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DIGITAL HISTORIANS: ENGAGING STUDENTS IN HISTORICAL THINKING
THROUGH AN INTERACTIVE WEBSITE

A Dissertation

Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Education

By

Casey Margaret O'Donnell-Chavis

December 2022

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Casey Margaret O'Donnell-Chavis

2022

DIGITAL HISTORIANS: ENGAGING STUDENTS IN HISTORICAL THINKING
THROUGH AN INTERACTIVE WEBSITE

By

Casey Margaret O'Donnell-Chavis

Approved October 14, 2022

Jason Ritter, Ph.D.
Associate Professor & Department Chair
of Instruction and Leadership in
Education
Department of Instruction & Leadership
(Committee Chair)

Gibbs Kanyongo, Ph.D.
Professor & Department Chair of
Educational Foundations & Leadership
Department of Educational Foundations
& Leadership
(Committee Member)

Joseph Kush, Ph.D.
Professor & Program Director
Department of Instruction
& Leadership in Education
(Committee Member)

David Carbonara, Ed.D.
Retired, Clinical Assistant Professor
(Committee Member)

ABSTRACT

The purpose of this study was to determine the extent to which students engage in historical thinking through the use of an interactive website, and how the students understood and experienced its various features and how they incorporated technology in their final video project. In the spring of 2022, five students participated in a class workshop focused on historical thinking using their Chromebooks. Following a week of learning about the five elements of historical thinking, students were asked to create a multimedia final video project on a historical figure of their choice. Two students completed the assignment. Thematic coding analysis and case study investigations were conducted on various data points that included Google Form questions, researcher's notes, and surveys. Results showed that participants were able to engage in historical thinking through the format of an interactive website at the same time as final video projects showed different SAMR levels related to technology integration.

DEDICATION

I dedicate this dissertation to my son, Atticus Neal. There is no doubt that one day you will become a doctor, scientist, ghostbuster, and a WWE superstar. You have already changed my world. I hope you know that everything I do, I do for you. Love you more.

ACKNOWLEDGEMENT

A doctorate program is not a one-man band, a lone wolf adventure. It takes many individuals to help you create a unique, beautiful song and howl. There are not enough words or pages to acknowledge all the prayers and guidance for my dissertation. However, here is my attempt.

You provided me with laughter when I was in desperate need of a joke. You gave me a hug when my arms felt broken. You believed in me when I lacked hope in my heart. It was the smallest smile and the long list of revisions. Thank you to family: my husband, Johnathan, my mother, Michele, my father, Fil, my in-laws, Jerry and Glenda, my brothers, Blake and Alek, my Uncle Larry, my confidant, Ann Hill, Ms. Applebee and her students at Harper High School, and Clearview School District. I would like to also acknowledge the one person who kept the dream alive and reminded me that quitting is never an option, my biggest fan, Atticus.

My committee chair, Dr. Ritter, and my dissertation committee, Dr. Kush, Dr. Carbonara, & Dr. Kanyongo, provided knowledge, inspiration and feedback that saw me through. You have been amazing, and I thank you from the depths of my soul.

Lastly, I would not be here today without the life from my God. "I will lift up mine eyes unto the hills, from whence cometh my help. My help cometh from the Lord, which made heaven and earth." Psalm 121:1-2

Much love to all for being my rock band and my wolf pack.

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CHAPTER ONE: INTRODUCTION

Background

The students' eyes were more glazed than Krispy Kreme Donuts. There was a pool of saliva on one student's desk. The educator looked around the classroom at the zombies that replaced her pupils. She could not fathom why her PowerPoint on World War I would cause such a reaction from an otherwise rambunctious class. She did not think that her forty-two slides would cause them to go comatose. In fact, she had spent hours at home researching trench foot pictures and maps of key battles in Europe to grab their attention. She could not understand how they could be so uninterested in such an exciting topic.

The above vignette is illustrative of a common problem that teachers share throughout the K-12 educational system: namely, young students struggling to connect to the material being taught. History is a challenging subject to teach and perhaps even more challenging to sit through. Steffey and Hood (1994) highlighted the struggle that students feel going to a history class. Students do not enjoy social studies because it is difficult for a teacher to connect it to their lives. However, Chiodo and Byford (2004) found that when middle and high school students are active in the learning process and felt relevancy, they had a positive perception of social studies.

As we enter the twenty-third year of the 21st century, technology has transformed instruction in the classroom. Twenty-first-century digital natives are intolerant of boring, lecture-based social studies lessons. Worksheets do not turn zombies into scholars. Additionally, technology is everywhere. From the watch on their wrist to the cell phones they hide in class, this generation has always had WIFI with unlimited information at their disposal. Quickly,

Chromebooks have replaced textbooks, PowerPoint slides are downloaded in the cloud, and cell phones are encouraged at desks. Teachers and students are being held accountable for learning through standardized testing but continue to score low on tests. High school students are a new form of zombies yearning for life in the history classroom. In this dissertation, I used TPACK as the premise for my foundations. TPACK is the knowledge required by faculty members for technology in their pedagogy. The goal of this research study is to determine the effectiveness of an interactive website based on the historical thinking of a group of high school students. My methodology combined different theorists and was modeled after the framework of TPACK.

My two passions, social studies and technology, were combined to examine and determine what impacts they have on learning. Instructors must learn how to incorporate technology into the classroom. TPACK and SAMR are used to gauge how well technology is integrated. In what follows, I first describe several TPACK ideologies and how each piece relates to my research study. I explore how TPK has an impact on digital natives, and they use technology for personal gain on assignments. I define SAMR and the influence it has on teachers and in particular, this dissertation. Lastly, I analyze how historical thinking is the center of the content piece of TPACK.

Upon exploration of TPACK, I explain the statement of the problem, purpose of the study and research dynamics.

TPACK: Technological Pedagogical Content Knowledge

I have over ten years of teaching social studies to high school and middle school scholars, and I know all too well the struggle of disinterested learners. With the digital age, teachers are urged to lecture less and facilitate more. When a person finds a personal connection to a topic, it

becomes easier to comprehend. There are many theorists who researched that when students create their own product, they learn more (Gardner, Marzano, Tate, Jonassen, & Wineburg).

I began teaching with technology, and my students loved producing their own websites and music videos. I could not imagine educating in a way any differently. I was torn between pursuing a doctorate degree in social studies or technology. As I began at Duquesne University, I learned more about theorists that I found myself aligned with. One of those was TPACK.

TPACK was a confusing Venn Diagram that had so many intimidating letters in it, I felt overwhelmed the first time seeing it. Through the guidance of my professors, I became aware of this new way of thinking. As I broke TPACK into CK, TK, and PCK, I realized that my love for social studies and technology could be intertwined. TPACK has now become part of my vernacular and has molded this research study.

Mishra & Koehler (2006) created the framework in question, suggesting that teachers have interdependent knowledge, comprised of three components: technology, pedagogy, and content knowledge. This is also referred to as TPACK. Content Knowledge (CK) is knowledge about the subject matter that is to be learned or taught (Harris, Mishra & Koehler, 2009). An example of this is World War I information. If the knowledge is incorrect or based on faulty assumptions, this can lead to students retaining mistaken conceptions. Pedagogical Knowledge (PK) is knowledge on the practices of teaching and learning. It includes knowledge about students' needs and preferences as well as strategies for student understanding. Technological Knowledge (TK) is developing and evolving, and the definition is changing. It is keeping up to date with technological developments. There needs to be an intersection of all components of the TPACK to be effective as a teacher. As a researcher, I sought a way to develop a website that

intersects at all three knowledge points. The following information is how each part of TPACK knowledge is orchestrated in the development of an interactive website.

Technological Pedagogical Knowledge (TPK)

According to Koehler & Mishra (2009), Technological Pedagogical Knowledge is understanding how teaching and learning can change when particular technologies are used in particular ways. This is knowing that pedagogy will change based on technological tools. A teacher's rules and procedures will change as new technology is introduced in the classroom. Challenges arise for cultivating the new breed of digital students. A teacher's pedagogical knowledge will change due to the technology in the classroom. Technological developments have reshaped not only the student, but an entire generation.

Teaching with technology has changed and so have our students. In *Apple Classrooms of Tomorrow-Today (ACOT²)*, their goal was to model teaching and learning with technology (Apple, 2008). They identified six design principles for the 21st century high school. One of the principles is understanding of 21st century skills and outcomes. The students who are in today's classrooms are not the same as those students from class 40 years ago. Schools and laws differ just as much. States are required to give standardized tests. This is especially true when one considers that teachers do not work in vacuums and must respond to district and state initiatives and mandates. Students are required to take core subjects, and state tests can even count as a grade. Not only do mentors feel the pressure from educational acts, but they also have to stay abreast of the new era of learners.

Our students are what Prensky (2001) calls "digital natives." Prensky (2001) estimated that today's average college graduates have spent over 10,000 hours playing video games and 20,000 hours watching television. According to MedlinePlus, most children in 2019 spent about

three hours a day watching tv; added together, all types of screen time can total 5-7 hours a day (<https://medlineplus.gov/ency/patientinstructions/000355.htm>). Prensky argued, “Our students today are all ‘native speakers’ of the digital language of computers, video games, and the internet” (2001, p. 1). Strasburger, Jordan, and Donnerstein (2010) reported in the Pew Internet and American Life Project that 93% of youth aged 12-17 are online and 71% have a cell phone. He describes how digital natives enjoy multi-tasking, thrive on instant gratification and frequent rewards, and prefer games to serious work.

This generation of digital natives can play video games, text on their phones, and still listen to their MP3 players. It can be cumbersome for a digital immigrant (i.e. a large portion of existing teachers) to learn how to make course material more accessible and captivating for his or her audience.

A New Way of Learning

A common feature of new emphases in social studies is the implicit acceptance of the notion that inquiry and skills-based instruction are perhaps better suited for an education in our contemporary, fast-changing, and increasingly interdependent world (Prensky, 2001, p 1). The students have changed, but the institutions have not. As technology downloads more gigabytes of power, children have learned to hack the system. Loewen (2007) asked students how they used the internet and learned from one student, “At my school, we divided up the {vocabulary term list} and then posted our part on the Internet. Then you could download the terms, change the style, print them out, and hand them in” (p. 341). Instead of learning vocabulary terms, they have manipulated the internet to take shortcuts on assignments. Teachers are failing to prepare students for new tests that assess evaluation skills rather than on rote memorization, which has been previously wielded. Levstik & Barton (2015) observed that facts are not history and are not

compelling; however, the enduring themes and questions that humans have struggled with over time are compelling (p. 3). South Carolina Social Studies College and Career Ready Standards states, “The South Carolina Department of Education and all school districts shall emphasize higher order problem solving skills in curricula at all levels” (p. 6).

Revised Bloom’s Taxonomy calls for the highest level for students to create construct, direct, and produce. Revised Bloom’s Taxonomy acts as a ladder for educators to move up the rungs to allow students to express what they learned in a way other than a worksheet. SAMR model is similar as a person would move through these stages; however, it is the integration of technology that is being measured.

SAMR

The SAMR model is a framework created by Dr. Ruben Puentedura. It classifies four different degrees of classroom technology integration. SAMR stands for Substitution, Augmentation, Modification, and Redefinition. Not only could it be used in the classroom, but it also goes beyond and can be applied at faculty meetings, observations, and other activities. SAMR can be seen in the same light as Bloom’s Taxonomy (Krathwohl, 2002). How a teacher integrates technology can be rated based on one of the four following levels: Substitution, Augmentation, Modification, and Redefinition. It is important to note that the SAMR levels are not based on the amount of technology being used but instead on how it is utilized. A teacher may have a smartboard, Chromebooks, projector, and clickers, but if she is just showing a PowerPoint, then this would be at the lowest level. Below I have listed examples for each level.

- Substitution- technology is substituted for a more traditional one. An example of substitution would be if a teacher took a primary document and scanned it, and showed it on the board.

- Augmentation- substituted for a traditional one but with significant enhancements to the student experience. The teacher may ask students to create a PowerPoint on the contextualization of the primary document that they are studying. In the PowerPoint, students find videos and attach them to interactive links.
- Modification-transformation is taking place at this stage. Students may take the primary document and create their own graphic organizer for the class.
- Redefinition- redefine a traditional task in a way that would not be possible without technology and thus creates a novel experience. In this scenario, students conduct research on the primary document, write a script, and record themselves acting it out.

Importantly, the SAMR model should not be seen as a ladder or staircase because in some instances, substitution, where technology as a direct substitute with no functional change, is best. The SAMR model should be seen, instead, as a spectrum. One way to look at it is, at the Enhancement stage, a chef cooks a traditional family recipe but adds her own spices. At the Transformation stage, one is concocting an entirely new, original recipe. SAMR is usually rated by teachers' usage of technology. This dissertation analyzed the SAMR level of high school students when asked to produce a final video project. As a researcher, I was intrigued to see how students were using technology in the classroom when it came to directing their own videos. It is believed that the digital natives can manipulate technology, but I wondered if they could utilize it effectively in an educational atmosphere. Thus, students received a SAMR score on how well they incorporated technology in their creation of a video.

The second focus in TPACK is how pedagogy and content knowledge intertwine. It is important to note that a teacher needs to not only understand the digital natives, but the tests that students are required to take.

Pedagogical and Content Knowledge (PCK)- Historical Thinking in the Classroom

According to Koehler & Mishra (2009), Pedagogical and Content Knowledge is “the core business of teaching, learning, curriculum, assessment and reporting”. PCK is applied to the teaching of a specific content. For this dissertation, the content portion is social studies and historical thinking. In this section, I discussed the current pedagogical knowledge in historical thinking.

Many standardized tests like AP, SAT, and ACT ask students to analyze and answer questions to a passage. The learning style is different for undergraduates. Students are reading primary works by Adam Smith and Abraham Lincoln. They scrutinize books written by experts in the field. As students evaluate documents, they should be sourcing and contextualizing. Even though technology is at every person’s fingertip, each student should be able to think and read critically.

Resnick and Science National Research Council researched that higher order thinking involves self-regulation of the thinking process. It is also effortful. This means that considerable mental work is involved (p. 3). It often has more than one solution, and it entails subtle interpretation and evaluation. Critical thinking is not explicitly listed as a historical thinking skill; instead, it is incorporated in all the skills. Rather than being disengaged from history, students should learn to question the author’s thesis and cite examples of statements and opinions that influence the reader.

Museums have released digital copies of primary documents, which allows staff to download and show in class. Books such as *Historical Thinking Skills: A workbook for U.S. History*, *Assessing Historical Thinking & Understanding*, and *Why Won’t You Just Tell Us the*

Answer? Teaching Historical Thinking Grades 7-12 have been written to guide educators on how to use historical thinking in the classroom.

That Meh Feeling

As a social studies teacher, I often heard complaints that it is boring. Allen (1994) offers an interesting perspective on this common perception from students, posing the question, “If this is social studies, why is it boring?” Allen taught English classes and noted how her students often dreaded going to their least favorite class: social studies. The students in Allen’s class begged to stay in their literature class instead of going to history, because they hated it. Steffey & Hood (1994) found that teachers heard students say along the lines of, “I hate history. Why is it required anyway? Who cares about all that stupid stuff?” (p. 3). She would have to listen to these same complaints over the years, and she became interested to know why her students hated it so much. As an ELA teacher, Allen began combining the two subjects to bring about change. Allen figured out a way to bring autobiographies and a human element to the dreaded social studies class. Her students became interested in subjects like the Great Depression and the Roaring 20s. She even had her students interview family members to learn about their experiences in history. Allen showed that social studies does not have to be a boring subject; instead, it can be embraced by even the most apathetic learner.

Personal Connections Leads to Attention

Reinforcing Allen’s experiences, Black & Blake (2001) noted how John Dewey advocated a curriculum centered on children’s interests. Foster & Padgett (1999) claimed that students often learn (and quickly forget) information that has little meaning for them (p. 357). This problem is especially acute in a subject like social studies where students often report feeling bored, failing to see any sort of applicability or relevance to their lives (Steffey & Hood,

1994). Conversely, Tate (2016) made the point, “When students are actively engaged in experiences with content, they stand a much better chance of learning and remembering what we want them to know” (p. 4). TPACK is understanding more than just pedagogy in the classroom. It is the realization that teaching changes with technology in the classroom. A teacher’s rules and procedures will change as new technology is introduced in the classroom. For example, as a high school teacher, I had a procedure when I wanted my students to turn off their monitor or when they had to have laptop lids closed.

Technological and Pedagogical Knowledge (TPK)

Technological Pedagogical Knowledge (TPK) refers to how teaching can change when particular technologies are used in particular ways. I used the theories of Mindtools by Jonassen, Carr, and Hsiu-Ping, and the acquisition of new skills by students in knowledge construction tools.

