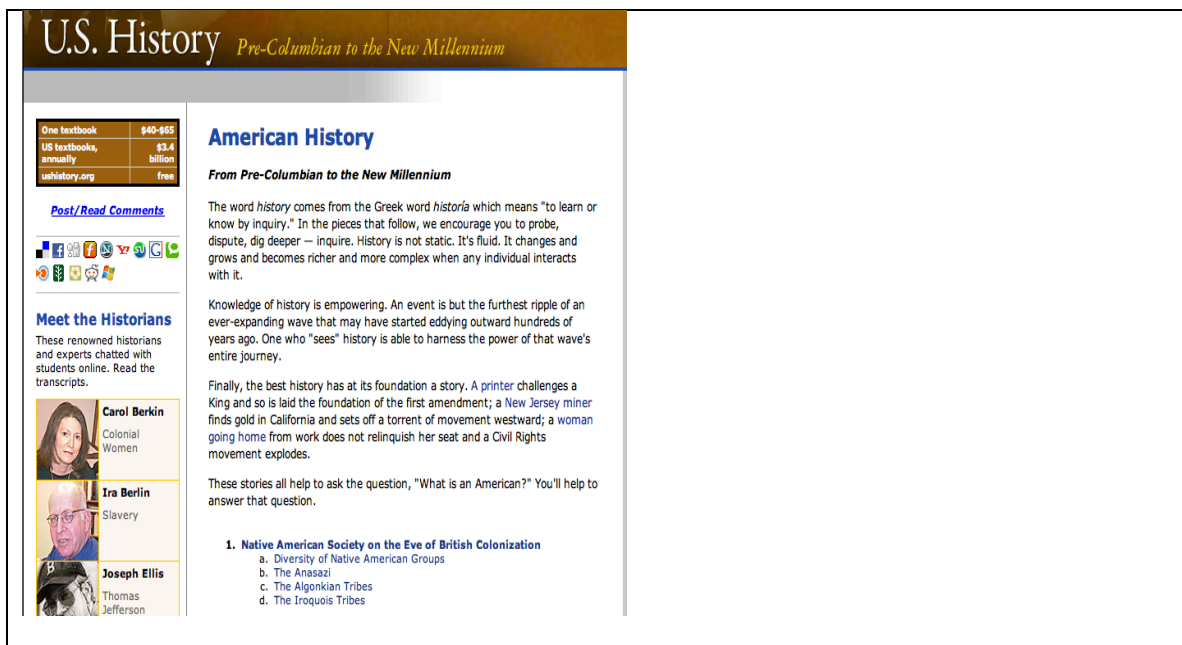


Figure 2. The “front page” of the *U. S. History: Pre-Columbian to the New Millennium* textbook

The least cited free digital U. S. history textbook is *HistoryCentral.org: History's Home on the Web*. Perhaps the pop-up ads and bright colors are a distraction to potential readers. Additionally, the textbook is very challenging to navigate. Figure 3 is a screen capture of the *HistoryCentral.org* textbook.



Figure 3. The “front page” of the *HistoryCentral.org: History's Home on the Web* textbook

Image analysis. The total number of images in the traditional and digital U. S. history textbook accounts of slavery is not statistically different. Additionally, comparing the total number of images in the free and publisher-produced digital textbook accounts of slavery reveal no statistical difference. The finding may be somewhat misleading since I only counted the slavery-related images in the digital textbooks that

were directly within the textbook historical narrative. For example, if a textbook page contained a link to an external web page with more slavery-related images, those additional images were not counted. Therefore, the number of slavery-related images in the free digital textbooks (as opposed to the publisher-produced digital textbooks that have no external links) could be higher.

The number of captions accompanying images in the traditional and digital U. S. history textbook accounts of slavery is not statistically different. Similarly, the number of captions accompanying images in the free and publisher-produced digital U. S. history textbook accounts of slavery is not statistically different. This is surprising given that digital textbooks have more space, though not infinite amounts, and can therefore include many captions and annotations to its images than traditional books.

Additionally, there is no statistical difference between the number of discussions of an image in traditional and digital U. S. history textbook accounts of slavery. There is also no statistical difference between the number of discussions of an image in free and publisher-produced digital U. S. history textbook accounts of slavery. Lastly, the number of mentions of an author of an image in traditional and digital U. S. history textbook accounts of slavery is not statistically different. Likewise, the number of mentions of an author of an image in free and publisher-produced digital U. S. history textbook accounts of slavery is not statistically different. As stated earlier, it is surprising that digital U. S. history textbooks do not have higher numbers of images, captions, discussions of images, and mentions of authors of images because of the greater availability of space on the online page.

Despite the statistical similarity in numbers of images and use of images between the traditional and digital U. S. history textbooks, the digital textbooks include longer citations and annotations, thus providing more historical context for the images used. For example, in *Digital History: Using new technologies to enhance teaching and research*, the following textbook annotation is included for the image of the drawing and plan of the British slave ship, “Brookes”:

The ‘Brookes’ after the Regulation Act of 1788, was allowed to carry 454 Slaves, She could stow this number by following the rule adopted in this plate. Namely of allowing a space of 6 ft. by 1 ft. 4 in. to each man; 5 ft. 10 in. by 1 ft. 4 in. to each woman, & 5 ft. by 1 ft. 2 in. to each boy, but so much space as this was seldom allowed even after the Regulation Act. It was proved by the confession of the Slave Merchant that before the above Act the Brookes had at one time carried as many as 609 Slaves. This was done by taking some out of Irons & locking them spoonwise (to use the technical term) that is by stowing one within the distended legs of the other. Figure 1: Longitudinal Section. Fig. 2: Plan of lower deck with the stowage of 292 slaves, 130 of these being stowed under the shelves as shewn in figure B & Figure 3. Fig. 3: Plan shewing the stowage of 130 additional slaves round the wings or sides of the lower deck by means of platforms or shelves (in the manner of galleries in a church) the slaves stowed on the shelves and below them have only a height of 2 feet 7 inches between the beams and far less under the beams. See fig. 1. Fig. 4: Cross section at the poop. Fig. 5: Cross section amidships. Fig. 6 Lower tier of slaves under the poop. Fig. 7: Shelf tier of slaves under the poop. (Mintz & McNeil, 2012f, para. 1)

One exception to this rule is the textbook inclusion of the painting, “The Old Plantation” (1790). The traditional textbook, *American Anthem*, includes the painting with the following caption:

This watercolor painting titled *The Old Plantation* was created by an unknown artist. It shows enslaved Africans from South Carolina around 1790. The image contains numerous examples of African cultural traditions that carried over to the colonies. (Ayers et al., 2008, p. 97)

The textbook also labels and provides explanations for the headscarves, brooms, and musical instruments in the painting. The digital textbook, *Digital History: Using new technologies to enhance teaching and research* includes the painting with no annotation.

Interactive images. Visual sources in textbooks should connect images to the historical narrative, include discussions of the history of the image, and invite students to participate in the image on the page (Masur, 1998). The traditional textbooks in the study accomplished this goal with a few of their images. One notable image, in *America: Pathways to the Present*, is a large one-page map of the United States with routes on the Underground Railroad illustrated and famous depots described. The depots are labeled on the map as follows:

1. John Brown led fugitives on a midwinter journey from Missouri to Canada via Chicago;
2. Levi Coffin, a Quaker, helped more than 3,000 slaves to escape [Cincinnati, OH];
3. Harriet Beecher Stowe maintained a depot in Walnut Hills [Cincinnati, OH];
4. The home of Presbyterian minister John Rankin in Ripley was one of the most active depots [Ripley, OH];
5. Seminole Indians in Florida offered safe havens for escaped slaves;
6. Dorchester County was the birthplace of Harriet Tubman. She rescued about 300 slaves on 19 trips to the South [Dorchester County, Maryland];
7. Portuguese fishermen and the Shinnecock Indians helped transport escaped slaves from Long Island to New England;
8. Frederick Douglass established a print shop in Rochester that became a depot [Rochester, NY]. (Cayton et al., 2007, p. 309)

The presence of labels and clear descriptions on the map provide the reader with useful supports for learning and engaging with the material. With the affordances of digital history, digital history textbooks can provide much more with its images.