Since their publication in 1998, researchers theorized that technology can be used to facilitate learning. Jonassen, Carr, and Hsiu-Ping created the notion of Mindtools. “Mindtools are computer applications that, when used by learners to represent what they know, necessarily engage them in critical thinking” (Jonassen, Carr, & Hsiu-Ping, 1998, p. 24). They require students to think about what they know in new ways.

Knowledge Construction Tools are the process of knowledge construction resulting from creating products. Hypermedia consists of pages of text, a graphic, a sound bite, a video clip, or a document. Students are likely to learn more by constructing instructional materials than by studying them. (Jonassen, Carr, & Hsiu-Ping, 1998, p. 29). The quickest way to learn about something might be to have to teach it. In Mindtools, students are engaged in interpreting the world and reflecting on their interpretations. When students work with computers, they enhance

the capabilities of the computer, and the computer enhances their thinking and learning (Jonassen, 1996, p. 3). In this research, I sought to find out how technology had an impact on students' research and video production. Learners are much more mentally engaged by developing materials than by studying materials (Jonassen, 1996).

Learners that become producers show that they retain information better. In my dissertation, students were asked to construct their own final project video. In Tate's (2016) third edition of *Worksheets Don't Grow Dendrites*, she found that technological literacy is crucial to be successful, high school students. Tate (2016) recommends that students use the process of digital storytelling in integrating technology. Tate even writes that note taking can be digitized. Apps and tools such as Google Docs allow students to contribute notes in real time (Tate, 2016, p. 157).

Hofer & Harris (2015) explored the process of creating learning activity types. The educator must choose learning goals and consider the classroom and school contexts. After considering the goals, the teacher must then choose the building blocks for the learning design. There are three sets of activity types. They are knowledge building activity types, convergent knowledge expression, and divergent knowledge expression.

The participants in this study had an opportunity to explore activity types in knowledge building activity types. Harris et al. (2010) describe the social studies learning activity types. There are 44 learning activity types that have been identified to the time of publication. 17 are focused upon helping students build their knowledge of social studies concepts (p. 595). The divergent knowledge expression activity types are ways that teachers may want their students to express their understanding of a given topic. A sample of a product-oriented divergent

knowledge expression activity type is to create a film by using a combination of still images, motion video, music, and narration.

Hofer and Harris (2015) gave the rationale that teachers will want students to make their own project or product to show that they understand the concept being taught. Other product-oriented divergent knowledge includes building a model, generating a game, or designing an exhibit. Under Product-Oriented Divergent Knowledge Expression Activity Types, students are asked to create their own film. In this dissertation, students were asked to share their knowledge that they learned by creating their own movie and uploading it to *Flipgrid*.

C3 Framework and Historical Thinking Skills

Students across the nation are required to take social studies classes to earn their high school diplomas. In South Carolina, students in U.S. History take the End of Course (EOC) exam. The tests are multiple choice and count as a final exam in their grades. Students also take a benchmark in the semester course. There is support for teachers to be effective in the classroom. One of the goals for teaching social studies is to enhance lessons with historical thinking. The National Council for Social Studies (NCSS) holds conferences and sends out publications to provide fresh ideas for social studies teachers. One document comes from the C3 Framework that helps to bring focus to thinking historically in a social studies classroom.

The College, Career and Civic Life (C3) Framework believes in building critical thinking and helping students learn how to evaluate information sources. The framework provides guidance and support for rigorous student learning. Helping students develop a capacity for gathering and evaluating sources and then using evidence in disciplinary ways is a central feature of inquiry (NCSS, 2013, p. 181). One of the important differences between the old standards and the new standards involves a greater emphasis on historical thinking skills. In exploring how to

use internet primary sources to teach critical thinking skills in history, Carver (1999) argued, “It is difficult to teach critical thinking history skills when students’ primary sources of history are, in reality, secondary sources” (p. 7).

It is important for students to read historical documents outside of the textbook (Loewen, 2007, p. 3). Even though textbooks have evolved, there are often voices missing that students need to hear.

Content Knowledge (CK)

Part of the longstanding and overarching problem in social studies centers on the following observation by Loewen (2007): “All over America, high school students sit in social studies and American history classes, look at their textbooks, write answers to the questions at the end of each chapter, and take quizzes and examinations that test factual recall” (p. 340). Ninety-minute lectures and worksheets are increasingly viewed as ineffective for 21st century learners. Cuban (2001) wrote how the goal should be to transform teaching and learning into an engaging and active process connected to real life. Many leaders believe that whole-class instruction, and lecturing is obsolete in the information age (Cuban, 2001, p. 14). To that end, this study looked at how to engage students in historical thinking with an interactive website and multimedia presentations.

Loewen (2007) wrote, “Rather than having students memorize the names Amerigo Vespucci, Giovanni Verrazano, Ponce de Leon, Hernando de Soto, etc, and a phrase telling what each allegedly did, teachers can help students focus on the larger picture- the effects of Columbus’s 1493 expedition” (p. 358). When studying history, Columbus is seen as the discoverer of America. Textbooks leave out other worthy explorers’ contributions to the world and often minimize the experiences of indigenous people. Students can be misled about

Columbus. In my experience of teaching the topic, I would ask my students if Columbus discovered America, why are we not called Columbia? This helps to lead to discussion regarding the truth about the voyage of Christopher Columbus. Primary and secondary documents can be added to the curriculum, so students have a more well-rounded view of history. Imagine reading about the Holocaust and only hearing from Adolf Hitler. For these reasons, students should learn how to analyze primary and secondary documents.

Historical Thinking Skills

The term “historical thinking” may not be a term that is familiar to the average student. It was not until I was a doctorate student that I learned about historical thinking. As a teacher for four years of high school social studies, my students studied by reading primary documents and directing their own videos, but I never knew that there was a term for it. Learning about historical thinking is beginning to emerge in the primary grades. In fact, my son’s social studies vocabulary sheet consisted of primary and secondary sources.

Importantly, however, students should not be given primary and secondary documents without any scaffolding. It is imperative that social studies teachers model for students how to read these documents. Primary and secondary documents are different from a textbook because there are no comprehension questions at the end. Students must keep in mind that it is the opinions of someone else. Also, the language may be difficult for learners to read. Students should learn how to read the primary texts and analyze them as a historian. They must read for sourcing (Wineburg, Martin, & Monte-Sano, 2013, p.g. x). Sourcing refers to the ability of a student to understand read and critically think of who wrote the document and when it was written. Given that anything can be published on the web, students should learn how to avoid mis-information and biased opinions. Students should be able to tell fact from fiction. Along

with sourcing, contextualization asks students the context of when primary documents were written. Corroboration is comparing a text to another to check the accuracy of the evidence. Students should understand the background and setting to fully grasp the meaning of the text. Lastly, students should use claim-evidence. This is when students will use facts to support their argument. These are all important skills to read and think like a historian.

Why Use Historical Thinking and SAMR?

Historical thinking represents a way of thinking in which students are called upon to think like historians and are engrossed in certain tasks. Thinking like a historian includes being able to review primary documents by contextualizing, considering multiple perspectives, sourcing, and making claim-evidence connections. Students essentially ask the same kinds of questions as a historian. Guiding questions require students to engage in higher-order thinking. Technology is already being used to enhance historical thinking. Primary documents are available to teachers to use in classes. Teachers share resources in blogs, on websites, and over social media. Students can conduct research and design projects.

The first two research questions that I pose in this dissertation study are focused on evaluating whether there is a correlation between students' historical thinking scores and the SAMR level they achieve in producing their video artifacts at the end of the study. Due to the small amount of final video projects submitted by the subjects, I completed a case study on the two that completed all parts of the research. I analyzed artifacts and videos based on the historical thinking rubric and gave each participant a score based on their answers.

Statement of Problem

Teachers in the 21st century are facing issues that were never addressed in their college of education classes or preparatory programs. Prior to the 21st century, educators were referred to as

sages holding all the knowledge. In the digital age of today, students can Google their answers, which begs the question, “Why should I teach it?” The internet does make it easier for students to download the Constitution on their phones, but students are having problems deciding what is fact and what is fiction, and students are not connecting to the material. A student’s level of concentration on a video game should be the same as in the classroom, which is why teachers should find new ways to captivate students in historical thinking with technology.

Purpose of the Study

The purpose of this study is to determine the extent to which students engage in historical thinking through the use of an interactive website, and how the students understand and experience its various features and how they incorporate technology in their final video project. Mindtools are “tools for engaging learners in constructive, higher order thinking about the subjects they are studying for extending learning outcomes and expectations beyond recall, and for helping learners become self-directed, critical thinkers” (Jonassen, 1996, p. v). This format can serve as a model for teachers to make their own platforms online. This new learning avenue allows students to be involved in their own learning.

Digital Historians Website:

The *Digital Historian* website (<https://sites.google.com/view/digitalhistorians>) was built in Google Sites. (See Appendix A). This type of pedagogy was produced in a format intended for individual use and independent studying. There are six tabs on the site. The home page gives information about the meaning of historical thinking. There are also videos that include the State Farm commercial where the actors say, “I heard it on the internet, so it must be true.” This allows students to begin thinking about the perils of the internet. There is a history interest survey that students participated in at the introduction of the study. There is a discussion for

students to reflect on a car crash. Students are asked to think they just saw a car crash. The police receive statements from people in the crash, witnesses to the crash, and traffic camera footage. Students are to reflect on the following questions: Why would there be different stories of the crash if no one is just plain lying? What are the different types of people who might have even seen this car crash? What might make one person's story more believable or plausible than another person's story?

The four tabs constitute the mini-lessons. The content focuses on the Black Plague, the Middle Passage, the Industrial Revolution, and WWI. The mini-lessons are modified from Stanford History Education Group's *Reading Like a Historian* website. Some of the primary documents are used from the lesson. The background information and some of the discussion questions also originate from this source. I was given permission by Stanford History Education Group to use these lessons.

Each mini-lesson outline is the same. Students type what they know about the topic in a Padlet. Padlet is a free website where individuals can post pictures, videos, and sticky notes on the Padlet board to express ideas. After the Padlet, the researcher presents the hook videos. These videos are from *The History Channel* and pique the interest of the students. Following the hook videos, students have access to a brief background presentation video about the topic. Using Google Docs, students click on the link and automatically save their own documents to annotate. The primary and secondary documents are marked up by the student. On the *Digital Historian* website, audio files with recordings for each primary document are also available. Students were able to listen to the audio as they annotated their documents. There are high-resolution images. After students annotated the text, they played the arcade game that I created in *Classrooms.net*. Each game has 10 questions on it. Students choose what type of game they

want to play, and the website automatically generates a game based on my questions. Finally, students answered Google Form surveys asking them to think deeply about each topic. There are five questions on the Google Form. The questions are at different depths of knowledge. Students are asked first to identify different historical thinking concepts and finally are asked to analyze each document.

I selected the topics of the lessons for specific reasons. Textbooks lack personalization of battles and events. I picked topics that would not only intrigue and excite students but also bring a human element to topics. Due to the recent pandemic with COVID-19, a lesson on the Black Death struck interest with this generation. I opted for the Middle Passage due to general student curiosity about what life must have been like aboard a slave ship, and because it is not typically covered in great depth in history courses. The Industrial Revolution is a lesser-known turn of event in American history; however, it is one of great significance. The students connected to the primary documents from the point of view of children who worked in the mills. Finally, I chose the battle of Somme during World War I because I wanted the students to see how newspapers can treat similar events differently.

The last tab is for the final project. To see if the website was effective in the learning of historical thinking, I decided that for the final project, students would use the new knowledge that they learned from the study to create a video on a historical person. Students were instructed to conduct research and use multiple perspectives to create a video about a historical person, unveiling the unheard story that was left out of the textbook. Students created a video in *Flipgrid* based on what they learned about historical thinking.

The interactive website was designed to be different from a regular website. The students were able to download the primary document to their own Google docs. From there, students

highlighted the text, made comments, researched a word in the glossary, and studied pictures to help them better understand the primary document. There are several benefits to highlighting and commenting in the margins to aid learning. Yue, Storm, Kornell, and Bjork (2015) wrote that just the act of deciding what to mark may lead students to a deeper and evaluative level (p. 70). There are also comprehensive questions to help students better understand what they read.

Instead of focusing solely on an interactive website and how students felt about it, I wanted my participants to create their own video using elements of historical thinking that they learned on the website. SAMR is typically applied to teachers' integration of technology. I was interested to see if given the assignment of a final video project, what SAMR level would students produce at. After discussion with my dissertation committee, I drafted the following research questions.

Research Questions

RQ1: What is the relationship between historical thinking scores and the ability to create instructional technology artifacts at the SAMR Enhancement level (Substitution & Augmentation)?

RQ2: What is the relationship between historical thinking scores and the ability to create instructional technology artifacts at the SAMR Transformative level (Modification & Transformation)?

RQ3: How do students understand and experience their learning from the use of a Google site designed to facilitate historical thinking?

Significance of the Study

With the success of this interactive website, teachers might see this avenue of technology integration as helpful and could build websites with similar interactive components to motivate students in other subjects. Teachers can create their own websites and use them for students who are struggling. Google site is a program that is easy to use, and interactive websites can be adapted for each student and learning style.

Finally, textbooks cost a lot of money; however, this program is free to use. Google Sites is easy to use for an expert with technology. However, if a teacher is unsure how to build a website, it could be cumbersome. This website is not just another textbook. Teachers can use interactive features like text to audio, quizzes, and glossary.

As in every research study, dilemmas and issues are bound to arise. As a first-time researcher, I sought ways to overcome the inevitable challenges and to conduct the study in ways that would still be informative for my research questions. The following are a list of some of the limitations and delimitations for *Digital Historians*.

Limitations

My sample size is small. Only five students participated in this study. There were not enough participants to generalize to the entire population. For the final video project, two subjects produced videos for analysis.

Another limitation was the time of year. I completed the research portion during the last few weeks of school. It was after the End of Course testing, and students had to turn in their Chromebooks.

Delimitations

The location of this study is considered a delimitation. I decided to conduct my research in a face-to-face setting instead of online. The websites I chose should have been unblocked by the school district, and I limited my setting to school districts with 1:1 technology initiative.

CHAPTER 2: LITERATURE REVIEW

The COVID-19 pandemic changed the field of education. In a short amount of time, faculty members were expected to be IT specialists. They had to learn to unmute themselves in Zoom, post assignments in Google Classroom, and communicate virtually. It is unknown how this method will impact students' content knowledge. It was (and continues to be) a huge learning curve for instructors as they scrambled to create captivating lessons while students received information via an online platform. Public school teachers learned how to navigate the online world; however, they are still in need of practice.

One of the biggest questions that I heard from my peers was, "How do I teach when I am uncomfortable with the technology myself?" I have over thirteen years of experience as an educator. I taught social studies in grades 6-11 and spent over five years working with students. I was employed for four and ½ years as an instructional technology coach, and I have assisted instructors with all different levels of IT knowledge. It is a tricky question to try to answer because I, myself, have a love of social studies and technology. In my first two years as a teacher, I worked in a New Tech Network school. Our small learning community used computers every day, and they completed PBLs (project-based learning). Using my background knowledge, I launched a website that would be teacher and student friendly for my dissertation.

There were many sites to choose from, but I felt that Google Sites would be the easiest to navigate. I used Google Sites before in undergraduate work. I also did a Project Based Learning (PBL) with my seventh-grade students using Google Sites. They had to create a World War I yearbook. They were able to maneuver easily around Google Sites. More recently, I built a website in Google sites for Clearview County's Instructional Technology page. I created tabs on digital literacy, a biweekly newsletter (Tech Tip Tuesday), and formational YouTube videos. In

Digital Historians, beginners interacted with primary documents, listened to the audio for each document, played an interactive quiz to determine if they mastered the material.

For the purpose of this chapter, I explore why reading and thinking like a historian is important for students under the C3 Framework for social studies. I define historical thinking and expand on what each skill in historical thinking means and what research has shown to be successful teaching strategies. Finally, I explore how social studies and historical thinking are being used with technology.

Social Studies: From Rote Memorization to Historical Investigators

Since the beginning of World War I, tests have been given to students from primary school to college to determine what they know about The United States. According to Wineburg (2018), “Ironically, the 2001 (NAEP history) test followed a decade of the standards movement and a relentless push to raise the bar. Yet, inexplicably, results were identical to those from earlier tests” (p. 13). The questions continue to ask students to answer questions based on rote memorization.

The students in this study were enrolled in a United States History honors class. Students were expected to learn how to evaluate primary and secondary sources, put historical developments in context, analyze claims and reasoning found in sources, create a claim or thesis, and explain it in writing. *Digital Historians* helped introduce and build on the skills that they already had. Students practiced analyzing and making claims around primary documents.

During my research, I realized that students apply historical thinking skills in history classes; however, they refer to them as critical thinking skills. The College, Career, and Civic Life (C3) Framework for social studies standards are meant to focus on the importance of critical thinking, problem-solving, and participating skills (NCSS, 2016). Over 3,000 social studies

professionals, university scholars, and district and state representatives commented and reviewed the C3 Framework. It has four dimensions.1.) Developing questions and planning inquiries 2.) Applying disciplinary tools and concepts 3.) Evaluating sources and using evidence 4.) Communicating conclusions and taking informed action. Social studies time is lost at elementary levels due to high-stakes testing. Often times, social studies is incorporated in literacy. This can be seen on the RLA GED test. History related passages are used for students to analyze and answer questions. C3 promotes disciplinary literacy in social studies. The issue with reading just from the textbook is that students are disengaged by chapter questions and are in need of motivation (<https://www.socialstudies.org/standards/c3>).

To follow along with the C3 Framework, historical thinking is a new way that students can evaluate sources and use evidence. Educators need to share stories outside the textbook. Some wonder if technology can save our students. Wineburg (2018) challenged, “Despite today’s hype over flipped classrooms and blended instruction, history class, it seems, hasn’t changed all that much. Over three thousand high school students in a 2015 survey reported that their history teachers who lectured more than any other during the school day” (p. 26). Students should be learning to analyze information instead of spitting it back on standardized tests. They need to learn how to read and think like a historian for tests like the EOC. By reading and writing like a historian, learners become capable of discerning fact from opinion, and truth from lies. If the youth do not learn these skills, then what will they become as adults? This generation is the future of democracy. Students need to learn the skills of how to think critically. Once on a quiz, a student wrote that the Presidential Cabinet is where he keeps his snacks in the kitchen. Even though her remark was funny, it was also sad considering that we had spent days learning about the Cabinet.

Not Just for History Class

Historical thinking can be used in other subject areas. Students would be able to identify who the author is and analyze the date and place of that document. In science class, they can use these skills to help with research. The writings of an academic are different than the writings of a teenager. The language and vocabulary of academia are more advanced. Practicing evaluating documents will help them in science and other courses. In English classes, literacy skills are essential. Educators are reading teachers. Assessment-based literacy classrooms with authentic assessment activities involve real reading and real writing (Cooper & Kiger, 2008, p. 4). Literacy may also include viewing, the process of looking at media such as television, films, and videos in a critical, evaluative way (Cooper & Kiger, 2008, p. 8). Historical thinking will help build literacy skills as well. As adults, historical thinking helps with digesting news and navigating websites. These skills help to establish better global citizens.

Still, it seems many instructors are relying on what they know best such as PowerPoint, lectures, and worksheets. Tate (2016) devised 20 strategies that are more “effective for understanding and long-term retention of information than do worksheets or long lectures” (p. 4). One of her strategies is the use of technology. Even though students are fluent in sending text messages and Googling answers, they do not have the interpersonal skills needed for the actual real world. As new websites and programs become more readily available, they can sharpen and hone in on these skills. Youth and adults are falling for click baits and fake news. Wineburg’s (2018) research shows that at the middle school level, 82% could not distinguish between an advertisement and a news story, which is bleak (p. 3).

Young people often see history as mind-numbing and uncontroversial. History is written by the victors and the powerful, and it loses the accounts of the weak and vulnerable. Students

find themselves unable to connect to social studies and find it irrelevant to their lives (Foster & Padgett, 1999, p. 357). When the only way that students learn is through rote memorization, they are missing the rich dialogue of the past. History needs to be seen in a different light. Unfortunately, history is often seen in separate facts with no connection between events.

The National Council for the Social Studies (2016) wrote that an excellent education in social studies is essential to civic duty (p. 180). Some may wonder what the importance of social studies is especially to young adults that see the subject as lame. It thus can be questioned, what is the importance of reading or doing math? Citizens need to learn to read like a historian because it makes a person think about who wrote the article or quote. Historical questions help a person to learn how to analyze everything from websites to political ads and to even a political cartoon they see in the paper or online. As much as reading is ingrained in our everyday life, so should the skills of a historian.

The following are the definitions of each component of historical thinking. Included are research and teaching strategies.

Historical Thinking: Defined

What is historical thinking? According to teaching history.org, historical thinking is “complex and multi-faceted; focus[ed] on five key aspects particularly relevant to the K-12 classroom.” These are:

- Analysis of Primary Sources
- Multiple Accounts & Perspectives
- Sourcing
- Context
- Claim-evidence Connection

For the purpose of this dissertation, I focused on the definitions that were created by Sam Wineburg. The following are definitions of each topic of historical thinking.

Analysis of Primary Sources

Primary sources were once seen as books locked in an archive section of the library where librarians were only able to handle them. Primary documents have now come alive thanks to the Library of Congress, and the internet. With the click of a mouse, a teacher can find a primary document and share it with his or her students. According to Tally and Goldenberg (2005), “The promise of digital image archives is that they can make it possible for students and teachers to engage directly and routinely in this more authentic historical thinking process route to acquire a narrative grasp of history” (p. 3). Beginners should be exposed to primary documents instead of relying solely on the textbook. In the digital age, students should interact with digital text. In this research, my participants were able to download the primary source in their Google account and use the features to annotate the document.

Students must be explicitly taught what historical thinking is. One way to approach this is to consider Marzano’s (2004) six steps to effective vocabulary. Step 1: provide an explanation of the new term. Step 2: students restate the explanation of their new term in their own words. Step 3: create a nonlinguistic representation of the term. Step 4: students do activities. Step 5: discuss the terms with others. Step 6: students are involved in games (Marzano, 2004).

Resources that provide and stress the importance of using primary documents and historical thinking include Loewen’s *Lies My Teacher Told Me* (2007), Wineburg, Martin, and Monte-Sano’s *Reading Like a Historian* (2012), and Seixas and Morton’s *The Big Six Historical Thinking Concepts* (2012). These resources, as well as other websites, help teachers to use historical thinking and primary documents in their classroom. Waring & Robinson (2010)

researched developing critical and historical thinking skills in middle grades social studies. To put the students in the mindset of analyzing primary documents, researchers told students to go on a mind walk. Students were asked to recall the activities in which they were involved during the previous 24 hours. They were then asked to reveal some of the evidence of their own personal existence. An example of this would be at the gas station. There would be a receipt, video footage, witness from the cashier, and fingerprints on the handle of the nozzle (Waring & Robinson, 2010, p. 23). After analyzing photographs for primary resources, students gave a new definition of primary sources: “things used to prove that something exists and that give us details or provide evidence about the past” (p. 25). Students even connected to their own lives by saying that historians work the same way as Scooby-Doo and Law & Order.

Even though students may not always read historically in a history class, there may be evidence that both high school and college level learners seem to be able to learn historical context when reading multiple historical texts. (Nokes, Dole & Hacker, 2007, p. 494). Students view the textbook as objective truth, and they do not question or think critically about it (Burenheide, 2007); thus, they need to be exposed to a variety of texts. Kohl and Zinn joked that Loewen should have called his book *Lies 70% of My Teachers Told Me* (Loewen, 2007, p. 363). Loewen (2007) researched that the weight is getting heavier for U.S. History books, but they can be smaller since students now have access to the web where primary documents include newspaper articles, the census, historic photographs, and secondary interpretations (pp. 3-4).

Instead of history teachers relying solely on the textbook, documents could include diary entries, newspaper articles, speeches, census statistics, art, maps, letters, and other primary resources. It is not enough just to have primary documents. Students need to read and think like a historian to fully understand. As Nokes (2007) points out, students must be explicitly taught how

to read primary documents. *Historical Thinking Matters* (<http://historicalthinkingmatters.org/>) is a website that focuses on key topics in U.S. history and is designed to teach students how to critically read primary sources so that they can construct historical narratives.

Nokes, Dole, & Hacker (2007) conducted a study to evaluate whether high school students could learn to use heuristics used by historians and learn history content in a quasi-experimental design. Two hundred and forty-six 11th graders from eight history classes participated. Student and teachers were observed for 3 weeks. During observations, they found that none of the teachers provided opportunities for students to read multiple texts on a regular basis and did not teach heuristics. When tested, students who read multiple texts with a focus on heuristics outperformed those who read traditional texts.

Multiple Accounts and Perspectives

Besides being heavy, a textbook is a single-text approach to history learning (Stahl, Hynd, McNish & Bosquet, 1995). Even though the textbooks have prettily designed and end-of-section questions, students are not receiving a well-rounded account of history. The majority of authors of the textbooks tend to be white males (Loewen, 2007). Dialogue from diverse perspectives is missing. History needs to be about learning from different points of view. Imagine learning about the slave trade from just the captain of a ship. The experiences of those who were captured yield a different tale. Students need to be informed from all accounts. Stahl, Hynd, Britton, McNish, and Bosquet (1995) wrote, “Providing students with multiple perspectives on a particular event can aid them in constructing a richer and more detailed mental model of that event, thus enhancing content knowledge” (p. 40).

One way to draw students into discussions about multiple perspectives was through the use of a car crash. Students were introduced to the idea of multiple perspectives by imagining

that there was a car crash. They had to imagine that a car crashed into a school bus. Thankfully, no one was injured. The police arrived, and they interviewed everyone involved. As statements were given, it became clear that no one was lying, but there were discrepancies. The officer in charge asked who was involved in the car and bus crash. Students had to ponder these questions: How did these accounts differ from one another? What might have made one person believe one statement was more plausible than another?

Barksdale (2013) learned with his young students the importance of self-discovery when having students read primary documents aside from reading the textbook. His students were able to analyze the primary document and reach conclusions that were the same in the textbook. The main difference was that the students were able to reach their conclusions by themselves instead of being told in a book.

Students must be exposed to more than one resource. In order for students to form an accurate picture of the past, they must analyze and synthesize documents from multiple accounts and perspectives. Multiple accounts and perspectives can include, but are not limited to, primary documents, diaries, artifacts, and works of art. To think historically, students need to learn to read, question, and analyze sources. Students see different perspectives, and thus, they begin to inquire more about the source.

Sourcing

Sourcing in historical thinking terms refers to questioning the author or authors of a document and their intent in writing it. Individuals must ask questions about the documents that include the following: Who wrote the document? What was the purpose of writing the document? Why did the individual write the document? Further, understanding historical context is important to history because learners comprehend that a document is not free-standing in time.

Understanding historical events involves analyzing the events and historical era in which the document was written. Thus, students must understand that the time and context influence primary documents.

A student must be taught to read primary documents as a historian. This is different from how an average person might analyze a document. Historians begin with sourcing. They read to see who wrote it and try to answer the following questions: “Who wrote this source and when? Is it a diary entry? A memo obtained through the Freedom of Information Act? A leaked e-mail? Is the author in a position to know first-hand, or is this account based on hearsay?” (Wineburg, Martin & Monte-Sano, 2013, p. x). It is important that students begin the process of sourcing. Students are reading news on Facebook and believe that it is accurate. This is leading to false information being shared over again in fake news. Sourcing allows the reader to actively engage in the text and not be a passive reader. Students will be able to use the internet to find information about the author and reach a conclusion different from a student who reads it as a complete and final truth.

One of the activities that Wager & Robinson (2010) did was reading to the students *The True Story of the Three Little Pigs* by Jon Scieszka and Lane Smith. It is a story from the point of view of Al, the big, bad wolf. Students were familiar with the original tale of the three little pigs. They asked students, “How does this different version of the *Three Little Pigs* relate to history?” Students learn about sourcing and how the multiple accounts have different perspectives from this discussion.

Context

The other component of reading and writing like a historian is the idea of contextualization. It is the idea that events must be located in place and time to be properly

understood. This idea is important to historians because the document must be fixed in a time and place of when it was written and the forces that have influenced it. Students should be asking themselves the following questions: “What was the context? When and where were these words uttered?” (Wineburg, Martin & Monte-Sano, 2013, p. x). It is easy for a person to see a meme online and believe that the quote used with the person is true. There are arguments on social media where a person reposts or reblogs a quote out of context. These are discernment skills that students need to develop to be better readers.

Ohn (2010) wrote that historical contextualization demands thoughtful effort to interpret historical agents and events in terms of the historical context of the time when they lived (p. 56). In his study, there were a group of 23 senior elementary teacher candidates enrolled in a social studies method. They first studied Rosa Parks and watched *Teaching Tolerance* videos and YouTube videos about her. He had them write a news report about Parks addressing questions that arose while they did their own research. They had a discussion where students reported their findings. Some argued that their information was correct because it was a primary source. They decided that all primary sources contain perspectives or hidden agendas (Ohn, 2010).

New Visions for Public Schools also has a lesson on contextualization. The scenario has a fight between two students, Justin and Max. When the principal composes the reports, he includes how Justin’s dad is new management at the factory and Max’s parents were fired from that factory. As the report is presented, it becomes clear that the principal answers all the questions for contextualizing a historical event.

Claim Evidence Connection

The last part of historical thinking is the claim-evidence connection. Students need to be able to read a primary document and use evidence to support claims. The use of evidence is

important when students are writing Document Based Questions (DBQ). Participants generated a multimedia presentation applying multiple pieces of evidence. Claim-evidence connection is important to historians and for students to support their answers. Lastly, claim-evidence connection refers to the historical arguments that individuals have about primary documents. Students digest that history is not static and is often heavily debated. Historians support their position with evidence. Even though collaboration is not one of the key historical thinking concepts, it is imperative for novices to work together to fully understand primary documents.

For this study, students worked alone on the final project. The final project was taking all the skills and directing a multimedia presentation on the true story of a famous person. They were instructed to find primary and secondary documents and include multiple perspectives about that person. Possible famous people included Pocahontas, Christopher Columbus, and Rosa Parks. Students built the video in either iMovie or Movie Maker and uploaded the video to *FlipGrid*. *FlipGrid* is a free website where learners upload videos and can even produce a video. Videos are only one minute and thirty seconds long by default, but the teacher can change that to five minutes.

In any field, it is important for the researcher to know what has been successful in the field. I explored how historical thinking was used in disciplinary literacy. Historical thinking is not a new concept. There is plenty of research on it. The use of a digital platform is limited. There are only a handful of websites that engage students in historical thinking. I branched out my research to include how historical thinking is being used with technology.

Primary Sources & Technology

More and more teachers are finding ways to catch the attention of their students. Some have created Escape Rooms in their classrooms where students must figure out a puzzle to crack the

code to escape. Others have used games like *Jeopardy!* And *Who Wants to be a Millionaire?* for review purposes. What appears to be popular is asking students to imagine that they are investigators, and they must assess clues. Swan, Hofer, and Locascio (2008) researched the use of case-based historical instruction in a 5th-grade social studies class. They called it the Historical Scene Investigation (HSI) Project. Originally developed in 2001, the HSI project materials were created to pique the interest of students in K-12. Swan, Hofer, and Locascio (2008) examined the historical reasoning of 5th-grade students after using HSI-based instruction.

The purpose of the HSI Project was to use inquiry-based instruction and for students to use primary documents in which students would use analytical skills. The research question posed was to know if discrete, short-term exposure to the materials strengthened historical thinking. The study was conducted in a fifth-grade class in which students were exposed to three separate 2-day HSI investigations. The historical investigations were about the Jamestown colony, the Battle of Lexington Green, and the story of a runaway slave. The investigation used the CSI television show to grab the interest of the students. Evidence in data collection and analysis were detective logs, classroom observations, and student interviews. The researchers used a nine-level rubric analysis of the student responses. They found that half of the class responded with unsupported responses to the documents. The teacher is quoted as saying, “I think the biggest thing that I like in all my classes ... they are seeing better that the textbook is written from an American perspective. I think my students are better about not just reading and accepting it” (Swan, Hofer, Locascio, 2008, pp. 89-90).

Tally and Goldenberg (2005) piloted a study that examined middle and high school student performance on an online historical thinking assessment task. Teachers received training on online primary materials in history. They sought to see if students were able to think

historically. The research questions in the pilot were the following: “How do students describe their current history or social studies class? What historical thinking skills do these students exhibit? (Tally & Goldenberg, 2005). Students were given an image and were told to take notes on details and draw conclusions based on their observations. Seven middle and high school teachers from public and private schools participated. Prior to the study, teachers received professional development, which included standards instruction, an introduction of information to the student, and reassurance that there were no right or wrong answers (p. 5). Students completed the task within one class period. 159 middle and high school participants from four different schools completed the online activity. The data analyzed were their responses to the activity and questionnaire. About a quarter of the subjects said that their current class feels different from lecture-based instruction because they read through the primary documents, used technology, and worked in groups. The greatest percentage of students (nearly half) said that their current class is different because of the roles that technologies play. In their reflections, they said that their computers helped to lead to interesting assignments and activities. Students even saw primary sources as an important element in their learning process. Students enjoyed learning to work with different media and materials, including primary documents (Tally & Goldenberg, 2005, p. 11).