Digital U. S. history textbooks, through interactive images, have the potential to engage students in the learning and doing of history like never before. Internet texts can offer more than print and two-dimensional graphics, but can integrate symbols, icons, three-dimensional graphics, virtual reality environments, audiovisual enhancements, animations, and other multimedia options (Leu et. al., 2004). These new forms, presentations, and combinations of texts and images challenge our traditional

understandings of how information is represented and shared with others (*ibid.*). For this reason, I was initially excited about what I would find in my review of digital U. S. history textbook accounts of slavery.

Unfortunately, my excitement quickly waned when I noticed that of the nine digital textbooks analyzed, only two of them, *United States History and Geography* (McGraw-Hill) and *North Carolina History: A Digital Textbook* used interactive images. *North Carolina History: A Digital Textbook* used a google map of directions from Person County, North Carolina to Philadelphia, Pennsylvania to describe the route of North Carolina enslaved person, James Curry, as he escaped from slavery in 1837. The caption beneath the map reads, “Locations mentioned by James Curry are marked on this map. We don’t know the exact route he took, but the roads from Petersburg, Virginia, to Chambersburg, Pennsylvania, probably followed about the same route they do today” (LEARN NC, 2009c, para. 1).

The *U. S. History & Geography* (McGraw-Hill) digital textbook was the only other textbook in the study that used interactive images. One notable interactive image was a facsimile of a runaway slave advertisement from 1860. The advertisement offers a \$100 reward for “a Negro boy named Sandy, about 35 years of age. . . “ (Appleby et al., 2013, par. 1). The interactivity of the image allows the reader to click on one of three buttons to learn more about the conditions of the enslaved. One button reads, “In 1850, only about 1000 out of 3 million enslaved people attempted the escape to freedom. For enslaved people who might never have traveled more than a few miles away from a plantation, escape was a very dangerous plan” (*ibid.*, para. 2). Another button reads, “In 1860 one enslaved person costs the equivalent of about \$130,000 in today’s dollars. This

represented a huge investment for slaveholders, which encouraged them to offer generous rewards for the return of runaways” (*ibid.*, para. 3). The final button with text read, “The large investment is one main reason that very few Southerners owned people in slavery. The ones that did, however, were wealthy and influential in politics” (*ibid.*, para. 4).

Figure 4 is an illustration of this interactive image.

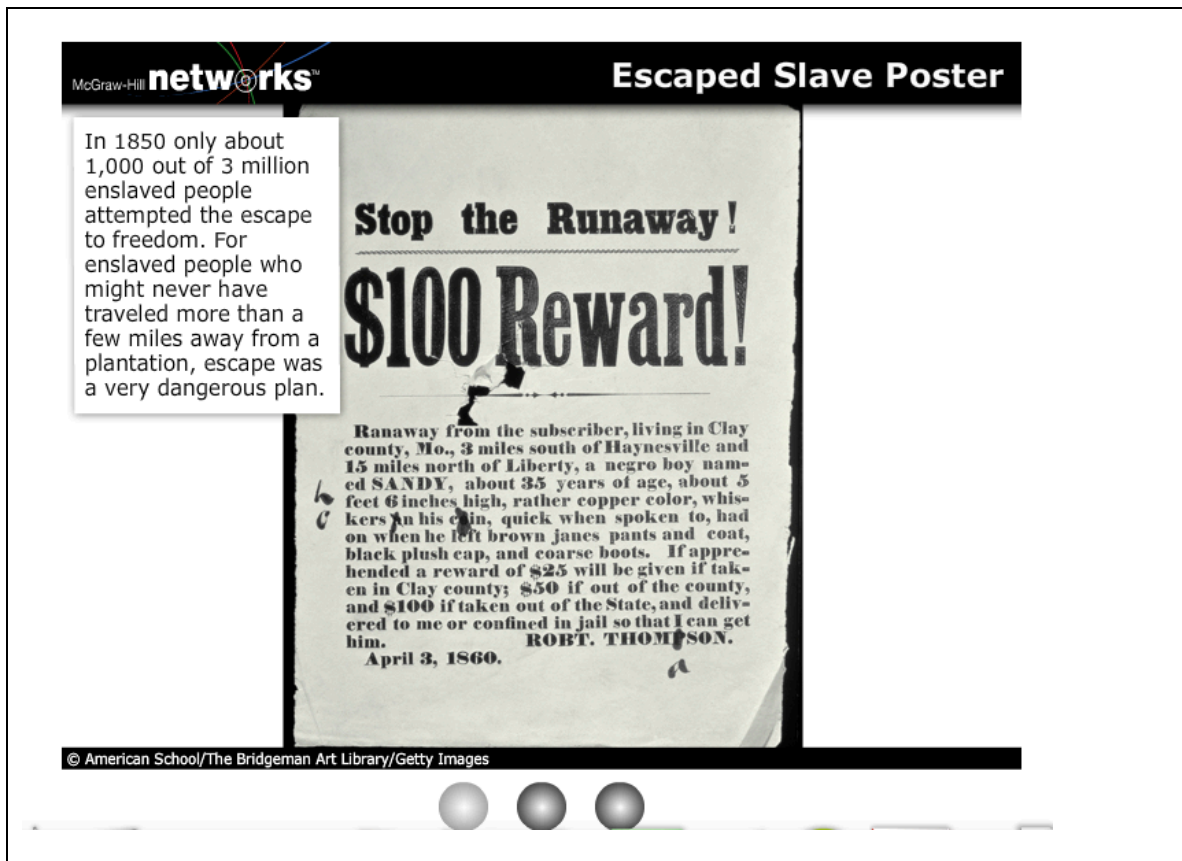


Figure 4. An interactive image in *U. S. History & Geography* textbook

Multimedia message design analysis (videos). Beyond the static presentation of images and text, the digital environment facilitates the communication of messages in a variety of formats including mixing print text with photography, videos, music, links to other pages, and graphics. This multimodality is not just the domain of youth in schools, rather it is the habitation of all people across generations in school, work, personal, and

civic activities of life in the twenty-first century (Miller, 2010). With that in mind, literacy in the digital and high-tech world of this century requires different practices and mindsets. Lankshear and Knobel (2007) argue that these new literacies involve the two related elements of “new technical stuff” and “new ethos”. The new technical stuff “can be employed, to do in new ways, the same kinds of things we have previously known. Equally, however, they can be integrated into literary practices that in some significant sense represent new phenomena” (p. 9). Albers, Vasquez, and Harste (2008) sum up new technical stuff by stating that it “doesn’t just allow us to technologize our existing practice, it creates space for us to move beyond where we are now to allow for greater participation, collaboration, and distribution of knowledge—to do things that were not possible with our previous level of technology” (p. 5). Lankshear and Knobel’s (2007) “new ethos” is the more informal, collaborative, and participatory aspect of the presentation of information.