Researchers also found that students were able to use historical thinking skills. The AP and honors classes used historical thinking skills the most, but even standard and remedial students had sharpened historical thinking skills. Tally and Goldenberg (2005) concluded that students did not need direct teaching about a historical era or context. They were more motivated from hands-on learning. For recommendations, they suggest that students curate and publish on websites their own historical exhibitions. They were able to note detail and draw

simple inferences. Participants used corroboration and examination when studying a map. Students were able to view images and learned skills of document analysis that were transportable across historical topics (Tally & Goldenberg, 2005, p. 16).

Historical thinking can also be thought of as a literacy term. All teachers, no matter the subject, are reading teachers to an extent. In this literature review, I also researched how historical thinking was used as disciplinary literacy.

Disciplinary Literacy for Historical Thinking

Disciplinary literacy is the approach that asks students to read, write, think, and speak as a member of a discipline. Kukral and Spector (2012) wrote that students in this type of environment see themselves as doing work the way that a member of a discipline would work in his or her field. Shanahan and Shanahan (2008) wrote that during middle school and high school, many students begin to master even more specialized reading routines and language uses. They can think and write historically if given lessons and opportunities to practice. This study shows pre-service social studies teacher need to be provided instruction on how to include historical thinking in their lessons.

Nokes, Dole, and Hacker (2007) completed research in which they determined high school students can use heuristics while reading historical texts. In their article, they refer to the problem of teaching history; readers learn facts rather than criticize information. Sourcing, corroboration, and contextualization are rarely taught.

The Carnegie Corporation of New York's Council on Advancing Adolescent Literacy (Kukral & Spector, 2010) has noted that adolescents may "struggle with text for a number of reasons, including problems with vocabulary knowledge, general knowledge of topics and text structures, not knowing what to do when comprehension breaks down, or lack of proficiency in

monitoring their own reading comprehension.” Reading in the content areas is not just a history problem. Young students need help to read in all content areas. Historical thinking needs to take place and be demonstrated in the classroom. “Schools are unique sites for youth across class and ethnic boundaries to learn to read such documents” (Kukral & Spector, 2010). They even recommended that students in elementary grades use primary documents to begin their skill building early.

Thinking Historically is for Everyone

As young as kindergarten, students can think historically (Nokes & Hacker, 2007). Using primary sources gives students a sense of the reality and complexity of the past. Historical reasoning is important to develop so that students can interpret new information or develop a deeper understanding of the material. They rarely engage in sophisticated reading processes in secondary history classes (Nokes & Hacker, 2007). For some students, the textbook is thought of as a primary document. When it comes to credibility, students are more likely to choose a textbook over an eye-witness account. Textbooks are also overused and limit the opportunities for students to read like historians (Nokes & Hacker, 2007). Technology allows for easy access to primary and secondary documents and allows for a different teaching approach from presenting students with the facts of history. In classrooms, teachers are finding that using historical thinking not only makes students into good readers but also good students and good learners (Barksdale, 2013).

According to Bain and Weston (2012), “Achievement is enhanced if teachers believe they are change agents, that all students can learn, and that they are the major agent for encouraging students to feel confident” (p. xi). There must be a way to reach out to educators to show them that technology does not drive instruction. Instructors often think that if they have the

latest technology, this will lead to a revolution in their classroom. Bain and Weston (2012) reflect on every teacher's dream, "If only I had the next new thing!" (p. 3). In an evaluation State of Maine Learning Technology Initiative (MLTI) reported that only 60% of participating teachers used their laptops weekly to conduct research for lessons, develop instructional materials, or provide classroom instruction (Bain & Weston, 2012). The most commonly used technology was digital cameras (88%), followed by presentation (82.4%) and tablets at 77%. Some respondents like clickers and discussion boards were at 29% (<https://citejournal.org/volume-18/issue-2-18/science/teachers-and-technology-present-practice-and-future-directions/>). One common assumption about technology with students is that children will quickly and inherently learn to use it in masterful ways, then apply that masterful use to their own learning (Bain & Weston, 2012, p. 7). In reality, students need to be taught how to use technology in order to think historically. Students do not intuitively know how to use Google Docs to annotate documents.

Technology Content

In a recent article by Hammond and Manfra (2009), the authors provide a three-part pedagogical model to guide social studies teachers to make the best use of technology and social studies content. Even though there is a growing interest in technology-mediated instruction, there is a low rate of technology by history teachers, perhaps for being slow adopters. Hammond and Manfra developed the giving-prompting-making approach to instruction. Giving it to the students straight is lecturing the content to them where they are passive and absorb the information. In the prompting approach, students examine, make inferences, or create associations once the teacher becomes a facilitator. The making phase expects the youth to generate a product or produce a documentary and support a conclusion while the teacher acts as a supervisor and provides

feedback. In the making phase, students provide opportunities for content knowledge formation and skill development. This three-part pedagogical approach fits with the TPACK framework because they are parallel and complement one another.

Mindtools

Jonassen (1998) wrote, “Computers can most effectively support meaningful learning and knowledge construction in higher education as cognitive amplification tools for reflecting on what students have learned and what they know” (Jonassen, Carr, and Yueh, p. 32). Mindtools are computer applications that, when used by learners to represent what they know, necessarily engage them in critical thinking about content they are studying (Jonassen, Carr & Yueh, 1998, p. 24). It requires students to think about what they know in different, meaningful ways.

Jonassen wrote that learners can create their own hypermedia knowledge bases that reflect their own understanding of ideas. Applying Mindtools to this study, students directed their own Mindtools and presentation on new information gained. In *Computers in the Classroom*, Jonassen explains that many students can not engage in cogent and coherent discourse because they are rarely asked their opinions on topics. They “have been too busy memorizing what the teachers tell them” (Jonassen, 1998, p. 29). Even though Mindtools have been around since 1998 and technology has evolved, memorization is primarily still being taught in social studies classes. Jonassen wrote that Mindtools represent a constructivist use of technology where we construct knowledge. Students need the opportunity to create their own conceptualization of a content domain. Jonassen explains that the computer enhances their thinking and learning when working with computers instead of the computers controlling them.

Jonassen, Carr, and Yeuh (1998) found, “Mindtools are unintelligent tools, relying on the learner to provide the intelligence, not the computer” (p. 31). This is such a powerful statement

because teachers can become overwhelmed with the use of technology in the classroom and think that students are learning just because they have a computer. In this dissertation, I investigated Mindtools to captivate students in historical thinking. The website cannot compel a student to think like a historian; instead, students utilized software to show what they have learned through Mindtools. Mindtools are used to attract learners in constructive, higher-order thinking about the subjects that they are studying.

Jonassen breaks Mindtools into classes. Semantic organization tools are used to analyze and organize what they know or are learning. Examples include databases and semantic networking. In Databases, learners develop a data structure, locate relevant information, and search the database to answer content questions. Under semantic networking, concept and visual maps help learners see connections and relationships. Programs such as SemNet, LearningTool, and Inspiration allow students to label relationships between concepts. The reasoning behind semantic network is to represent the structure of knowledge that someone has constructed.

Semantic organization tools are for when there is a relationship among ideas. Dynamic modeling, on the other hand, is for describing the relationships among ideas. The Spreadsheets tool is an example of dynamic modeling. This Mindtool is used for representing, reflecting on, and calculating quantitative information.

Creator of Mindtools, Jonassen (1996) believed that “learners should use the media to generate their own instruction, and in doing so, learn more about the content” (p. 193). Mindtools was applied in this study through the multimedia presentation that the students created using different software applications that included iMovie, *FlipGrid*, and MovieMaker.

One of the latest technology trends is hypertext. Hypertext refers to an enhanced text because the reader has greater control of what is being read and the sequence in which it is read.

The primary documents in each section have hyperlinks to a Google Doc that has the text of the audio files. Students are actively participating in the Google Doc by annotating the text, highlighting, typing comments, and inserting pictures or videos to help them understand the material. It is a new form of notetaking.

In Joanssen's *Computers in the Classroom*, he notes that Lehrer, Erickson, and Connell's studies found that on-task behavior increased over time, transforming stages of development such as notetaking, coordinating with team members, and designing the presentation.

In this dissertation, Mindtools was incorporated by the multimedia presentation that subjects created. When students are engaged in creating multimedia presentations that have text, graphics, sound, and animation, they construct knowledge that has more metacognitive and motivational advantages than someone who just sits and listens to a lecture.

How TPACK and Social Studies Are Being Used in the Classroom

Teachers are using technology to enhance learning in social studies classes. Koehler, Mishra, Kereluik, Shin, & Graham (2014) wrote that teachers often lack the knowledge to successfully integrate technology into their teaching (p. 101). The TPACK framework advocates that teachers understand the knowledge of content, pedagogy, and technology. Hogue, Yang, and Walsh (2000) are just some examples of how TPACK in the field of social studies is being used. These projects include websites and interviewing relatives.

Hogue (2000) researched how her students would use historical thinking skills when researching family history. She asked them to analyze a picture like a historian in order to prepare students for their own learning. Next, students were shown how to record videos on devices and how to scan them into the program. They were then instructed to interview a member of their family. Hogue also suggested letting students ask multiple members about a

picture and see similarities and differences. Students then designed a reflective presentation on the computer of what they discovered and learned.

Yang (2009) conducted research on a computer-mediated oral history project from elementary, junior, and senior high schools in Taiwan. The project called for complex-problem solving and higher-order thinking. Yang noted how by captivating historical research students, they developed “ways of thinking carefully about the nature of evidence and reliability and validity of sources” (p. 243). It also promoted team spirit that students felt as historians. This research shows that when students take ownership of the project, they will both learn and lead more.

The Participants’ Profile

The age group studied for this dissertation were high school students. There are many factors that need to be considered for this special group. Students secrete hormones that trigger pubertal growth and physical changes. The thyroid gland, pituitary gland, adrenal gland, testes in males, and ovaries in females all work together to change adolescents. This is mentioned for me to realize the physical changes that are taking place in the sub-group that have impacted dynamics. Middle and high school students often focus on their bodies, which will influence their mental state, all relevant considerations for the studies in this dissertation. The brain has two major brain growth spurts in which the cerebral cortex thickens. This allows them to think abstractly and reflect on their cognitive processes (Bee, Boyd & Johnson, 2006). As this occurs, individuals can think more abstractly, and this is the reason why this subgroup was chosen instead of a younger age group.

Piaget called the stage for 12 and 16 years old the formal operational stage. This means that students will reason logically about abstract concepts. They also can search methodically for

an answer, and that is referred to as systematic problem-solving (Bee, Boyd, & Johnson, 2006). Students at this age also can derive conclusions from hypothetical premises known as hypothetical-deductive reasoning. Adolescents begin to process information faster and use processing resources more efficiently at this stage.

A common manifestation of hypothetical-deductive reasoning is what Elkind called adolescent egocentrism. It is the belief that one's thoughts, beliefs, and feelings are unique (Bee, Boyd, & Johnson, 2006). This idea of adolescent egocentrism could also give students courage to try out various attitudes and behaviors.

Middle and high school students also experience sensation-seeking and can be reckless. Risky behaviors are more common in adolescence due to peer pressure and peer acceptance. These students face many social challenges. They include drugs, alcohol, tobacco, teenage pregnancy, body image disorders, eating disorders, depression, and suicide.

Students who were targeted for this study were going through Erikson's (1950) psychosocial stage of identity versus role confusion. In this stage, Erikson said that every adolescent must examine his identity and the roles he must occupy. Positive characteristics gained are fidelity, an adaptation of a sense of self amid pubertal changes, and a search for new values (Bee, Boyd, & Johnson, 2006). They undergo what Erikson referred to as the identity crisis.

James Marcia believed that adolescent identity formation has two parts: a crisis and a commitment. Crisis is when old values are reexamined and could cause upheaval. Another development of the teenage brain is the locus of control. It refers to a person's beliefs about the causes of events. Through an external locus of control, youth see it as outside of themselves. Internal locus sees that they are responsible for the outcomes (Bee, Boyd, & Johnson, 2006).

Summary

Even though individuals may view social studies as a boring subject, teachers are doing their best to seize the attention of the digital natives in the twenty-first century. There is a revolution to stop the one-sided narrative of a textbook and instead use primary documents. Research shows that students can participate in historical thinking when they are scaffolded. Through the use and ease of technology, history educators can now find primary documents from online resources that otherwise would have been locked up in a library. There are also organizations such as the C3 Framework and *ACOT*² and former educators like Marica Tate, James Loewen, and Sam Wineburg who have published books and papers on how to entice students through the use of technology and historical thinking.

Technology is not new. Using the SAMR model, educators can be rated on how technology is being used in the classroom. If a teacher is using a Smartboard as a projector, then she is at the Substitution level. The website *Reading Like a Historian* by Stanford History Education Group provides teachers with lesson plans, graphic images, primary and secondary documents and worksheets to help prepare students for learning through historical thinking.

CHAPTER 3: METHODOLOGY

The purpose of this study was to determine the extent to which students engage in historical thinking through the use of an interactive website, and how the students understand and experience its various features. Students learned about historical thinking through four topics that pertain to social studies. After the four learning modules, students produced a multimedia video in iMovie or Movie Maker based on the true story of a famous person. Students were asked to upload their videos to *FlipGrid*, and the researcher examined the content of the movie to determine the manifestation of historical thinking skills on a rubric from the UMBC Center for History Education. The researcher also assessed the content of the movie to assign it a score according to the SAMR model (See Appendix B for rubrics). The SAMR model is meant to capture the degree and ways in which technology is used. The four levels of the SAMR model are as follows: Substitution, Augmentation, Modification, and Redefinition. In addition to the final video project, other instruments for analysis included a historical interest survey, an exit interview from each participant, and participants' reflections on Google forms. The website created for this study was called *Digital Historians* and was built in Google Sites (<https://sites.google.com/view/digitalhistorians>). It includes videos from YouTube, background videos, Padlets, audio files, an arcade game, and reflections using Google Forms. Students were instructed to create a video using *Flipgrid* on a historical person using primary sources and historical thinking skills, including sourcing, corroboration, contextualizing, and claim evidence. Critical reading is also a criterion on the rubric. After determining their score, the researcher applied the SAMR model to determine which technology integration level the participant achieved (Substitution, Augmentation, Modification, Redefinition). I was interested to find to

see if high level of SAMR parallel to high historical thinking scores on the rubric. There is an assumption that computer access and use increases student achievement.

The researcher taught the students about historical thinking through a Google Slides presentation. Even though the other component of the research questions were pertaining to SAMR levels, I did not discuss with the participants about how I was going to grade their project using the level. However, I did explain that in the IRB form that I would assign a SAMR level. I decided not to teach SAMR levels to the students because I was interested in witnessing the SAMR level of students naturally. I felt as a researcher that I would overload the students with too much information. However, upon analysis, students could have benefited from being educated about SAMR because they might have added more technology in the project. If participants understood the rating systems for the project, they might have been more willing to incorporate technology differently.

This study looked at the relationship between students and SAMR. A fundamental challenge for teachers is maximizing the learning and achievement of each student in her classroom while they are at different levels. By acknowledging SAMR in students, a teacher can arrange projects and assignments that fit their levels. Students would care about their SAMR level to guide them in developing necessary skills in a post-secondary world. My participants are juniors in high school, and after another year, they will be entering the workforce, universities, or technical schools. By being cognizant of technology integration, these young students will realize that technology is more than an instant message or an easy way to Google facts.

Research Design and Questions

The study was conducted at a school district in the southeastern United States. This dissertation operated under the standards of action research, which is defined as “any systematic inquiry conducted by teachers, administrators, counselors, or others with an interest in the teaching and learning process” (Mertler, 2009, p. 4). The research design was a case study and employed a case study with qualitative thematic coding analysis. The main goal of this study was to address how an interactive website might be able to facilitate historical thinking by the students. Research questions included:

RQ1: What is the relationship between historical thinking scores and the ability to create instructional technology artifacts at the SAMR Enhancement (Substitution & Augmentation) level?

RQ2: What is the relationship between historical thinking scores and the ability to create instructional technology artifacts at the SAMR Transformative (Modification & Redefinition) level?

RQ3: How do students understand and experience their learning from the use of a Google site designed to facilitate historical thinking?

Setting

The setting for this dissertation was in a rural area of the southern section of the United States. It took place in one class, and the teacher that helped to facilitate this research was a veteran teacher of more than 20 years. One section of a United States History honors class participated in this study. It was concluded by the researcher that these students might benefit from an extensive dive into the analysis of primary documents. As they worked through the website, it was hoped that the students would strengthen their skills in reading primary documents.