Only four of the nine digital textbooks in this study used videos-- *A Biography of America, Digital History: Using new technologies to enhance teaching and research, The Americans* (Holt-McDougal), and *United States History and Geography* (McGraw-Hill). The videos used in the digital textbooks in this study do not reflect the new technical stuff or the new ethos of new literacies. All of the videos feature prominent historians lecturing about slavery accompanied by the panning and zooming of still photographs or political cartoons from the time period and period-specific music playing in the background. While this formula worked for Ken Burns, it is outdated for the 21st century. As a medium of communication in this century, the videos should emphasize expression, participation, social networking, and various ways of meaning making

(Miller, 2010). Chhada and Macias (2013) discuss ways that historical filmmaking can document and reflect modern modes of communication. The immediacy and uncertainty of a historical moment can be caught in films by applying animation, which allow tweets, Instagram photos, and texts to accompany a video presentation (*ibid.*).

Discussion of Results

The most clear and basic conclusions of this study is that digital U. S. history textbook accounts of slavery do not take advantage of the affordances of digital history and continue to perpetuate lies, distortions, and omissions. In terms of the affordances of digital history, “[t]he situation is a lot like the televised radio shows that were produced at the birth of TV: new media, old mentality” (Turkel, Kee, & Roberts, 2013, p. 63). In fact, two of the three publisher-produced textbooks, *The Americans* by Holt-McDougal and *United States History* by Prentice Hall, are scanned, electronic versions of traditional textbooks. The digital history affordances of increased accessibility of primary source documents (Lee, 2002), multiple perspectives of historical narratives (Ayers, 1999), flexibility in presentation forms (Cohen & Rosenzweig, 2005), and integration of formerly marginalized historical accounts (Bolick, 2006) exists as untapped potential in the digital U. S. history textbooks. Despite this “sleeping giant” (Martorella, 1997) of technology in the textbooks, the digitization of the historical narrative gives the reader the opportunity to search, browse, and retrieve data, along with the ability to make connections that otherwise may have gone unnoticed. This encyclopedic property of the web can make historical research faster and easier by putting the immense, seemingly limitless, library of information at the fingertips of history students and teachers through online searchable databases (Murray, 1997).

Digital history textbooks, however, are not encyclopedias and, in terms of accounts of slavery, are continuing to offer limited and distorted narratives. Because the digital U. S. history textbooks mirror traditional textbooks, it is no wonder that the omissions and distortions continue. Driven by market forces and profit, textbook publishing companies make historical content a low priority. In fact, the millions of dollars that publishing companies earn from popular textbooks is not due to content, but rather to design, accompanying instructional activities, and discounts and incentives offered to school districts and states (Lavelle, 2009). Therefore, textbook content for slavery, which could be controversial and contentious, is often whitewashed and sanitized in order to avoid upsetting potential readers, while simultaneously attempting to appeal to the most readers. This conclusion about digital U. S. history textbook narratives of slavery is consistent with past research findings that history textbook accounts of slavery are diluted and superficial to avoid controversy (Cornbleth & Waugh, 1995).

Digital U. S. history textbooks and the master narrative of slavery. The digital U. S. history textbooks in this study mostly reflect, but sometimes contest the master narrative of slavery. According to Aldridge (2006), master narratives “refer to a dominant and overarching theme or template that presents the literature, history, or culture of a society” (p. 681). He adds that “when master narratives dominate history textbooks, students find history boring, predictable, or irrelevant” (*ibid.*, p. 663). The master narrative of slavery, with few exceptions due to the affordances of digital history, remained largely unaltered in the digital U. S. history textbooks.

The erroneous master narrative of slavery. As previously stated in the literature review, Swartz (1992) found that K-12 U. S. history textbook accounts of slavery follow

a script, which takes an “individualistic, biographical approach” (p. 343) without addressing “underlying issues such as purpose, cause and consequence of events and systems such as slavery” (*ibid.*). She further added that textbook accounts of slavery leave the traditional story of race relations unchanged and intact (*ibid.*). Loewen’s (1995) seminal study of U. S. history textbooks revealed that though the textbooks “no longer sugarcoat how slavery affected African Americans, they minimize white complicity in it . . . [and] present slavery virtually as uncaused, a tragedy, rather than a wrong perpetrated by some people on others” (p. 145). Sadker, Sadker, and Long (1997), in their textbook analysis, found that history textbooks tend to relegate women and minorities to the outer borders of the historical narrative. Consequently, in the textbook accounts of slavery, the experiences and voices of the enslaved would be marginalized or silenced. In addition to the lack of a complex analysis of slavery (Swartz, 1992), the absence of discussions of race and racism (Loewen, 1995), and the silencing of the experiences and voices of the enslaved (Sadker, Sadker, & Long, 1997), traditional textbook narratives of slavery have also been devoid of recent historical scholarship (Kolchin, 1998). In his research on depictions of slavery in college-level, United States history textbooks, Kolchin (1998) found that “texts [should] do more to convey to students the excitement with which historians have reinterpreted and continue to reinterpret the nature of American slavery” (p. 1436), as well as show “how historians go about constructing and reconstructing the past on the basis of historical evidence, and how absorbing such historical creation can be” (*ibid.*). In his analysis of the textbooks, Kolchin (1998) also found that “slavery as an issue in American history looms much larger . . . than slavery itself” (p. 1426). In other

words, the political, social, and economic factors contributing to, and resulting from, slavery are discussed, but the conditions and experiences of slavery are largely ignored.

The effects of digital U. S. history textbooks on the master narrative. Despite the potential connection to primary source documents and recent historical scholarship, digital U. S. history textbooks failed to change the master narrative of slavery. As aforementioned, there are no statistical differences between the total number of primary sources in traditional and digital U. S. history textbook accounts of slavery, but two of the free digital textbooks include primary source documents that complicate and problematize the clean version of U. S. slavery. *Digital History: Using new technologies to enhance teaching and research* includes primary source documents that convey the Founding Fathers' challenges with slavery. A 1786 letter from future president, George Washington, to John Francis Mercer states:

. . . I never mean (unless some peculiar circumstances should compel me to it) to possess another slave by purchase; it being among my first wishes to see some plan adopted by the Legislature by which slavery in this Country may be abolished by slow, sure and imperceptible degrees. (Mintz & McNeil, 2012g, para. 1)

An 1802 letter from President Thomas Jefferson to Rufus King states that the enslaved people involved in Gabriel Prosser's rebellion in Richmond, Virginia in 1800 were fighting for their freedom and should not be punished with death, but relocated to Sierra Leone (Mintz & McNeil, 2012h). Even though these documents seem to be apologetic in presenting the Founding Fathers' struggles with slavery, most traditional U. S. history textbooks (including the three traditional U. S. history textbooks in this study) include master narratives of slavery that disregard the roles of the Founding Fathers. As a further deviation from the master narrative of slavery, *North Carolina History: A Digital*

Textbook includes primary source documents that discuss the role of racism in the development of slavery. An excerpt from North Carolina v. Mann (1829) included in the textbook, discusses a ruling of the North Carolina state court establishing the absolute right of white masters over black slaves, even when the “masters” have only temporarily hired a slave (LEARN NC, 2009d). It is clear from this court decision that the economic status of the poor white slave hirer, John Mann, was less important than his race in establishing his power over black slaves. This explicit presentation of the racism of U. S. slavery was a departure from the master narrative of slavery.

Linking to the past: still a prisoner of the linear model. Not only was the lack of variation in content of primary source documents a disappointment in the digital U. S. history textbook accounts of slavery, but the positioning of the primary sources within the narrative was also disappointing because of the limited use of hypertext links. If used effectively, hypertext links in the historical narrative could “weave text and source together more tightly. It could use images or maps as organizing structures, as portals into the narrative, rather than merely as illustrations. It could connect readers to relevant parts of the analysis from different directions with different purposes” (Ayers, 1999, para. 17). Additionally, the effective use of hypertext links would demonstrate the complexity of history by allowing readers to see different perspectives and interpretations on the same event. According to Robertson (2006), “[l]inks can connect material ‘external’ to a work—say, commentary on it by another author or parallel or contrasting texts—as well as within it, and thereby create text that is experienced as non-linear, or, more properly, as multilinear or multisequential” (p. 444). With few exceptions, in all of the digital U. S. history textbooks in this study, the hypertext links were employed in a one-

directional path to single documents. In this way, hypertext links were only a path to a text (*ibid.*), rather than a method of demonstrating historical thinking. As aforementioned earlier in the study, hypertext links can make visible the connections between historical evidence and historical arguments. However, when primary sources supplement the historical narrative rather than being integrated into it through links, the narrative can remain simple and linear with little facilitation of historical thinking (Townshend, 2002).

Using hypertext links to break free from the linear model of history reflects historical thinking, certain cultural ways of learning, and the interconnectedness of learning communities. Links allow intertextual weaving (Ayers, 1999) that provide contextual connections to help students understand a documents' meaning in the context of the range of documents in the digital textbook site. Additionally, hypertext links, through their multi-directional and non-linear placement, can mirror the many perspectives and extemporaneity of different cultural approaches to the study of history.

According to Rommel-Ruiz (2006):

Like African American oral slave culture, hypertext approaches to history are improvisational and polyrhythmic . . . [but] more than validating the ways African Americans have been telling their history for centuries, hypertext and the Internet offer ways for people to think about a past that reinforces a community of interconnected, but different, voices. (p. 467)

North Carolina History: A Digital Textbook is the one digital textbook in this study that uses both internal and external links to connect documents, annotate anachronistic language, provide contextual information about authors and texts, and provide lesson plans and study guides from a community of learners. For example, a page in the textbook on newspaper advertisements for slaves includes transcriptions of excerpts from ads in an 1837 North Carolina newspaper, a scanned version of the newspaper page to

show the layout of the paper and accompanying advertisements, internal links to explain nineteenth century phrasing, an external link describing how to read newspaper advertisements, questions to consider related to the advertisements, an external link to a learner guide explaining how to understand advertisements in historical newspapers, three related lesson plans created by other North Carolina teachers, and related topics that connect this textbook page to other pages throughout the book (LEARN NC, 2009e).

The illusion of inclusion. Just as the digital U. S. history textbooks in this study miss the opportunity to fully use hypertext links in their accounts of slavery, they also miss opportunities to explicitly address race and racism. The section heading “The Illusion of Inclusion” borrowed from Vasquez Heilig, Brown, and Brown’s 2012 study of Texas state social studies standards speaks to the danger of assuming the inclusion of race and racism in textbooks when, in reality, those terms and ideas are not there. Given the democratizing discourse of digital history, it may be easy to conclude that digital U. S. history textbook accounts of slavery include marginalized perspectives of African Americans and discussions of race and racism. But, as noted earlier, the marginalized accounts are not included through the primary source documents. Additionally, the digital U. S. history textbook accounts of slavery fail to explicitly deal with race and racism along with its development. This is disconcerting because “. . . White, middle-class teachers—who make up the majority of practicing and preparing teachers in the United States [Sleeter, 2008]—often resist addressing the topic of race and racism, a phenomenon related to their privileged and racially isolated social location [Brown & Brown, 2010; Epstein, 2009]”. (as cited in Vasquez Heilig, Brown, & Brown, 2012, p. 420).

Also, Vasquez Heilig, Brown, and Brown (2012) argue that addressing race and racism in U. S. history content is important because:

[s]tandards (i.e. textbooks) present the context whereby race knowledge becomes codified and defined for K-12 students and in so doing helps normalize how race is understood in the classroom . . . Second, the manner in which race and racism are rendered through the standards (i.e. textbooks) . . . affects the development of cultural memory for both students of color and White students and the ways they make meaning of race and racism in their own daily lives. (p. 408)

The stakes for K-12 history students are extremely high. It becomes more challenging to make content changes to reflect the marginalized perspectives of African Americans and the role of race and racism in slavery when the assumption of democratization prevails. This research study points to the danger of unquestioned acceptance of digital U. S. history textbooks.

CRT and digital history textbooks. As an interpretive framework, CRT challenges dominant and hegemonic history textbook narratives emphasizing race neutrality, objectivity, and color-blindness. Additionally, it explains the limited discussions of race and racism in textbooks as structural problems related to broader issues of racism in educational curriculum and policy (Vasquez Heilig et al., 2012). While I do not believe that the digital and traditional U. S. history textbooks in this study are racist, I do believe that the framing of the narratives of slavery, by not discussing the development of race and racism, perpetuate White privilege in the narrative and marginalize African American experiences. The traditional and digital textbook narratives of slavery also privilege White students' interpretive frameworks and historical ways of knowing in the U. S. national narrative (Epstein, 2009). For example, in a study of White and African American students' constructions of United States history, "[w]hite students constructed positive views of national history and identity, ones in which the

nation progressively included greater numbers of people into a democratic society based on ever expanding or equal opportunity and rights” (*ibid.*, p. 65). In the same study, African American students “attributed racial conflict and struggle, rather than progressive nationalism, as the means for inclusion, saw racism as ongoing and institutional rather than exceptional or individual and identified with blacks as a people rather than the nation as an entity devoted to democracy” (p. 70). The dominant narrative of slavery in the traditional and digital U. S. history textbooks in this study aligns more closely with the White students’ national history understandings.

With this in mind, I believe the CRT framework exposes at least two explanations for the lack of discussions of race and racism in textbook narratives of slavery. The CRT tenet of “Whiteness as property” (Ladson-Billings & Tate, 1995) provides the first explanation in that textbook narratives are considered the intellectual property and exclusive domain of Whites. So, to be non-White and included in the narrative is to be “mentioned” (Foster, 2006) on the periphery of the main narrative. The second explanation is related to the CRT tenet about the myth of colorblindness. In this view, the traditional and digital textbook narratives of slavery are not racist, but are race-less. As such, the narratives continue to alienate the race-conscious collective stories, ways of knowing, and experiences of African American students.

CRT, ideology, and textbook narratives of slavery. Ideologically, U. S. history textbook narratives, through the framing of historical actors and actions, confer power and legitimacy--both real and symbolic--to certain social, economic, and political actions of majority and mainstream groups (Anyon, 2011; Bourdieu, 1973). In this study of textbook accounts of slavery, this ideological empowerment of majority groups and

disempowerment of the marginalized is clearly evident in the depiction of the first sixteen U. S. presidents' views towards slavery and racism. Using the CRT framework to analyze the depictions, I exposed the textbooks' silence. By ignoring content related to the ways U. S. presidents supported or grappled with slavery and racism, the textbooks are implicitly affirming silence and penalizing discussion of those issues. However, if the "white gloves" are taken off and the U. S. presidents' stances on slavery and racism are explicitly discussed, then racial equality and justice can become more legitimate aspects of history and social studies curriculum. For example, Loewen (1995) in a comment about the importance of examining Abraham Lincoln's racism and egalitarianism, contends that "if Lincoln could be racist, then so might the rest of us be . . . [a]nd if Lincoln could transcend racism, as he did on occasion, then so might the rest of us" (p. 154). Considering this analysis, I believe that the ideological and real power of racial privilege in textbook narratives, curriculum, and society at-large, has to be acknowledged before it can be overcome.