Sampling Strategy:

Confidentiality was given to the school district, the high school, and the teacher. Names have been changed to protect the data from Digital Historians. The population included high school social studies students at Harper High School in the Clearview School District. Due to the obvious constraints of working with all of the students at Harper High School on a qualitative study, I narrowed to working with a sample. A sample is a subset of a population (Mertler, 2009, p. 248). The selection of participants was conducted through convenience sampling. Schrieber and Asner-Self (2010) explain that convenience sampling occurs when the researcher has access to the sample {and} can easily contact the sample (p. 85).

Sample Size:

The sample size for this study was five. Students were enrolled in high school and were currently taking a U.S. History class. During the history interest survey, participants were asked their age at the time of research. All participants were seventeen at the time of research and juniors in high school. At the time of research, the Clearview school district had a 1:1 initiative in which students had Chromebooks and Google accounts. Their Chromebooks were equipped with cameras, and students had access to Google Sites. The sample consisted of four females and one male.

Participant Recruitment:

Clearview School District was close in proximity to my geographic region. As a researcher, I felt it was important to engage students in a face-to-face format for this project. Even though online classes like Zoom became popular due to COVID-19, I sought a way to carry out this dissertation in person.

I was aware that Clearview School District was 1:1 technology, and I approached the superintendent to ascertain if I could investigate my research questions at the high school. Harper High was the only high school in the district. I was granted approval, and I met with the principal and answered questions he had about my study. He asked that I not implement my research until after the End of Course Test for U.S. History was completed. Next, he paired me with Ms. Applebee because she had a U.S. History Honors class that had sixteen students. She was eager to launch a research study in her class. The following week, I returned and spoke to the students about my research. I distributed Duquesne's IRB-approved parental consent and student assent forms to them.

To complete this study, I formed a dissertation committee with a dissertation chair. After writing chapters 1-3, I was granted permission to continue with my study at the dissertation proposal meeting. I corresponded with the instructor and the assistant superintendent to discuss the process of completing my study at the school. After the approval of IRB, I drafted and sent a proposal letter to the district's superintendent. He reviewed my proposal, and I was granted approval to conduct my research at Harper High School. Five students in the class out of sixteen agreed to participate. Those students who did not wish to participate still completed the lessons in the Google Site; however, their answers from the data set were removed. No students were harmed during the study, and they did not receive any incentives such as bonus points on their grade.

Procedures

My research study is intended to contribute to understanding TPACK in the areas of secondary social studies. I have first-hand knowledge of the boredom students sometimes express in this subject area. For my research, I decided to analyze the latest technology and if it

would motivate learners. I found the materials for my topic on the website *Reading Like a Historian* (<https://sheg.stanford.edu/history-lessons>). The website houses lesson plans, worksheets, and questions to assist educators in bringing historical thinking into their classrooms. However, the documents that are provided could be used with paper and pencil. I reflected on how I could use SAMR in my research. To be at the redefinition stage, I was not substituting with technology. *Reading Like a Historian*'s lessons are all for paper and pencil activities. I modified their information and created a Google site that redefined and changed a traditional way of teaching to one with a Google site that is embedded with Google Docs, Google Forms, Padlet, and YouTube videos. By creating my own website and bringing in audio files, YouTube, Quizizz, arcade games, and *Flipgrid*, I supplemented some of their materials to determine if technology can further have an impact on historical thinking.

In direct instruction, I presented a Google Slides presentation to the class and explicitly taught historical thinking concepts. I fashioned a PowerPoint with activities for each historical thinking skill (See Appendix F). It includes a check for understanding on primary and secondary sources and reading of the book *The Three Little Pigs* to teach multiple perspectives.

I deliberated about specific learning objectives and the structure of the content. I contemplated on the format of each mini-lesson that would best suit the needs of the students. I included audio readings of each primary document. I lacked experience in this field, so I contacted BPO Films for guidance on recording the documents.

BPO Films (<https://bpofilms.bigcartel.com>) is a company founded by three Pittsburgh natives. They direct films and television series for online consumption. One of the founders is Blake O'Donnell. He is my eldest brother. I reached out to him because he had experience with audio equipment. I lacked the confidence in reading fluently, so I outsourced the audio files to

BPO Films. Blake O'Donnell and Ben Dietels recorded each set of documents and independently emailed them to me. I uploaded each audio file to my Google site. Blake O'Donnell also did the narration for the background PowerPoint slides.

I had originally planned this research using iBooks. Each iBook chapter was going to focus on a learning module. I realized that it would be too complicated with an iBook. First, the students would need to have iPads. Secondly, I would have to download the iBook to their iBook library, which is a cumbersome task to manage. Lastly, once I edited the book, I could not re-publish those changes. As I deliberated on the avenue I could take to create a historical thinking platform, I attended a Google Bootcamp class. During the six-hour class, I rediscovered Google Sites. Previously, I constructed an Instructional Technology website for a district, which I owe to my Google certification of educator level 1.

As I decided on using Google Sites, I knew that I would be able to use other Google apps for this dissertation. The school district operates Google as their LMS, thus students were familiar with the apps. Previously, I had created surveys in Google Forms and was familiar with its features. I generated the history interest survey and end of mini-lesson reflection in Google Forms. I built the primary documents in Google Docs so participants could download and annotate. Students changed their fonts and font sizes and defined words. The historical thinking presentation was also developed in Google Slides. It is also important to note that every widget is embedded on the *Digital Historians* website. Participants did not have to leave the site to watch YouTube videos or take the forms. This is important because students' off-task behavior can be easily observed.

With this background, it was not demanding for me to construct a website that was accessible to learners. The link was shared with the teacher and students through their Learning

Management System-Schoolology. Technology coordinators unblocked the website. Students were able to access Google Forms and student primary documents with their school's Google account. With Google Sites, I could edit it up to the day before the first day of research if I wanted, and those changes would be seen.

Human learning takes place visually, auditorily, and kinesthetically. Students learn visually (Biradar, Thorat, & Vaidya, 2020), and since there are many different videos produced by companies, it was not challenging to find videos that grabbed their attention. For this dissertation, I wanted my students to be visually involved. It was manageable to upload YouTube videos on Google Sites. The first hook video was from a music video called "The Bubonic Plague." The rap song was based on "Hollaback Girl" by Gwen Stefani. There was a clip from *Roots* from the *History Channel* that was a reenactment of the slave ship. There was a short presentation on the Triangle Shirtwaist Factory that tells the story of the people who perished during the fire. This intrigued students as they studied The American Industrial Revolution. I included a video that had facts about The Industrial Revolution that was produced by Happy Learning Revolution for Factory Life. The Battle of Somme presentation was a brief explanation of trench warfare from the *History Channel*. The narration and images were powerful.

I located images online through Google Images. I pulled images that were relevant to the primary documents and inserted them on the website. With the help of my eldest brother, we constructed the background videos with pictures for each learning module. The background slides were created by Stanford History Education Group (SHEG) Reading Like a Historian: (<https://sheg.stanford.edu/history-lessons>). Each presentation was about 3-5 minutes long and included important information that would help prepare the students to learn more about the

module. This information was not required to know, and it was not a history lesson. It provided a brief background for each mini lesson.

Timeline:

The following is a brief timeline of the course for Digital Historian's research project.

October 2021- Dissertation Proposal

January 2022- IRB Approval

April 2022- Approval from superintendent and Harper High School's principal

May 12, 2022- Research presentation to students- students receive IRB assent and parental consent

May 23-27, 2022-

Digital Historian's Learning Modules

- What is historical thinking? Overview and lesson

- Black Plague

- Middle Passage

- Factory Life

- Battle of the Somme

May 31, 2022- Multimedia final project uploaded to *FlipGrid*

Data gathering began in the spring semester of 2022 of one U.S. history class. The course of this study with students was conducted over a total of six meetings.

Session One- May 12, 2022:

The first session was an introduction to the research topic and a discussion of the requirements for the final project. All students read over the IRB forms for parental consent and

student assent. I showed the website to the students and answered any questions that they had about the research. They were also given instructions for the final video project, included below:

“You have analyzed, contextualized, and scrutinized documents after documents! It is now time to take what you have learned and create an accumulated masterpiece!

Your task: Research a historical figure- perhaps someone you know a little bit about and discover the story that no one knows! We all have a secret identity, and the history books cannot include everything. Your job as a Digital Historian is to discover the history mystery.

You will create a multimedia presentation that is at least 3 minutes long. You can create the video in iMovie, Movie Maker or any other software editing program. It will include information about the hidden history of your historical person.

You will upload it to FlipGrid (see videos below on how to upload).”

Session Two-Monday, May 23, 2022:

Upon my arrival at Ms. Applebee’s classroom, she informed me that homeroom was extended, and she was not told when the students would move. By the time the class arrived, I had thirty-five minutes to discuss the PowerPoint presentation. I reintroduced myself to the students. I had hoped that the website would be unblocked for the students so that they could see the Google Slide presentation; however, it was not. I decided to show the slide presentation on the Smart Board and proceeded with my historical thinking concept lesson.

To acclimate the students to the mindset of primary documents, I taught a lesson on historical thinking using a Google Slide presentation. The presentation was also on the first webpage so that students could look back at it for reference. Included in the Google Slides presentation were the terms for historical thinking. Additionally, I discussed the difference between primary and secondary sources. After I gave examples for each one, students had

fifteen items that they determined were either primary or secondary sources. We discussed each one, and I felt they understood the difference between the two based on their responses. I was prepared to give them a worksheet with more examples; however, I felt that they did not need it.

To discuss the idea of multiple perspectives, I opened with the story that there was a school bus and car crash. This allowed me to discuss the different types of points of view that would have witnessed the crash. The participants said the children and car driver were witnesses. We considered the viewpoints and how they changed from the children on the bus to the people who witnessed the crash. Finally, we reviewed the other points of view, such as security cameras on the bus and on the traffic light at the site of the crash.

For multiple perspectives, I had the read-aloud YouTube video of *The True Story of the Three Little Pigs* by Jon Scieszka. Due to time constraints, we deliberated the story of *The Three Little Pigs* from the point of view of The Big Bad Wolf. It was a great debate in the class because some students agreed with the wolf. I pointed out the YouTube video for students to watch on their own on the PowerPoint slides.

For sourcing, I wanted the students to think about who wrote a particular quote and how that impacted how they read it. I showed them a quote about trying. The quote said, “Think a thousand times before making a decision, but after making a decision, never turn back even if you get a thousand difficulties.” After deciding whether it was an appropriate quote, I revealed to them that Adolf Hitler said it. This opened arguments on analyzing sourcing. I asked how they felt now knowing that the quote was from Adolf Hitler. One young student said that she did not care that Hitler said it because it was still a wise quote. Others were shocked when I told them that Hitler said it, and they said it made them think twice about what they read.

For contextualization, I utilized a quote from Abraham Lincoln speaking about slavery. Students considered whether Lincoln was racist based on the quote, “I will say here...that I have no purpose directly or indirectly to interfere with the institution of slavery in the States where it exists. I believe I have no lawful right to do so, and I have no inclination to do so.” We analyzed the quote together, and they were able to tell me that Lincoln was a Free Soiler, meaning Lincoln was only opposed to the expansion of slavery. We discussed the Civil War and how this statement was said during a senatorial debate.

Due to time constraints, we conversed on how police officers use corroborating and corroborating evidence for cases. The students were able to understand this concept the easiest. I lectured that the evidence used to prosecute a case includes more than one piece of evidence. In court, they will call corroborating evidence and witnesses to strengthen a case. After we conversed about claim evidence, I felt that the participants understood those historical thinking concepts.

I showed the class my website and told them about the schedule for the rest of the week. Since I found out that day that the students would need to turn in their Chromebooks on Wednesday (2 days away), we would learn about the Black Plague and The Middle Passage on Tuesday and The Industrial Revolution and Battle of the Somme on Wednesday. I would return on Thursday to do the exit questionnaire. I reminded them of the final video project and answered questions that they had. I reviewed how to upload their video on *FlipGrid* and said it was due on May 31, 2022.

After I left the high school, I went to the district office and spoke to Mr. Harding, the instructional technology director, about my website. He apologized for the website being

blocked. He said it would be ready for tomorrow, and I was told to call him if it was still blocked.

Session Three- Tuesday, May 24, 2022:

I arrived at Harper High School on Tuesday, May 24, 2022. It was a normal school day. Ms. Applebee assured me that I would have all ninety minutes of time with the students. When they arrived, I checked to see if the website would work on the student computers, but it was still blocked. I planned, and I had a review worksheet on the historical thinking concepts. Students read a primary document from the autobiography of Olaudah Equiano. It was one of the documents on the *Middle Passage* website. As the students were answering and discussing among themselves the answers to the questions, an IT tech was able to put the website on the Chromebooks for every student at the high school. I explained to the students that they had to log out and log back in to see the website. Once they accomplished that task, they had access to the website! I was overcome with a feeling of astonishment and pride as they began clicking through the website. I realized as they were clicking around that the audio files were still blocked and the student documents for each module were being filtered on some computers. The YouTube videos were restricted, but I figured students would not have access to YouTube. We finished going over the Olaudah Equiano document and then watched the *History Channel* short video. We discussed as a class why the white men would have kept the slaves alive on board. They began going through the website and reading over the documents. I observed that no one annotated on the Google Docs, and this was something that would need to be taught explicitly to them. Students had to turn in Chromebooks the next day, so I decided that students only had time to work on one of the two sites.

After they explored the *Middle Passage* website and answered the Google Form questions, they learned about The Black Plague. Even though this is not a United States History event, students and researchers will connect the context to the global pandemic of COVID-19. I shared with them the YouTube music video “Bubonic” which is sung to the tune of “Holla Back” by the group known as historyteachers. The students enjoyed watching the music video, and we discussed how it related to COVID-19. Students drew similarities and differences to the Black Plague and COVID-19. Students worked on the primary documents and played games. The one part of the website that had everyone’s attention was the games. They absolutely loved them and challenged one another to beat their scores.

The students worked independently and finished at different times. Some students took their time and really read through the primary documents, while others Googled answers. I noticed that most of the students had their cell phones out and were on their phones. I observed one student even made a phone call.

At the end of the period, students had submitted at least one, some both, Google Form documents. Students had plenty of time to finish reading both pages of the website. I thought it would take longer for the students to go through the different sections of the website. All of them skipped the background information videos. I observed that the students liked to look over the Google slide presentation on the historical thinking concept. I went over the final video project and answered questions that they had.

Session Four-Wednesday May 26, 2022:

On Tuesday, May 25, 2022, I was concerned that the students would not be able to access Google Docs. While I was at work, I printed off the documents and created a booklet for each student to have. As I was printing off the booklets, I realized that the passages that I used should

have been shorter to be reader friendly. I stapled the packets and had them ready when I returned to Ms. Applebee's class.

I arrived at Harper High School for my time with the students. Ms. Applebee informed me that there was a band concert in the gym, and some students would be missing. All my participants were there for the fourth session.

I began the day by reviewing the final video project. Some were concerned that they would not be able to complete the project because they had to turn in their Chromebooks. I reassured them that they could use their cell phones to make the video.

I began the day's lesson with the Triangle Shirtwaist Factory fire. I asked students if they had studied it, and Ms. Applebee informed me that they had not. I showed them the Triangle Shirtwaist Factory from the *History Channel*. After the video, we discussed why the Industrial Revolution was important to the United States. I explained to the students the directions for the day. They were to first work in the Factory Life section and explore its content. After they completed the Google form for Factory Life, they could move on and complete the last section on the Battle of the Somme from World War I. I handed out the booklets to the students, and they instantly began annotating them in various ways (e.g., highlighting, questioning, commenting). Some students displayed the documents on their computers and read them online. Students read about The Industrial Revolution from the point of workers as well as physicians. They worked for about thirty minutes and played the *Classtools.net* game. When there were 40 minutes left in the class period, I showed the video on World War I trench warfare. The students had been exposed to World War I, and they were familiar with the topic. We discussed trench warfare and Ms. Applebee shared information on the topic. This made the students eager to

return back to the website. Students learned how the media can approach the same battle but with different views of who the winner is.

Learners continued until it was time for them to dismiss. I reminded them about the final video project, and they also turned in their Chromebooks at the end of the period.

Session Five-Thursdays, May 27, 2022:

During session five, I returned to Harper High School, and I conducted my exit interviews with the class. I was limited by time, and for research purposes, I decided to type my exit interview questions, and students wrote their answers on the paper. It had a total of 10 questions that asked how they experienced the website, and what did they think could be different. The participants spent roughly 15 minutes answering the questions. Afterward, I expressed my gratitude and gave final instructions for the video.

Session Six- Tuesday, May 31, 2022:

Online- *FlipGrid* Upload

Participants uploaded their final video project by May 31, 2022 to *FlipGrid*.

Role of the Researcher:

I am the sole researcher for this study. I kept a field journal and wrote down impressions that were used for analysis in thematic coding.