To be seen and not heard. As stated earlier in this chapter, the digital U. S. history textbooks in this study do not include more slavery-related images than traditional textbooks. Given the digital history affordance of flexibility in presentation forms (Cohen & Rosenzweig, 2005) and the lack of digital space constraints, an illusion of digital textbooks providing a "visual link to the historical experience of slavery" (Best, 2011, p. 151) can easily be created. While both traditional and digital U. S. history textbook accounts of slavery include images of slavery, those images were not created by the enslaved and rarely demonstrate how they were used to support or oppose slavery.

Consequently, the images of slavery are seen, but the experiences of the enslaved remained unheard.

The exception to this trend is the *Digital History: Using new technologies to enhance teaching and research* textbook that includes annotations describing the creation and context for some of its slavery-related images. For example, “The Negro Woman’s Appeal to Her White Sisters” image in the textbook includes the following annotation:

Antislavery broadside created and published in London, 1850. With the increasing size of the abolitionist movement came the use of handbills and broadsides appealing directly to women of all races. Invoking powerful imagery, such as the supplicating figure shown in the broadside, were intended to appeal to the sisterhood of all women. Variations of this image appeared in various abolitionist newspapers, broadsides and goods sold at fundraising fairs. (Mintz & McNeil, 2012i)

Unlike traditional U. S. history textbooks that used some images as decorations, this digital textbook used slavery-related images as learning tools.

Digital history textbooks: no obsolescence? With the ability to edit and update digital text, along with the ability to connect to Rich Site Summary (RSS) feeds, digital U. S. history textbooks should always have the most up-to-date content. The digital U. S. history textbooks in this study did not take advantage of these technological affordances. While the historical narrative approach analysis revealed that there was no statistical differences between traditional and digital U. S. history textbooks based on thirteen key ideas about U. S. slavery in the recent historical scholarship, there was one digital textbook that scored particularly low in one area revealing that its content about slavery is based on outdated scholarship. The account of slavery in *Academic American History* includes the following statements:

Although slaves were able to retain some of the customs brought by their ancestors from Africa, they dared not openly exhibit full expression of their

heritage. Slaves could not create a culture of their own; family life for slaves was often fractured by the sale of family members, especially children, and marriages between slaves were generally permitted only with the indulgence of the slave owner. (Sage, 2010, para. 60)

Based on historical scholarship by Genovese (1972), Franklin and Moss (2005), and Singer (2008), it is clear that the above statement about slaves not being able to create a culture of their own is not correct. As an act of resistance to the oppression of slavery, enslaved people developed a unique African American culture through building families, communities, and religious institutions (Franklin & Moss, 2005; Genovese, 2008; Singer, 2008).

In addition to inhibiting the prevalence of outdated content, digital history textbooks could also prevent obsolescence in videos, interactive images, and other technological tools to advance student learning in history. As stated earlier, the digital history textbooks in this study present older “Ken Burns” style history videos and lack interactive images. On a positive note, *U. S. History and Geography* (McGraw-Hill) includes interactive maps, games, graphic novels, quizzes and tests, slideshows, and a message board application facilitating opportunities for students to collaborate; *United States History* (Pearson/Prentice Hall) includes a glossary, a search engine, and a highlighter and note-taking tool; and *The Americans* (Holt-McDougal) includes audio recordings of every textbook page for the visually-impaired, a note-taking tool, an up-to-date current events page with RSS and twitter feeds, and vocabulary flip cards.

The ideological context of the digital textbook. History textbooks are social and cultural products that reflect predominant ideologies and contexts of the time and place of their creation (Anyon, 2011; Apple, 2004; Washburn, 1997). Because the digital history textbooks in this study do not take advantage of their technological affordances, I

believe that these textbooks reflect the haste and immediacy of the presentation of information, the unquestioned belief in the superiority of the most recent technologies, and the constricted education budgets of most states and school districts. The connection to the easily-updated, infinite archive of the Internet, along with the twenty-four hour, continuous news cycle present in contemporary society, can contribute to the lack of concern for fact-checking and the non-use of diverse technologies to present the information. Consequently, the emphasis is on the speed at which information can be available and accessed, rather than on the accuracy of the information or whether the presentation of the information takes full advantage of the available technologies. Additionally, there is a tendency among some educators to be prisoners of the moment and believe that the most recent technologies in education are the best technologies. In this tyranny of the recent, educators fail to fully investigate the value of all educational technology tools from traditional books to digital books. Therefore, technological innovation, and not student learning, becomes the main criteria for the creation and evaluation of digital textbooks. Lastly, in reference to the current ideological and historical context of digital textbooks, the economic recession has led some states and school districts to look to the digital option as a cheaper alternative to traditional books. In this sense, concern for saving money and staying within a tight budget outweighs concern for the educational value of digital textbooks.

Influence of digitization on the historical narrative of slavery. Considering the ideas and arguments of McLuhan (1964), the issue with digital U. S. history textbooks is not the availability and accessibility of content, but it is the way the content changes due to the technology. Therefore, in this study, the medium of the Internet is the

message and the historical narrative of slavery is its by-product. Discussing the implications of the Internet as the message, Carr (2010) argues that the Internet's emphasis on speed, efficiency, and the accumulation of data from many sources inhibits deep thinking and concentration by users. The tendency for distracted thoughts of Internet users not only reflects the searching patterns and immense breadth of the Internet, but it also facilitates the "research" and copy and paste practices of users. For example, according to Riley (2013), "[t]he first thought of a member of the digital generation, when faced with a query, is not to pull out an encyclopedia or a textbook or a dictionary. They go online – almost invariably, they Google it" (p. 152).

In terms of the digital U. S. history textbook narratives of slavery, the message and medium of the Internet both encourages and discourages historical thinking and contextualization. Through the internal links to glossaries, annotations, and related internal textbook pages, and the external links to other electronic books, historical archives, and journal articles, the digital U. S. history textbooks in this study can facilitate deep thinking and analysis beyond the surface-level search for answers. However, the digitization of the primary sources in the textbooks can also discourage historical thinking through the loss of the context in which the original document was created and read. For example, *North Carolina History: A Digital Textbook* includes four newspaper articles describing the events of Nat Turner's rebellion in 1831, but does not include scanned images of the paper to provide visual context revealing the placement of the article in the paper and the content of the surrounding articles. In this way, without the visual context of the newspaper articles, the medium of the Internet can change the interpretation of the content.

Along with the visual experience of the original documents, there are other deficits experienced when digitizing historical documents. According to Weller (2013):

One historian using the archive ‘read barely a word, instead, he picked out bundles of letters and . . . ran each letter beneath his nose and took a deep breath . . . ‘ When asked what he was doing it was discovered that he was a medical historian documenting outbreaks of cholera: ‘When the disease occurred in a town in the eighteenth century, all letters from the town were disinfected with vinegar to prevent the disease from spreading. By sniffing the faint traces of vinegar that survived 250 years and noting the date and source of the letters, he was able to chart the progress of the cholera outbreak. (Weller, 2013, p. 8)

Even though, in this example, the smells could be captured with digital metadata, the digitization of the letters would still be a limited experience. Because in the discipline of history both the context and original experience of historical documents matter, the use of digital history textbooks, regardless of increased access to primary and secondary source documents, falls short of fully reflecting the historian’s practice.

Another unintended negative consequence of the digitization of historical documents is the potential for ignoring traditional print documents or exalting those documents as superior and more authentic than digital ones. According to Thomas and Johnson (2013):

This situation begs the question of the fate of the invisible mass of undigitized material. Will these collections become forgotten, languishing in record offices unconsulted; or conversely, will they become the hunting ground of the professional academic historian? In time, will the researcher’s quest for new and original material mean that digitized primary sources will pick up a secondary status: not counting as a ‘real’ primary source . . . (Thomas & Johnson, 2013, p. 180)

The Future of Digital Textbooks

Although it was depressing to discover that digital U. S. history textbooks did not live up to the claims of digital history, I am still excited about the prospects that lie ahead. I do not believe that the promises of digital history are bigger than the available

technologies. Discussing some of the existing technologies integrated into current news websites, Baehr and Lang (2012) write:

Within a single page on a news website, such as *The New York Times*, users can read articles from the printed version of the paper, see breaking news feeds from the Associated Press, read and/or contribute content to the *Times* blogs, recommend articles, follow other readers, login to Facebook to see what others are sharing on nytimes.com, download and solve puzzles, play games, contribute reviews of theatre, movies, and books, buy tickets to plays, movies, and other events, and customize the display of headlines and stories displayed on the site. (p. 53)

Is this too much to ask of a digital history textbook? Should textbooks try to make use of all of the available technologies? If they do not, will students continue to be disengaged and bored with history (Aldridge, 2006; Loewen, 1995)? If they make use of existing technologies, will students and teachers become overwhelmed by the information-overload? As Carr (2012) suggests, will the multi-sensory engagement and multiple information sources distract students and prohibit them from thinking deeply and critically about history?

Admittedly, my predisposition towards the bound, finite, and linear textbook narrative not only limited my vision for the future of digital history textbooks, but it informed and influenced my methodological approaches and analysis of the findings. Rather than being open to creative and innovative formats for the presentation of the historical narrative, through my narrow vision of textbooks in this study, I created that which I most criticized. Just as my title suggests that digital U. S. history textbooks are in a new format, but tell the same old story, my research study is an analysis of the new format of digital textbooks conducted with the assumption of the same old story of linear and chronological presentations of history. Also, based on my twelve years of teaching high school U. S. history, I made certain assumptions about the authority of the textbook

narrative in U. S. history classrooms that led me to confine digital textbooks to specific traditional formats in this study. While I currently do not restrict my teaching to the textbook, I use it as one of many sources for my students to evaluate and analyze. Because of this research study, I now embrace the flexibility and openness of digital history textbooks and realize that “[m]eaning is constructed by the process of interaction, not by viewing a fixed authoritative source . . . “ and “the textbook is neither at the center or periphery of instruction, but an integral component in an array of instructional tools” (Laspina, 1998, p. 212).

So, in spite of my false preconceived notions about digital history textbooks, I believe that they can take on multiple formats to facilitate student engagement and historical thinking. As long as the primary motivation for the creation and design is the improvement of student learning and not technological innovation, I am confident that digital U. S. history textbooks can effectively make use of all available technologies.

Will the revolution be digitized? Digital U. S. history textbooks, through the power of the Internet, have the potential to revolutionize the history of slavery. More than access to more primary source documents and flexibility in presentation forms, the historical narrative of slavery can promote transnationalism, globalization, and activism through the digital textbooks. Through collaboration across national and geographic borders, a digital textbook account of U. S. slavery could include discussions of slavery in other parts of the world at different times and transnational links across the African Diaspora (Ebeling, 2003). In this way, slavery could be taught from a global context as a human rights violation (Merryfield & Kasai, 2004). Additionally, through digital textbooks and the power of the Internet, students and teachers can learn about the

abolitionists of the 18th and 19th centuries by mimicking their behavior and participating in grassroots social justice organizing to fight human trafficking and slavery today. With Facebook, Twitter, and other collaborative technological tools, students could participate in, initiate, or mobilize a social movement for the abolition of contemporary manifestations of human slavery. Though these potentials for globalization and social justice activism exist, sadly, they have not yet been realized in digital U. S. history textbooks.

Digital U. S. history textbooks and democratization. Friday, March 15th, 2013, North Carolina Governor Pat McCrory signed two bills designed to expand digital learning and technology access in North Carolina public schools. House Bill 23 is “a bill directing the State Board of Education to develop and implement digital teaching and learning standards for teachers and school administrators to ensure provision of high-quality, integrated digital teaching and learning to all students” (State of North Carolina, 2013, para. 3). House Bill 44 is “a bill signaling North Carolina’s intent to transition from funding textbooks to digital learning materials in public schools by 2017” (*ibid.*, para. 4). Given these policy decisions, it is important that democratization remains a goal of digital U. S. history textbooks in K-12 classrooms.

In terms of the historical narrative of slavery, democratization has not yet been realized, but digital U. S. history textbooks should continue its pursuit. For it is clear that “[i]f our [digital] textbooks represent inaccurate, glorified, romanticized, even quasi-racist or sexist tendencies, then that will be passed to our students, ill-equipping them for the realities of modern-day America while making them ignorant of our immensely complicated, sad, and wonderful past” (Lavelle, 2009, para. 3).

Democratization, in terms of access and ownership of the technologies necessary to use digital U. S. history textbooks, is in a precarious state. In our current economic climate, even with the support of U. S. Secretary of Education, Arne Duncan, and North Carolina governor, Pat McCrory, the transition to digital textbooks has the potential to become an underfunded legislative mandate leading to a large digital divide between rich and poor schools. An additional obstacle to equal access and ownership of digital U. S. history textbooks are textbook publishing companies. In response to the digitization trend, publishing companies have added technological “bells and whistles” to their digital textbooks to attract more customers and take over the digital textbook market. While the publisher-produced digital textbooks can be effective learning tools, the expense of the annual subscription fees can prevent some school districts from taking advantage of them, thus contributing to the digital divide. The good news is that this study revealed that free digital textbooks connected to universities and historical associations were the most accurate and inclusive, and used the most internal and external links, annotated and contextualized images, and explicit discussions of race and racism in their accounts of slavery. The publication of *Digital History: Using new technologies to enhance teaching and research* by the School of Education of the University of Houston, *North Carolina History: A Digital Textbook* by the School of Education of the University of North Carolina at Chapel Hill, and *U. S. History: Pre-Columbian to the New Millennium* by the Independence Hall Association in Philadelphia, Pennsylvania has facilitated the inclusion of free and more accessible historical content. In addition, the publication of these digital textbooks has enabled more academic freedom for authors resulting in more textbook discussions of controversial topics like race and racism.

Beyond both the free access to existing digital history textbooks and the physical access to the technology tools necessary to use digital history textbooks is the democratization of the creation and educational uses of those textbooks. As referenced earlier, digital history textbooks can become a truly democratic space when ownership of the medium is not monopolized by those who can afford it and when multiple voices and perspectives are included in the narrative. Open textbooks and flexbooks are exemplars of technologies that give students and teachers the freedom to create their own textbooks to cater to their learning and content needs. According to Lindshield (2010), “open textbooks are free, online, open-access textbooks. The content of open textbooks is licensed to allow anyone to use, download, customize, or print without express permission from the author” (p. 27). In this way, digital open textbooks are nimble enough to allow for multiple variations and uses. Flexbooks are “free and open source textbook platform[s] where one can build and edit collaborative textbooks” (Park, 2008, para. 10). Billing itself as the epitome of nimble, flexbooks highlight their collaborative aspects as well as their flexibility to meet the needs of many learners and teachers. For example, in response to rising traditional textbook costs and a mismatch between the textbook and the statewide curriculum, a group of math teachers in Minnesota wrote their own flexbook that saved the district \$175,000 (Huffington, 2011). This open-content, web-based, collaborative, customizable textbook model initiated by CK-12 Foundation’s flexbooks may be the future direction of all textbooks.