Managing Research Bias:

I have over thirteen years of experience in education with six years of high school and middle social studies that included courses such as Civics and Economics, U.S. History, and A.P. U.S. History. I received my undergraduate bachelor's degree in secondary social studies education with a reading endorsement from Bethany College, and a master's degree in secondary social studies education from The University of North Carolina at Pembroke.

The researcher had no direct connections with Clearview School District or Harper High School at the time of the study. Additionally, the researcher had no connections to the students or relations to any participants in this study. I created a thorough research plan that was supervised by a committee and chair. My website was open to not only the students but also my dissertation committee, teachers, and IT departments. I summarized the original context. During analysis, participants' answers from documents were not altered. I showed my committee my results and analysis.

Methodology

I wanted to create a study based on a case study with qualitative thematic coding because I felt that it would be able to tell the story of historical thinking in a way that would afford dialogue. I have experience working with qualitative data. I worked as a research assistant to Dr. Ritter, and he introduced me to thematic coding. I transferred this experience to my dissertation. Data collection points included the following: Google history interest survey, Google form discussion questions, and my field notes. Thematic analysis is a search for themes that emerge as being important to the description of the phenomenon (Fereday & Muir-Cochrane, 2006). I decided to approach it from a deductive angle. Deductive reasoning is the act of drawing a logical conclusion based on evidence. Encoding the information allows the researcher to identify and develop themes from the qualitative data. I used Fereday & Muir-Cochrane's article "Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive coding and Theme Development" to help with the process of coding. Fereday & Muir-Cochrane (2006)'s coding stages are as follows:

Stage 1: Developing the Code Manual

This step is important because it helps with the organization of the data and provides a clear trail of evidence for the credibility of the study. I decided to use deductive coding for my analysis process. In deductive coding, I started off with a set of codes as opposed to inductive coding, which is coming up with codes as I read my data. In a word document, I created a table that contained five columns. The following chart summarizes the code manual that I developed.

Concept	Definition	Data Source	Quote	Analysis
The theme or code I was looking for	The characteristics of the concept	The Google form or document where it was found	The direct quotation of the concept	My own interpretations or first impression of the concept.

Deductive reasoning works from the more general to the more specific and often can be described as a “top-down” manner (Mertler, 2009). I began with a theory and hypotheses that was tested through the use of the interactive website and final video projects. I decided to use the following concepts for deductive coding:

Primary/Secondary Sources- Students can or cannot identify the difference between primary and secondary sources. Students can or cannot provide detailed explanation on why a document is a primary or secondary source.

Multiple Perspectives- Students can or cannot explain similarities and differences by comparing information and perspectives in multiple sources. Students can or cannot identify consistencies and inconsistencies among various accounts.

Contextualization- Students apply or cannot apply prior and new knowledge to determine the historical setting of sources. Students use new settings to interpret the sources within the historical.

Sourcing- Students can or cannot evaluate the reliability sources based on the author's perspective and when and why they were produced. Students attempt to evaluate the reliability of sources.

Claim-Evidence- Students can or cannot formulate a plausible interpretation, argument, or claim based on the evaluation of evidence found in a variety of primary and secondary sources.

Triumphs- A great success or achievement gained with a lot of skill or effort in the area of technology.

Issues-An important topic or problem for debate or discussion.

Website- Discussion or comments about the website Digital Historians

Substitution- This would explain where technology acts as a direct tool substitute with no functional change.

Augmentation- This would explain technology as a direct tool substitute with functional improvement

Modification- This would explain where technology allows for significant task redesign.

Redefinition- This would allow technology for the creation of new tasks, previously inconceivable.

Upon downloading student responses from Google Forms, and the history interest survey, I removed names and replaced it with each participant's unique information. I began with the exit interview questions. I had 10 questions (See Appendix C) on the questionnaire. I reviewed each question, and I sorted each question under a historical thinking concept or technology

triumph or issue. I typed in my code manual the quote from each participant. I repeated the process with the Google form questions from each module and the history interest survey. I applied the code to the final video projects and my researcher's notes.

Each data piece was sorted based on the historical thinking concept or a technology triumph or issue. I had sixty pieces of data and was able to categorize them in the chart. The Google Form questions fell mostly under the historical thinking concepts. Each question from the Google Form related to a concept. There were five questions from the Google Forms where students were asked how was the author or speaker of the passage and how might it influence what they wrote. Examples of the questions are as follows: "How is the source for Document B (Mr. Holmes) similar to and different from document A (Dr. Ward)?", "Why are Documents B (British soldier) & C (German soldier) so different from Document A (Daily Express)?", "Who was Phillips? How might his background have influenced what he wrote about the Middle Passage?". I put each quote from every participant in my thematic coding chart. I read through their answers and compared and contrasted their answers. In the last column, I gave my findings from reading over their replies.

Upon reviewing the answers from the Google Forms, I went through each of the history interest surveys, and I analyzed them to determine the fit in my thematic coding chart. I found one question from the history interest survey, "If you could meet anyone from the past, who would it be and why?" related to contextualization. Students had to apply prior and new knowledge to determine the historical setting of sources. In examination of the final video projects, case study # 1 (Jean Louise) made an interesting point about George Washington when she stated "Washington was a slave owner who had a complicated relationship with slavery. As president, he signed laws, laws passed by Congress that both protected and reduced slavery"

(48.81 to 52.394 seconds in the final project). She used a new setting to interpret the sources within the historical context as opposed to a present-day mindset.

The exit interview questions related to the triumphs and issues with technology. The answers to these questions included, “Is there anything you wish to share with the researcher?”, “What did you like best about the Digital Historians website?”, and “How do you feel about researching and creating your own video?” Quotes from my researcher’s journal exhibit both the frustration and success I felt during the study. Every statement that I made in my researcher’s journal applied to a thematic code.

Stage 2: Testing the Reliability of Codes

During this step, I made a framework for analysis to determine if the code is usable for the raw information. My code is based on the five elements of historical thinking- multiple perspectives, sourcing, context, analysis of primary documents, and claim-evidence connection. There are also codes for each of the SAMR levels, triumphs, and issues. As I read through the raw data, I determined if the evidence matched one of the themes in my manual code.

Some data points matched to more than one code. In this instance, I coded the data in the first category, and then I re-entered the data under the other code. When a data quote did not match one of my preconceived deductive codes, I generated another category on the last page of my chart. As I added to it, I came across another code to use in my thematic coding, an example was quotes directly about the *Digital Historians* website.

Stage 3: Summarizing Data and Identifying Initial Themes

In stage 3, I carefully sorted each question and answer to the code as it related to my thematic coding analysis chart. Each question and data set were summarized separately, and key information was noted. I found each question related to a historical thinking concept, and I

added it to my chart. I re-typed statements in my thematic coding chart. I began by transcribing the video on George Washington. Transcription involves close observation of data through repeated and carefully listening to the audio. This allowed me to listen carefully to what the subject said during the final video project. By utilizing the closed caption feature on *FlipGrid*, I was able to apply each sentence to my thematic code. Next, I dissected each question on the history interest survey, exit interview questionnaire, and Google forms. I was able to determine which question and answer related to my thematic code. I added the quote to my chart and gave a short analysis with my thoughts in the last column. Finally, I screenshot Nelle's final video project on Adolf Hitler for analysis and my researcher's journal and analyzed based on my thematic codes.

Stage 4: Applying Template of Codes and Additional Coding

In Stage 4, I adopted "the template analytic technique" (Fereday & Muir-Cochrane, 2006) and "applied the codes to the text on the intent of identifying meaningful units of text" (Fereday & Muir-Cochrane, 2006, p. 87). I came across some statements that did not fit a code, and I added a miscellaneous code and titled it 'other'. During template analysis, it is flexible, and the researcher develops themes more where the richest data are found. There was a need for a code for triumphs and issues with the study. The code manual was updated once the dataset was analyzed. After the recode, the dataset was examined a second time using the updated code manual as a guide.

Stage 5: Connecting the Codes and Identifying Themes

During this step, I discovered themes and patterns in the data. The patterns that I observed while analyzing during deductive coding were that students did not provide enough

information and preferred to write brief words or short sentences in response to Google forms and surveys. Some questions were not answered completely.

Another theme that became apparent during thematic coding was that students understood historical thinking as critical reading. They understood primary and secondary sources; however, they believed primary sources were more trustworthy than secondary. Participants had issues with contextualizing and sourcing. In my researcher's notes and in their exit interview answers, we felt frustrated with technology when *Digital Historians* website was blocked. Even though students were nervous about the final video project and relinquishing Chromebooks early, two participants were able to research and submit the project.

In my thematic coding analysis chart, I gave a brief analysis that I felt related to the theme. Once I collected each individual question, researcher's notes, questionnaire, and videos, I read through the analysis and sought out themes in the clusters for each theme. I identified the following:

- 10 data excerpts for multiple perspectives
- 5 data excerpts for contextualization
- 6 data excerpts for sourcing
- 15 data excerpts for claim evidence
- 9 data excerpts for triumphs
- 7 data excerpts for issues
- 4 data excerpts for website
- 1 data excerpt for substitution
- 1 data excerpt for augmentation
- 1 data excerpt for modification

- 1 data excerpt for redefinition

During stage 5, I investigated the connection between the codes and highlighted overlaps and similarities between them. I began to think how these codes related to my research questions.

Stage 6: Corroborating and Legitimizing Code Themes

In the last stage, I examined the clustered themes that were representative of the initial data analysis and assigned codes. I closely examined the data and identified themes that included topics, ideas, and patterns of meaning that were repeated. I sought to create potential themes that provided insight into the data for my research purposes. I began by reading the quote for the theme code and compared it to the definition.

By analyzing the students' responses from the Google Surveys, my field notes, and exit interviews, I answered RQ #3: How do students understand and experience their learning from the use of a Google site designed to facilitate historical thinking? I coded responses from my focus group to hear the thoughts and opinions from the students. Using the same deductive coding process, I began to analyze the comments from my participants. I was curious to learn what they thought about the interactive website features as well as their experience with historical thinking. Without their voices, I would be unaware of the success or failure of this study. I can answer research questions 1 and 2 using a rubric, but it does not communicate to me the experience of historical thinking in an interactive website.

Instrumentation

Triangulation is a process of relating multiple sources of data to establish their trustworthiness (Metler, 2009, Pg. 11). It is the use of multiple methods or data sources to develop an understanding of phenomena. During this dissertation, I used different data sets. The Google Form questions were similar. They asked the same questions, which included: Is it

trustworthy? Why? And which do you prefer? By using similar questions, this helped with triangulation by testing the validity of each statement (See Appendix C for all questions).

Another form of triangulation is using different sources. With a final video project as one data point set, I used questionnaires that included the history interest survey and the exit interview, and Google form questions in all four modules to triangulate the data. Upon examining the data, the different Google form answers from the participants were similar, and I was able to draw conclusions based on their consistency across subjects.

Document Collection

To maintain the security of research videos and to provide ease for students and for myself, I created a *FlipGrid* account and a *FlipGrid* class for the final video project. This allowed me to share a link with the students on the *Digital Historian* website, and they were able to upload their video.

Students had the opportunity to share their thoughts and feelings about their experiences as digital historians. On the last day of research, I passed out forms to the participants that had ten questions on them. It gave me the chance to hear what everyone had to share. The exit interview was in a structured fashion (See Appendix C) Questions included the following:

- What did you like best about the Digital Historian website?
- What do you think could be different about it?
- What does historical thinking mean to you?
- How did you feel about researching and creating your own video?
- How did you experience the use of a Google site for learning?
- What features of the website did you find the most interesting?
- What did you like annotating on the most—paper or computer?

- Were the primary documents you read different from textbooks? How?
- Do you prefer textbooks or primary documents?
- Is there anything else you wish to share with the researcher?

Additional data that I collected was from the survey questions in Google Forms (See Appendix C for questions). Students were asked questions about each learning module. The Google Form data was copied and pasted into an Excel form so that I could more easily read answers for coding. After downloading the Excel form, I changed the names of my participants to a random and unique ID number. I also removed the answers from the other students that did not return the IRB forms.

I was able to keep track of students' responses. In Google Sites, there is a tool called Analytics in the Google settings. Prior to research, I added the Analytics Property ID to my Google Site. In Analytics, I was able to configure Analytics. In Analytics, I had access to report tabs and the average amount of time that each explorer spent on the website.

Security

The interactive website and forms that I created are used by Google. Google has a high-security network that ensures that everything is safe and secure. Google security measures can be found on their website. "Encryption brings a higher level of security and privacy to our services. When you send an email, share a video, visit a website, or store your photos, the data you create moves between your device, Google services, and our data centers. We protect this data with multiple layers of security, including leading encryption technology like HTTPS and Transport." (https://safety.google/intl/en_us/security/built-in-protection/). The account that I used was modified so that only I had access to it. I had a password, and I had a code sent to my phone for any sign-ons to my Google account. Once all comments and questions were answered in a

Google form, I downloaded the file to my laptop. The MacBook Pro Series 16 was stored in my office. My husband would see the laptop but did not have access to the password. I am the only user of the laptop. I have a password and a single-touch sign-on pad. After downloading the data, I encrypted each file with password protection.

Data was always kept confidential. Participants' names were deleted and do not appear on any survey or research instruments. All written and electronic forms were kept secure. Any study materials with personal identifying information will be maintained for three years after the completion of the research and then destroyed. In addition, any publications or presentations about this research will only use data that is combined with all subjects; therefore, no one will be able to determine how each individual responded.

CHAPTER 4: DATA ANALYSIS AND RESULTS

The goal of this dissertation was to use the latest theories in instructional technology (specifically derived from TPACK) to manufacture an interactive website based on historical thinking skills where young learners can browse through primary documents, watch YouTube videos, and play games. Chapter 4 focuses on data analysis and results from the study. Research questions were designed to determine if there was a relationship between SAMR levels and historical thinking levels when participants produced a multimedia presentation on a famous individual. The third research question exercised a thematic coding analysis to assess how students perceived analyzing primary documents and participating in an interactive website. Due to insufficient data obtained during the research study and the small sample size, a case study allowed for an individual to be studied given the level of uniqueness and to maximize the amount of information gathered.

The Participants

The participants of this research study were enrolled in Ms. Applebee's U.S. History Honors course in the spring of 2022 at Harper High School in Clearview School District. Clearview School District is in South Carolina. There was a total of sixteen students in the class. Only five learners returned Duquesne University's IRB assent and parental consent forms. All sixteen students received the same instruction and participated in the Google Forms, Padlets, and the final video project. I evaluated data only from the five that consented to be researched. Participants did not receive bonus points or any money or gift cards for participation.

Of the five participants, four were females, and one was male. They were all seventeen years old and in the eleventh grade at the time of the study.

Research Question # 1 and # 2 Results

The originally proposed research methodology for RQ # 1 and RQ # 2 was to conduct a correlation analysis on historical thinking and SAMR levels on the final video project. Due to the small number of participants and only two of the five students turning in a final video project, I decided to complete a case study instead for the two participants. According to Schreiber & Asner-Self (2011), a case study is “a systematic collection of information about a person, group or community; social setting; or event in order to gain insight into its functioning” (p. 12). It calls for a focused, rich synthesis of a product. The focus is holistic, and the purpose is to illuminate what happened (Schreiber & Asner-Self, 2011). Mertler (2009) describes case studies like a wide end of a funnel. Data collection procedures are modified and specified like the narrowing of the funnel as the topic is learned (p. 79). Using the historical thinking concept rubric and SAMR rubric, I sorted each data set by case study and analyzed the relationship between historical thinking and technology integration. See Appendix C for rubrics.

I approached each case study by looking at their history interest survey, Google Form answers, exit interviews and final video projects. Upon analysis of the case studies, I used the same deductive coding to examine the answers of the remaining three participants. I was only able to use the two case studies to answer RQ # 1 & RQ # 2. I answered RQ #3 based on all five participants.

Case Study #1- Jean Louise

The first case study was a young female student aged seventeen, and her pseudonym is Jean Louise. She attended Clearview School District at Harper High School in Ms. Applebee’s honors section. Jean Louise completed the history interest survey, historical thinking

presentation, Google Forms for the *Black Plague*, *Factory Life*, and the *Battle of the Somme*. She participated in the exit interview questionnaire and produced a final video project.

The following were her answers for the history interest survey that does not correlate to a category on the rubrics: “On a scale of 1-5, how much do you like history?” She responded “4.” She was interested in learning more about The Holocaust. One question on the history interest was a checklist, and subjects chose which ways they learned best. There was a range of options, and they included the following: watch videos, role play historical and/or current events, and create presentations for classmates and teacher. Case Jean Louise selected the following two choices: historical and/or current events and create presentations for classmates and teacher.