This democratization of the creation of digital textbooks must happen simultaneously with the democratization of the educational uses of those textbooks. A “didactic divide” (Fulton & Sibley, 2003) must no longer exist between the ways that

technology is taught and used in schools with predominantly White students and schools with predominantly students of color. For example, Carver (1999) found that in educational settings in which African American students are the majority, the dominant pedagogical approach to computer use is drill and practice. On the other hand, in majority White educational settings, computers tend to be used for multimedia presentations, exploratory inquiries, collaboration, interactive learning, problem-solving, simulations, and creation (Fulton & Sibley, 2003). So, even if there was a proliferation of digital U. S. history textbooks in K-12 classrooms, their presence would not be democratizing until all students and teachers, regardless of race, are taught how to take advantages of its technological affordances for engagement and learning.

Surprises

The entire study was a surprise for me. While I had my doubts about the lofty “democratization” claims of digital history, I had no idea how similar digital U. S. history textbooks would be to the traditional versions. As stated earlier, the similar numbers of primary source documents between the digital and traditional textbooks was surprising. Certainly large repositories of primary source documents exist online, but digital history textbooks are not linking to them.

This near absence of links within the historical narrative of digital U. S. history textbooks was another shocking finding. I had hoped to find digital textbook passages about slavery linked to historical scholarship, other digital textbooks, and online primary sources. What I found were no links to recent historical scholarship, few links to other digital textbooks, and links to other digital material on the Internet on the right or left side of the digital page—the equivalent of obscure footnotes in traditional print text. It was

both disappointing and surprising to note the lack of significant historical links in any of the publisher-produced digital history textbooks.

In terms of race and racism, it was surprising that while the free digital textbooks used the slave codes as primary sources to show the development of racism and slavery in the United States, none of the traditional textbooks, nor the publisher-produced digital textbooks included them.

In terms of the historical narrative approach, it was surprising that the traditional and digital textbooks scored similarly. Relatedly, it is surprising that given that ability to edit digital history textbooks with fresh approaches and new scholarship, many of the textbooks analyzed had not been edited in at least five years.

Lastly, with the interactive images and videos, it was surprising that the digital history textbooks did not take advantage of social media, virtual worlds, and simulations to create more engaging experiences.

Limitations

There were several limitations to my research. First, in my sample of textbooks, I used traditional U. S. history textbooks from the state of North Carolina. The study can be replicated and improved by gathering 11th grade U. S. history textbooks from all of the major regions of the United States. Second, my reliance on intra-coder reliability, although a proven content-analysis method (Krippendorff, 2013), meant that my interpretations were the only ones considered. This could be improved by using a team of researchers to collect data in a future iteration of the study. Third, the SubmitExpress.com link counter and link popularity check, and the google and yahoo backlink checks were very inconsistent. Teaming with an Instructional Technology

specialist or Computer Scientist to figure out the inner-workings of a search engine and study analytics could be helpful in similar future studies. Fourth, I focused only on content and content does not exist in a vacuum. In future iterations of this study, I would focus on traditional and digital U. S. history textbooks and the ways that teachers and students use them and interact with them. For example, in a 2011 study at the Sawyer Business School of Suffolk University in Boston, Massachusetts, senior undergraduate students were interviewed and surveyed about their attitudes and behaviors towards digital textbooks. Weisberg (2011) found that students were becoming more receptive to digital textbooks, “however they [did] not currently see their laptop or computer as a replacement for the textbook” (p. 192). Weisberg (2011) also found that there was no impact on student learning through the use of digital textbooks as opposed to traditional textbooks. My future study of digital U. S. history textbooks would extend the work of Weisberg (2011) to K-12 students and teachers.

A further limitation was my reliance on the two-sample t-Test for the data analysis. As aforementioned, the conditions for inference of the data sets were violated because the textbooks were not randomly selected. Also, even though the two-sample t-Test accounts for small sample sizes, the requirement of the normal distribution of the data led to the exclusion of outliers from calculations. This exclusion shaped the findings and the ensuing analysis. For example, although one of the digital textbooks had 135 primary source documents, because 135 was an outlier it was excluded from the data calculations. Therefore, the results of the two-sample t-Test found that the digital and traditional U. S. history textbooks have the same mean total number of primary sources, even though the 135 primary source documents of the *Digital History: Using new*

technologies to enhance teaching and learning textbook was more than all of the primary sources in the traditional U. S. history textbooks combined. With this in mind, perhaps a non-parametric statistical test, like the Mann-Whitney test, that does not depend on the distribution of data would be a more appropriate test.

Suggestions for Future Research

Following up on one of the aforementioned limitations, as a direction for future research, I suggest adding the voices of teachers and students to this important conversation. More qualitative studies about how teachers and students interact with, and learn from, digital history textbooks will be beneficial to the field. I also encourage more research examining the extent to which social studies teacher educators are preparing pre-service teachers to use digital history tools and textbooks. Following in the footsteps of Drs. Cheryl Bolick, John Lee, Meghan Manfra, Adam Friedman, and Trey Adcock, I hope to continue to contribute to the field by researching ways to engage teachers in the digital history field. Lastly, while I studied traditional and digital U. S. history textbook accounts of slavery, I encourage the examination of women, Native Americans, Hispanic Americans, Asian Americans, European Americans, and other groups in other periods in U. S. history.

Recommendations to Textbook Publishers, Historians, and K-12 History Teachers

Textbook publishers. The handwriting is on the wall. Gone are the days of the 800-page U. S. history textbook. It is time to usher in a new era of school and educational resources. The digital resources can no longer be a supplement to the print text, the digital are the text.

Even though this sounds like the death of the textbook publishing industry, I am convinced that it does not have to be. Textbook publishing companies can re-envision their role. With the plethora of free content available on the Internet, content is no longer the most valuable commodity. The presentation of the content should not even be the primary focus. Instead, textbook publishing companies should work in collaboration with groups such as the New Literacies Research Team at the University of Connecticut and the New Literacies Collaborative at North Carolina State University to make the use of content for learning in the 21st century the new commodity.

Historians. There is a great opportunity to continue to follow the paths left behind by digital history pioneers, Dr. William Thomas III, Dr. Edward Ayers, and the late-Dr. Roy Rosenzweig. Historians cannot dismiss digital history as a passing fad, nor can they turn their noses up to it as un-authentic history. Historians will do well to embrace the ways that the new technologies of the 21st century shape and influence the direction of the history profession. As the transition from print to digital textbooks begins, K-12 students and teachers need historians to engage in conversations about digital history and not leave the major publishing companies to writing the histories alone.

K-12 history teachers. For K-12 history teachers, the concern is not just the format of the content rather it is how the content is used to create student learning. Fundamentally, it is a question of pedagogy rather than content. Digital history textbooks hold the promise to bring pedagogy and content together in new ways that can radically transform teaching and student learning. The collaborative, interactive, multi-

dimensional, and inclusive affordances of digital history can reflect engaging, differentiated, and culturally-relevant teaching practices.

Conclusion

“Textbook” history, not digital history, has led to challenges in the development of the digital history textbook. While digital history has the potential to transform how history is written and done, I believe that the ideological constraints of textbook history writing stifle that potential. Because marketability and profit remain the predominant factors in textbook production, U. S. history textbooks--whether traditional or digital—continue to copy the models that lead to statewide adoption and major profits, which means that there is little to no change in content. Regarding digital U. S. history textbook accounts of slavery, the conservative trends of nationalism, “mentioning,” and avoidance of controversy and conflict (Foster, 2006) continue and prevent a critical analysis of the multiple perspectives and marginalized accounts. Though physical space in traditional textbooks for the marginalized voices of the enslaved are not an issue with digital textbooks, “mentioning” still occurs with no discussion of racism, white privilege, or institutionalized racial violence. Another major factor inhibiting digital U. S. history textbook accounts of slavery is the lack of digital historians who write digital history textbooks. Publishing companies and history professors with little experience or expertise in the field and methods of digital history, largely write digital U. S. history textbooks. With that in mind, most digital U. S. history textbooks are exact replicas of traditional U. S. history textbooks and the affordances of digital history are never realized. In fact, the only difference between digital and traditional U. S. history textbooks is that the digital versions are not as heavy.

With all that said, I am still hopeful. I am hopeful that textbook companies and educational leaders are driven by student achievement and not by profit margin. I am hopeful that all children, especially children of color and children from poor communities across the globe are encouraged, and given support, to not only become consumers of digital products, but creators and designers of the technologies that make digital history possible. I am hopeful that the “democratization of history” does not end with digital history textbooks. I am hopeful that this democratization not only incorporates the marginalized, but it recognizes their innate value, not just in a history book, but in the community. I am hopeful that this democratization means accessibility – for it was the accessibility of a young African American boy from rural South Carolina to the tools of digital history that produced this research. I am hopeful.

APPENDIX A

Original List of Digital U. S. History Textbooks (Before Criteria Applied)

Table A

Digital History Textbook Sites	Brief Description
<ul style="list-style-type: none"> • http://www.ushistory.org/us/ 	Digital US history textbook provided by the Independence Hall Association in Philadelphia, PA.
<ul style="list-style-type: none"> • http://www.america.gov/publications/books/history-outline.html 	Digital US history textbook provided by America.gov. It is also produced by the U. S. Department of State's Bureau of International Information Programs.
<ul style="list-style-type: none"> • http://en.wikibooks.org/wiki/US_History 	Digital US history textbook provided by Wikipedia.
<ul style="list-style-type: none"> • http://www.learner.org/biographyofamerica/ 	Digital US history textbook that is a companion website to the video series, <i>A Biography of America</i> . It is a production of WGBH Interactive for Annenberg Media.
<ul style="list-style-type: none"> • http://www.learnnc.org/nchistory/ 	North Carolina History: A Digital Textbook provided by LearnNC, a program of the University of North Carolina at Chapel Hill School of Education.
<ul style="list-style-type: none"> • http://historymatters.gmu.edu/d/1886 	<i>History Matters: The U. S. Survey Course on the Web</i> developed by the American Social History Project/Center for Media & Learning, City University of New York, and the Center for History and New Media, George Mason University
<ul style="list-style-type: none"> • http://memory.loc.gov/ammem/index.html 	American Memory: Library of Congress

<ul style="list-style-type: none"> • http://www.academicamerican.com/ 	Academic American History – website with written lectures by Henry J. Sage (a retired history teacher). Includes primary source documents.
<ul style="list-style-type: none"> • http://www.u-s-history.com/ 	US History – offers narrative and primary source documents.
<ul style="list-style-type: none"> • http://www.hippocampus.org/History%20%26%20Government 	HippoCampus.org and U. S. History – offers videos, text, and primary source documents.
<ul style="list-style-type: none"> • http://www.historycentral.com/USHistory.html 	American History – offers narrative, timeline, and some primary source documents about chronological time periods in US History
<ul style="list-style-type: none"> • http://www.easehistory.org/index2.html 	An Experience Acceleration Support Environment (EASE) – site with digital resources and videos about historical events, themes, and political campaigns of the 20 th century
<ul style="list-style-type: none"> • http://www.digitalhistory.uh.edu/database/hyper_titles.cfm 	University of Houston’s online digital history textbook

APPENDIX B

Analytical Instrument for Historical Narrative Approach

Traditional and Digital U. S. History Textbook Checklist for African American experiences in slavery

Title: _____

Publisher: _____

Year: _____

	Incorrect Information	No Information	Omits This Period	Limited Information	Full Information
	-2	-1	0	+1	+2
1. African, as well as European, culture forms an integral part of the U. S. heritage (Council on Interracial Books for Children, Inc., 1977; Franklin & Moss, 2005).					
2. The North American slave trade created enormous profits and the enslaved were treated as commodities (Williams, 1944; Council on Interracial Books for Children, 1977; Franklin & Moss, 2005).					
3. American democracy was predicated on American slavery. The development of equal rights among white men was based on stripping rights away from African slaves (Morgan, 1975; Brown & Webb, 2007).					
4. The significance of the Revolution, to Blacks, goes beyond participation in combat (Council on Interracial Books for Children, 1977; Nash, 1990; Franklin & Moss, 2005).					
5. Slavery and racism are connected in the history of the United States (Handlin & Handlin, 1950; Degler, 1959; Loewen, 1995; Brown & Webb, 2007).					
6. Slavery was inherently cruel and inhuman (Council on Interracial Books for Children, 1977; Patterson, 1982; Davis, 2006).					

7. While racism was prominent in the United States during slavery, anti-racist ideas and activities were present (Aptheker, 1993, Loewen, 1995; Singer, 2008).

8. African Americans covertly resisted slavery in many different ways, including building families, communities, and religious institutions (Genovese, 1972; Singer, 2008; Franklin & Moss, 2005).

9. Rebellion and slavery went hand in hand (Council on Interracial Books for Children, 1977; Rucker, 2006; Davis, 2006).

10. Slavery was a national, rather than just a regional institution (Loewen, 1995; Franklin & Moss, 2005; Singer, 2008).

11. Free blacks during the antebellum era faced severe political, economic, and social discrimination (Berlin, 1974; Franklin & Moss, 2005).

12. The economic and social legacies of slavery have national and global consequences in contemporary society (Hartman, 2007; Singer, 2008; Zueske, 2012).

13. The U. S. Civil war was not only a war to preserve the Union, but it was a part of an African American liberation movement (Franklin & Moss, 2005; Singer, 2008).

APPENDIX C

Checklist for Principles of Multimedia Message Design in the Videos in Digital U. S. History Textbooks

Table C

Principle of Multimedia Message Design	Yes	No
1. “Coherence principle: Weed out extraneous words, sounds, and pictures” (Mayer, 2008, p. 373).		
Describe:		
2. “Signaling principle: Highlight the essential material” (<i>ibid.</i>).		
Describe:		
3. “Spatial contiguity principle: Place corresponding words and pictures near each other on the page or screen” (<i>ibid.</i>).		
Describe:		
4. “Temporal contiguity principle: Present corresponding narration and pictures simultaneously” (<i>ibid.</i>).		
Describe:		
5. “Redundancy principle: Do not add printed on-screen text to a narrated animation” (<i>ibid.</i>).		
Describe:		
6. “Segmenting principle: Break an explanation into bite-		

size parts” (*ibid.*).

Describe:

-
7. “Pretraining principle: Begin by explaining the operation of each part” (*ibid.*).

Describe:

-
8. “Modality principle: Present words in spoken form rather than printed form” (*ibid.*).

Describe:

-
9. “Personalization principle: Present words in conversational style rather than formal style” (*ibid.*).

Describe:

-
10. “Voice principle: Present narration with a standard-accented human voice” (*ibid.*).

Describe:

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