Historical Thinking Skills Scoring Rubric (See Appendix C for Rubrics)

The Historical Thinking Skills rubric has six categories: sourcing, contextualizing, claim making, evidence collection, critical reading, and corroboration. There are four levels. A score of 4 is the highest one can receive on the rubric. A score of 1 is the lowest score on the rubric. The researcher gave the rating for each category in the case study. It should be noted that each score is based solely on the researcher’s rating. I used evidence to give reasons why the case study scored at each level and averaged out their points for each category.

Historical Thinking Skills Scoring Rubric- Secondary Results for Jean Louise

Sourcing- Criteria Rating at a Level 1

Jean Louise received a level 1 in sourcing because she attempted to understand the meaning and content of sources without appropriate scaffolding and support. Under perspectives, she did not adequately examine the reliability of the primary sources during the research project. In the final video project, she stated, “Appointed by the Continental Congress as commander of the Continental Army, Washington lead the Patriot forces to victory in the

American Revolutionary War and served as president of the Constitutional Convention.” Jean Louise did not provide any different perspectives and relied on facts for this part of the video. There is little historical thinking besides conducting research. Another reason why she received a level 1 in sourcing was due to the incorrect facts she used during her final presentation. She said, “Of 1887, which created the Constitution of the United States and the American Federal government, Washington has been called the father of the nation for his leadership of our country.” The Constitution was not founded in 1887. She gave another incorrect fact in her final project; she narrated, “He was an American military officer, statesman, and founding father who served as the 1st President of the United States from 1889 to 1897.” George Washington did not serve as president from 1889-1897. He was president from 1789-1797. She might have been more successful on the final video if provided with more scaffolding on how to conduct research. As juniors in high school and an honors class, students should have been exposed to research writing prior to this research study. This is a recommendation for next time there is more scaffolding on researching on the *Digital Historians* website.

The incorrect facts on George Washington and the Constitutional Convention were not the only mistakes Jean Louise composed. She made another mistake while interpreting documents from the *Black Plague*. In the *Black Plague* Google Form response, she mistakenly identified who wrote document A and did not answer the second part of the question “When and where was this document written? Why was this document written?”.

Jean Louise replied to the interview questionnaire question, “Were the primary documents you read different from textbooks? How?” She said, “Yes, because it was direct experiences from the people.” She attempts to understand the meaning and content of sources

with appropriate scaffolding and support. She did not earn a level 2 under sourcing, because she does not understand the meaning and content of sources.

Critical Reading- Criteria Rating at a Level 2

Jean Louise received a ranking of level 2 on critical reading because during the Google form question, she was able to determine the author's viewpoint by citing evidence. In the Google Form question for *Factory Life*, it asked, "What is the difference between two documents?" Jean Louise wrote, "It's from 2 different perspectives." She trusted document A over document B because she said it was a primary source. During the interview questionnaire, one asked, "Do you prefer textbooks or primary documents?" She answered, "Both, but if I had to choose it would be the primary docs." She had to analyze the primary documents to create an argument and rationale for which document was trustworthy.

Corroboration Criteria Rating at a Level 3

Jean Louise was successful in explaining similarities and differences by comparing information and perspectives of multiple sources. She understood the difference between primary and secondary sources. I observed the following in my researcher's journal: "Case study #1 was successfully able to identify the document from a slave narrative journal as autobiography."

Prior to direct instruction of the historical thinking PowerPoint, she understood primary and secondary sources. Through her research, she was able to expand her knowledge. I noted in my researcher's journal that she was able to correctly identify the difference between primary and secondary sources in the short exercise I did with the students during my direct instruction. She did answer when asked, "Is the document trustworthy, why or why not?" She responded that it should be trustworthy considering it is a primary source from a first-person point of view.

During a short exercise with a primary source from the *Middle Passage*, she mentioned that some other perspectives that should be read with Olaudah Equiano were other slaves. As to analyzing why Olaudah Equiano might have written it, she answered, “to tell us about their life as a slave.”

Jean Louise next reviewed *Factory Life* and completed the Google form questions. As to analyzing the difference between two documents, she wrote, “It’s from 2 different perspectives.” Jean Louise gave abbreviated answers to questions throughout the other Google Forms. She could have answered the question without reading through the documents. She did not give any reasoning or analyze the difference between the perspectives.

Contextualizing Criteria Rating at a Level of 2.5

Jean Louise received a rating of 2.5. I found some data points that supported historical thinking for contextualizing at levels 2 and 3. Level 2 is described as attempting to determine the historical setting of sources without fully understanding the historical context. During the analysis, she had some areas of concern with contextualization. She believed that the document from Olaudah Equiano was created in 1789 and was unable to discern that this was the publication date of the diary. She believed that he wrote it somewhere on a boat. When asked what was different then, she responded, “They got fed by the two white men.” I was seeking an answer as to what was different about life back then. This could have been an issue with the question that I asked.

In the *Black Plague* Google form, when asked to evaluate whether people in 1348 trusted and believed these authors, she wrote, “Yes, because they didn’t have anything or anyone else to tell them about the disease so they relied on these documents.” This is contextualizing at a level

3 because Jean Louise had to read the documents carefully to understand and answer the question.

Jean Louise struggled with another question that was asking about the credibility of the author's purpose. For a question on Factory Life, "Why is Dr. Ward being interviewed by the House of Lords Committee?" she answered "because of his work experience." This is a limited application to the historical context that is presented in the primary document.

She applied prior and new knowledge to determine the historical setting of sources. In her final video, she stated, "Many scholars and ordinary Americans alike ranked him among one of the great US presidents. I believe he was great president and above his and ahead of his time because he predicted that we did not need political parties and today that is one of our problems we have. Much of the division is because of political parties. Thank you." After research, she added to her stance on Washington. During her history interest survey, she said she would prefer to meet George Washington, and she shared her reasons why she would want to meet him due to his political party association.

Claim- Criteria Rating at a 3 Level

Jean Louise received a level 3 under "claim." She generated a reasonable interpretation, argument, or claim based on an evaluation of the evidence found in selected primary and secondary sources. To answer the Google Form questions for the different history topics, she had to evaluate the sources and form her own conclusions.

On the history interest survey, which was filled out at the beginning of the research, when asked, "If you could meet anyone from the past, who would it be and why?", she wrote that she would "probably choose George Washington because he was ahead of his time and he already had an idea of what going to happen in politics after his presidency". She created a one-minute

and thirty-second video on George Washington using a variety of resources. She justified her claim that his political influence would change after he became president.

After presenting information on historical thinking, I had participants complete a worksheet on paper where they practiced historical thinking. I observed the following in my researcher's journal: "Case study #1 was successful in identifying whether the document from a slave narrative journal was a primary or secondary source. When asked to give evidence to support her claim, she said, 'Because it is an autobiography by a former slave.' She understood the difference between autobiography and biography; however, I did not see the reasoning in her answer or response."

As a researcher, I analyzed her Google Form response and though her statements were correct, she could have used more direct quotes from the sources.

In the *Black Death* Google form, when asked, "What or who caused the plague by Ibn al-Wardi?" she wrote "Hong Kong and it was from fleas and rats." "How do these documents illustrate how people understood the Black Death?" She said, "They understood it to be a deadly disease which is what it was." She did not receive a criteria of level 4 for claim because she did not formulate a plausible interpretation, argument, or claim found in the primary and secondary sources. She did not give quotes from the documents to support her claim. This was seen in answering a question from the *Factory Life* Google form. The question posed, "Do you think that English textile factories were bad for the health of working-class families?" she answered, "Yes, because they were bad working conditions and they did not get paid enough."

In the *Battle of the Somme*, Jean Louise had to compare and contrast the documents. She wrote, "B & C are written by people in the war. A is written by a newspaper." When asked to follow up with which of these documents is most trustworthy? Why?" She answered, "Probably

B & C because they are primary sources.” When asked the opinion question, “Who won the first day of the *Battle of the Somme*?” She wrote “The British and the French.”

In the final video project, Jean Louise said about George Washington, “He was twice elected president, unanimously as president, we had a strong and well financed national government. Washington was a slave owner who had a complicated relationship with slavery.” She could have added to her statement and researched the conflicting viewpoints that Washington had from a primary document such as his diary or reflections.

Evidence Criteria Rating at a Level of 2

Jean Louise rated a level 2 for evidence. She justified claims using generalizations or limited appropriate direct evidence. When asked to write all that you know about the term “historical thinking” on the history interest survey, she wrote, “Theres primary and secondary sources, and theres a lot of elements that go into it.” There are five components to historical thinking, and she was only able to identify one part of it: recognizing primary and secondary sources. This was prior to the direct instruction of historical thinking, and, thus, it is reasonable why she was unable to identify the term.

In examining the writings of my participants, I found they said they trusted primary sources over secondary since they came from the source. My concern was that they believed it just because it was a primary document, then it was true, which is not always the case. For next time in the direct instruction, I will need to address this. In the *Factory Life* Google response form, Jean Louise said she trusted document A over document B because she said it was a primary source. She correctly identified the year of John Birley when his account was published. When asked, “What does Baines mean in the second paragraph, ‘But abuse is the exception, not

the rule?”” Jean Louise wrote, “He means the mistreatment of workers.” She does not provide any direct evidence from reliable sources to support her answer.

She justified claims using generalizations or limited appropriate direct evidence. In her final video project on Washington, Jean Louise said, “As President, he signed laws, laws passed by Congress that both protected and reduced slavery. He was a member of the Anglican Church and the Freemasons, and he urged religious freedom and his roles as general and president.” She did not offer any citations or offer additional information, such as how Washington felt. Perhaps a worksheet to go along with research to help scaffold students would be beneficial in future endeavors.

SAMR Rubric Level- Augmentation

For the final video project, Jean Louise completed her project on George Washington. The audio file was one minute and thirty seconds, which is the default maximum time Flipgrid provides users. Her presentation consisted of 239 words, and it was uploaded on May 26, 2022, at 11:19 AM. It was viewed fourteen times by the researcher and other students from the class. See Appendix D for the transcript. Based on the SAMR Rubric level, I rated Jean Louise at the Augmentation level. This would explain technology as a direct tool substitute for functional improvement. She used an audio file that used facts and information about George Washington. She was given a rating of “augmentation” because of her use of technology rather than simply using paper and pencil or even an oral presentation. Jean Louise conducted research and created the video in FlipGrid. During analysis of the final video, she incorrectly identified George Washington’s presidential term and the years for the Constitutional Convention. Even though Jean Louise had encyclopedias and articles at her fingertips, she still said incorrect facts on her presentation. Students can have all the technology in the world, but it does not translate to

knowledge. This shows that there is not always a positive correlation between technology and historical thinking.

Exit Interview Questions

Jean Louise assimilated the information learned in the documents to answer questions for the games on *Classtools.net*. Prior to the conclusion of the research, I had students fill out an interview with ten questions. Jean Louise said, “I liked the games and the videos.” When asked, “What features of the website did you find the most interesting?” she answered, “The games where I could answer questions and play the game.” In response to the question, “What do you think could be different about [the website]?” she wrote “Easier to read texts that can be better understood.” She defined historical thinking as “understanding and asking questions about history.” When asked how she felt about researching and creating her own video, she stated, “I feel okay about it. My experience with using a Google site has been good.” When asked, “What did you like annotating on the most, paper or computer?” Jean Louise said, “the computer.” For the questions, “Were the primary documents you read different from textbooks? How?” She said, “Yes, because it was direct experiences from the people”. When asked, “Do you prefer textbooks or primary documents?” she wrote “both, but if I had to choose it would be the primary docs.”

Case Study #2- Nelle

Case study #2 was a seventeen-year-old female in Ms. Applebee’s U.S. History Honors section at Harper High School in Clearview School District. Her pseudonym name is Nelle. During the history interest survey, Nelle responded, “If you could meet anyone from the past, who would it be and why?” She wrote “Jeffrey Dahmer, so I can ask him questions about why he did what he did.” “On a scale of 1-5 on how much do you like history,” she said “3.” She was

interested in learning more about Native Americans. In responding to the question, “Which way do you like to learn about history?” Nelle’s response was that she likes to watch videos. She responded to two Google response forms, the *Middle Passage* and *Factory Life*. When asked to write all that she knew about the term ‘historical thinking,’ she wrote, “It is questions to test your knowledge about what you are reading.” Nelle completed the interview questionnaire and produced a final project on Adolf Hitler.

Historical Thinking Skills Scoring Rubric- Secondary Results for Nelle

Sourcing- Criteria Rating at a Level 1

Nelle made an attempt to understand the meaning and content of sources with the appropriate scaffolds and support. When asked, “Which of these documents do you believe is the most reliable source of information on the *Middle Passage*?” She replied, “Doc A” (*The Portuguese* textbook) in the *Middle Passage* Google form. She did not adequately examine the reliability of a textbook compared to the narratives of the primary documents. She did not read into the bias of *The Portuguese* textbook. She correctly identified the age of John Birley when the account was published: the age of forty-four in the *Factory Life* module.

In the final video project, Nelle earned a 1 in sourcing because she cited few authors and few original dates of primary and secondary sources. She used information from a source similar to a textbook. Few authors are cited. See Appendix E for screenshots of the final video.

Critical Reading Criteria Rating at a Level of 2.5

Nelle received a score of 2.5 because she was able to determine the author’s viewpoints in primary and secondary sources; however, she did not cite examples of how the author used persuasive language and specific words and phrases to influence the reader. The second question said in the *Middle Passage* module, “According to the textbook, ‘The time between the moment

the slaves were bought and when they arrived at port was very dangerous not only for the European traders but for the slaves as well.’ Why might the textbook’s authors have chosen to compare the experience of the ship’s crew to the experience of the slaves?” She answered, “That they were both going through a dangerous time.” When asked about the identity of slave captain Phillips in the *Middle Passage* Google form, she answered “The captain.” Next, the participants were asked to analyze how might Phillips’ background have influenced what he wrote about the *Middle Passage*; Nelle replied, “It shows us what he also went through during the Middle Passage.”

Corroboration Criteria Rating at a Level of 3

Nelle was given the rating of a level 3 for corroboration on the historical thinking rubric. During the study, she provided answers that explained similarities and differences by comparing information and perspectives from multiple sources. She replied to the following question on the *Factory Life* Google Form: “How is the source information for Document B similar to and different from document A?” Nelle’s response was the following statement: “Both documents were telling about the factory health conditions, they were described in different perspectives of different doctors.”

Contextualizing Criteria Rating at a level of 3

Nelle received a rating of 3 in contextualizing. She applied prior and new knowledge to determine the historical setting of the sources. In the *Middle Passage* response form, the question asked participants to read over Document A, a Portuguese textbook and answer questions: “Where was this textbook written? How might this have influenced how it portrayed the Middle Passage?” Nelle responded that it was written in Portugal and gave insight into the life of the Portuguese. Even though she answered correctly, she attempted an interpretation of

some sources with a limited application to the historical context given to the Portuguese textbook. She did not understand the bias that was in the textbook and did not have enough background information to answer the question even though all participants were provided a background video on each topic.

In a second response on the Middle Passage to the question, “Why do you think slaves were punished for not eating?” she wrote “Because they were supposed to be kept alive so they can be traded.” This was related to the conversation we had in class about why slaves were kept alive, and it was in the History Channel video on the *Digital Historians* website.

Claim Criteria Rating at a Level of 4

Nelle was able to justify claims using appropriate direct evidence from a variety of reliable sources. In the *Middle Passage* Google Form, the following question was asked, “According to Phillips, what did the ship’s crew do for the slaves?” she answered, “tried to help keep them alive.” She was unable to reply to the question, “Who was Falconbridge?” To the question, “Who was Equiano?” she answered, “a former slave on the boat.” She gave a reasonable interpretation of the primary and secondary sources.

The other Google Form response she answered was the *Factory Life* under the Industrial Revolution. When asked, “Why is Dr. Ward being interviewed by the House of Lords Committee?” she answered, “to tell about the health conditions of the work places.” She was able to analyze the author’s thesis and determine the viewpoint and evidence to evaluate the claim. The Google response question in *Factory Life* asked, “What does Baines mean in the second paragraph when he states, ‘But abuse is the exception not the rule?’” she answered, “the mistreatment of the workers, while there were cases of abuse, it was not always the case.”

In response to “Do you think that English textile factories were bad for the health of working-class families?” she wrote, “It was because the work conditions were pretty bad and not healthy for the workers.” She used information from the documents to make a claim based on the evaluation of evidence found in a variety of primary and secondary sources. She analyzed a variety of documents to reach her conclusion, and that is why she was rated at a level 4.

Evidence- Criteria Rating at a Level of 2

Nelle justifies claims using generalizations or limited appropriate direct evidence. This can be seen in her final video presentation. She provided information on Adolf Hitler on three slides. Two slides had pictures. Each slide had one or two sentences of information. The information on the slides was limited and gave generalized information. This can be seen on the third slide where she wrote, “His concentration camps killed Over 6 million Jews.”

Another example of a criteria rating of two in evidence is in the *Factory Life* Google form: “Which document, A or B, do you think is more trustworthy? Why?” Nelle wrote, “Doc A is trustworthy because doctor ward had hands on experience.” She used generalizations to answer the question that Dr. Ward would have hands-on experience as a doctor, so that made him trustworthy.

SAMR Technology Rating: Modification

For the final video project, Nelle created a three-slide presentation on Adolf Hitler. She uploaded the project to FlipGrid on May 26, 2022, at 3:21 PM. It was eleven seconds long. It had eighteen views from the researcher and other students. See Appendix E for screenshots of her project.

Nelle received a rating of “Modification” on the SAMR level. A rating of “Modification” is defined as “explain where technology allows for significant task redesign”. Modification level

examples include when students download and annotate images using Skitch. An example of Modification level for a presentation is combining audio, video, and text notes in iMovie. It is a change to the lesson's design and learning outcome. A new product or synthesis of existing material is the outcome. This presentation would be at the modification level. The participant had to find high-quality images to insert into the FlipGrid creator/generator website. Next, the subject researched facts and inserted them onto a slide. Even though there were only three slides, the use of technology was at the modification stage because technology was, indeed, used, and Nelle produced a final video slide presentation in FlipGrid. Technology in the final project substituted pen and paper and enhanced the student experience. Nelle had to research pictures and facts to direct her presentation. Even though the information was short, it was important to note that she had to decide on what she wanted to include in the presentation, and that was (and is) a process of researching. Additionally, she conducted research to produce the video.

Exit Interview Questions

During the interview questions for students, she responded to the following question: "What did you like best about the Digital Historians website?" Nelle responded, "It is easy to use and get around." When asked, "What do you think could be different about it?" she answered, "The links could be easier to get to and not blocked." The question called for students to write what historical thinking meant to them, and she replied, "Like critical thinking but with history." She felt it was "a little confusing but fun" when answering how she felt about researching and creating her own video. Nelle found "The Games" feature of the website the most interesting. She felt that there was not really a difference between primary documents and textbooks. She answered the question, "What did you like annotating on the most? Paper or computer?" with

“Computer because its easier.” She preferred primary documents over textbooks. When asked, “Is there anything else you wish to share with the researcher?” she replied “Nope.”

Overall Historical Thinking Rubric Scores

Upon review of the historical thinking rubric scores, case study # 1, Jean Louise, and case study # 2, Nelle, it was evident they both had similar scores. They both scored in sourcing at the lowest level. The participants scored at the lowest level because they had problem areas with the idea of historical thinking. For the final video project, they were able to state facts on slides or narration; however, they did not use any primary documents on George Washington or Adolf Hitler. They were unable to discern the bias in textbooks on the *Middle Passage* module. They said they preferred using primary documents on the exit interview but did not use any for their research.

They shared the same results on evidence and corroboration. In evidence, both scored a level 2. While analyzing their answers, I came across the concept that they believed documents were trustworthy simply because they were primary documents. This was concerning because even though primary sources come from the source, they are biased. They both justified claims using generalizations and only knew one component of historical thinking, which was identifying primary and secondary sources. I noted that their answers were not in-depth and did not provide quotes from the documents to support their answers. This could have been an error on the researcher’s part due to the wording of the questions. I should have been clearer in my directions and even had “Give quotation to support your answer” or a word requirement may have increased the rigor and effort of their reflections.

The case studies both received a score of 3 on corroboration. As the researcher, I felt Jean Louise, Nelle, and the other participants were strongest in this heading. They were able to

understand the different perspectives and could distinguish between primary and secondary sources. This became evident during the historical thinking PowerPoint I presented to the students. They were able to identify the primary and secondary examples. Plus, they were able to compare and contrast documents on the same event.

The highest rating was by Nelle under the category of “claim.” She received a 4. She used information from the documents provided to make a claim based on a variety of sources. Jean Louise was able to make a claim, albeit a simpler one, and scored a level 3. During my thematic coding analysis, claim evidence occurred more than the other historical thinking concepts. When I presented the historical thinking concepts, making a claim and supporting it with evidence was the easiest to understand for the participants.

The main concern I witnessed while scoring Jean Louise and Nelle was the lack of examples cited from their readings. Students did not understand how backgrounds may have influenced an event being recorded. I observed it in both case studies where there was not enough information or thought about what was being read and why it was written.

Both case studies received 2.5 and 3 on the contextualizing level. They both applied prior and new knowledge to answer questions on the Google Forms for each module. I observed in the answers to some Google questions the discussions and the hook videos we had about the *Middle Passage* and the *Black Plague*. They both used information that we learned in class to add to their answers.

The following statement was presented to participants for the final video project:

You have analyzed, contextualized, and scrutinized document after document! It is now time to take what you have learned and create an accumulated masterpiece!

Your task: Research a historical figure- perhaps someone you know a little bit about and discover the story that no one knows! We all have a secret identity, and history books cannot include everything. Your job as a Digital Historian is to discover the history mystery. You will create a multimedia presentation that is at least 3 minutes long. You can create the video in iMovie, Movie Maker, or any other software editing program. It will include information about the hidden history of your historical person. You will upload it to FlipGrid (see videos below on how to upload).

Final Video Project Analysis

As I analyzed the videos, I witnessed that the student that utilized more historical thinking and facts had little technology integration. Jean Louise used a voice audio file to present her information. Meanwhile, the student that had more technology with pictures and slides did not integrate many historical thinking skills. They basically used facts from a textbook or an encyclopedia page. During my first session with all students, I explained the final project video. Students had over three weeks to generate a video. I would later discover that *Flipgrid's* default time limit on videos was one minute and thirty seconds but could have been increased up to five when I created the assignment. The two participants produced a video on George Washington and Adolf Hitler.

I reflected on the videos that the participants had to select which information to include in their video. They researched and scrutinized facts that were meaningful to them since there was a wealth of information on these two figures.

Jean Louise had an average historical thinking score of 2.25. She received an “Augmentation” rating on her final video project. Nelle had an average historical thinking score of 2.58 and a “Modification” rating on her final video project. I could not generalize about the

entire student population based on two participants. I could, however, examine the scores for the two case studies and summarize that as historical thinking increased, the SAMR score increased. As the historical thinking score decreased, the SAMR score decreased. Nelle's video was only three slides; thus, it was hard to really calculate a SAMR score, but she used technology in a new way compared to Jean Louise. Jean Louise only used an audio file for her final video presentation, but it was longer and filled with more information than Nelle's video. Since the directions I provided in the final video project were left open-ended for the students to decide on they would complete the final video project could explain the difference between Jean Louise and Nelle. When I originally created and envisioned the final project, I did not want to limit students to just one avenue for the media project. The short amount of time given to students to complete the project might have resulted in an easier way to finish the project, and that was to create an audio file whereas the powerpoint slides might have taken more time to design.

Research Question # 3 Results

RQ3: How do students understand and experience their learning from the use of a Google site designed to facilitate historical thinking?

To comprehend research question #3, I would like to first provide a summary of responses from the participants in my study. By sharing responses, I am supplying the reader with information to understand how subjects experienced the *Digital Historians* website. I share their responses without a filter or analysis.

Summary of Responses:

History Interest Survey- (See Appendix C)

At the beginning of the research, participants completed a five-item questionnaire on history. Questions included, "If you could meet anyone from the past, who would it be and

why?” In response to this question, two of the participants wished that they could meet George Washington because of his politics. Others included Benjamin Franklin and serial killer, Jeffrey Dahmer. The most interesting answer I received was to meet their grandpa. After reading this response, I decided to change the final project to include anyone. I felt that the final project should reflect the premise that everyone is of historical significance. I appreciated their honesty because I would not have thought to change my final video project requirements before reading their responses.

The next question students answered was, “On a scale of 1-5, how much do you like history?” The average score was 3 with one response at a 5 and one at a 1. “What is one thing you want to learn most about history?” Two remarked that the Holocaust and Adolf Hitler were their choices while others wanted to learn more about Native Americans. One even responded they wanted to know more about the U.S.A.

The last question the subjects answered was, “How do you learn best? Check all that apply from the following choices: read non-fiction books, magazines, and newspapers; do projects/hands-on activities; create posters, charts, and diagrams; watch videos; journal and write; role-play historical and/or current events; conduct research on the internet, and/or create presentations for classmates and teachers. Four out of five said that they learned best by watching videos. I found this interesting because I had background videos on the website, but none were viewed. The last person said that they learned best by creating presentations.

As a teacher of social studies classes, I was curious to know what my students knew about the term of historical thinking before I began my presentation with them. On the history interest survey, I asked, “What does historical thinking mean to you?”. Subjects connected historical thinking to critical thinking and used primary and secondary sources.

Google Form Responses:

Students were able to answer basic Bloom's questions and correctly identify who wrote the source for the documents used in each of the four mini-lessons. One of the common themes that occurred throughout the participants' responses was that if a document sounded "professional, confident, and educated," they tended to trust and found it more believable. This gave me a hesitant pause as a teacher because our students are still maturing and will tend to believe a source that sounds sophisticated. They felt a primary document was favorable, because it gave a real-life experience.

Participants were wary of secondary sources and said that the primary sources were like newspapers because "they didn't have anything or anyone to tell them about the disease, so they relied on primary-source documents".

Students questioned the reasoning behind the motivation of the documents that they read. They pondered why a particular interview took place, and they summarized their thoughts into sentences. They were unable to give evidence to support their beliefs on what they felt was the most reliable source. This was an area in which the students struggled.

I noticed with Google Form answers that participants used information from the hook videos and my short introduction to the topic. As an example, I asked students, "Why do you think slaves were punished for not eating on the slave ships?" One participant wrote, "They were punished for not eating because if they died from starvation, then the white men wouldn't get their profit." This was summarizing a discussion I brought up to students on why they thought the slaves were forced to eat.

Participants were able to successfully compare and contrast two documents. When asked, "How is the source information to Document B similar to and different from Document

A?” one person scripted, “Both docs are telling about the factory health conditions, they are described in different perspectives of different doctors.” When prompted to answer the question, “Which document A or B do you think is more trustworthy? Why?” they noted that experience and witnessing the event lead to a document being trustworthy. One subject wrote “A because it’s a primary source. Doc A is trustworthy because doctor Ward on hands on experiences.” Another analyzed “A, the doctor seen firsthand what was happening.” They were able to answer questions and analyze why a document was written.

Exit Interview Questionnaire

I originally intended for an open interview with participants. I decided a questionnaire would be best because I noticed that the group of students tended to be reserved. I created a ten-question interview worksheet, and the trends I noticed were as follows:

According to my participants, the most interesting part of the *Digital Historian* website was the games. I created the games in *Classrooms.net*, and it featured ten questions for each mini-lesson. Students had the option of choosing which format they wanted to play. There was PacMan, Snake, Asteroids, and other arcade games. The website created multiple choice questions out of the questions and answers I provided. As I observed the students, they really enjoyed playing them. They spent most of the time playing the game even though they did not read the primary documents on the website. One participant wrote, “I liked the games, and I liked being able to answer questions and see everyone’s feedback.” I was not surprised because I learned during my doctorate studies that digital natives enjoy learning this way. The information was relevant because teachers can create their own games like I did to captivate learners’ attention. Digital immigrants can also have digital natives produce their own games online due to the many free websites available. My only concern was that some websites were not available

to play in the school district, and thus, communication with the IT department and instructional technology coaches is imperative because in reaching out to them, they can help to unblock websites or find ones that they could access.

During the exit interview and my observations, my participants and I felt the frustration of technology. On the first day that I presented to the students and shared with them the IRB forms, the website only worked on Ms. Applebee's computer. Students had the link, but it was restricted. I emailed the IT department to get it unblocked, and I was told that they would investigate it. I returned the following week after End of Course exams, and the website was still restricted. I decided to go ahead and present my historical thinking lesson to the group. Fortunately, I was able to contact an IT specialist at the high school, and he was able to put the website as a shortcut on the Chromebooks for my next session. Everyone was able to access it.

Most of the items on the website were unblocked. Some were able to download the documents while others could not. Since the students could not access the documents, I ran off copies of the documents for them to annotate. One student answered the question, "What do you think could be different about {the *Digital Historian* website}?" She wrote, "The links could be easier to get to and not blocked." Another wrote, "The passages didn't work, so maybe try making sure all of the sources work." I reflected in my researcher's journal, "The website was still blocked so I went to the district office and spoke to Mr. Harding, and he was able to help me get the website unblocked for tomorrow. It showed the importance of communication between teachers and the technology department."

I also reflected on the fact that when I created my website, I did not consider the internet filters and restrictions for schools. I assumed that participants would be able to access internet

sites like *Padlet* and *Classtools.net*, but I was informed by Ms. Applebee that they were not. The IT department whitelisted my websites so the subjects could access them.

One of the questions I asked was “Do you prefer textbooks or primary documents for learning?” and all participants wrote that they prefer primary documents, because “it was direct experiences from the people and from that time that someone lived it”.

The students were also hesitant about creating their own video for the final project. They felt it would be fun and interesting but were still confused about how to make it happen.

One issue that I encountered while researching was the cell phones in the class. I did not ask Ms. Applebee what the cell phone policy was for the school, but I assumed that cell phones would be put away during class time. During my presentation on historical thinking, one student took notes, but most were on their cell phones. I was shocked to see their cell phones in their hands or on their desks instead of in their book bags. I was not sure if it was because it was the end of the year and that is why cell phones were out, or if they were always out.

Students seemed to be multitasking on their phones and listening to my presentation. I knew this because when I asked a question, some participants on their phones would answer. I wrote in my researcher’s reflection journal, “They were a polite audience even though most of them had their cell phones and were using them. I had one student take notes as I presented. I was shocked by the permission of the cell phones in the class. When I taught, cell phones were allowed in school but had to be put away during class.” I then reflected that if schools gave permission for cell phones to be used during class time, perhaps teachers could take advantage of the technology by allowing students to direct a video on their phone or play a game like *Kahoot* or *Quizziz*.

I was not sure if students would be able to access the *Digital Historian* website on their phones. I did not think until later, but I believe the website would still be blocked.

The last trend I noticed during my analysis was the preference for primary documents. All participants wrote that they prefer primary documents over learning from a textbook. Other researchers had noted that students relied on textbooks. Based on my case studies, it appeared that this trend was turning opposite. Students preferred reading primary documents and mistrusted textbooks. When asked, “Which of these documents is most trustworthy? Why?” one wrote “Probably B & C because they are primary sources.” Students were adopting the belief that primary documents were true. It appeared that social studies would warn students those primary documents were written by someone with bias and needed to consider the sourcing and context while reading. Sourcing should be taught more explicitly as well as the other historical thinking skills.

Padlet

I observed that students really enjoyed posting on *Padlet*. Even though this website was restricted, the participants posted on it with ease. I was impressed with their background knowledge and their answers. I was unable to analyze the *Padlet* responses because the writings were anonymous, and I was unable to tie responses to participants. It was an excellent exercise, and an instructor could use it in the future.

Thematic Coding Analysis:

During stage 1 of the thematic coding process, I created a chart for my code manual. In the chart, I had five columns. The first column was the theme I was analyzing. Under this heading, I had the five historical thinking concepts. Next, I had a column with the definition of each term so I would know when the theme occurs. I used the definitions from the historical

thinking rubric. The third column allowed me to note the artifact details and where the quote originated. The fourth column was the area where I inserted the quote from each artifact. Finally, I included a column where I can make analysis and notes. By breaking down each historical thinking concept and SAMR level, I was able to see trends in my data. I gathered the following data hits for each theme and used the following definitions in the chart below. While analyzing the data, two other themes started to occur. I added triumphs and issues pertaining to technology.

Theme	Definition of Theme	Number of Data Points Connected
Multiple perspectives/identifying primary and secondary sources	Students can explain similarities and differences by comparing information and perspectives in multiple sources. Students can identify consistencies and inconsistencies among various accounts.	14
Contextualization	Students apply prior and new knowledge to determine the historical setting of sources. Students use new setting to interpret the sources within the historical context as opposed to a present-day mindset.	5
Sourcing	Students can evaluate the reliability sources based on the author's perspective and when and why they were produced. Student attempts to evaluate the reliability of sources.	6
Claim Evidence	Student formulates a plausible interpretation, argument or claim based on the evaluation of	15

	evidence found in a variety of primary and secondary sources.	
Triumphs with technology	An important topic or problem for debate or discussion in the area of technology	9
Issues with technology	An important topic or problem for debate or discussion in the area of technology	7
Substitution	This would explain where technology acts as a direct tool substitute with no functional change	1
Augmentation	This would explain technology as a direct tool substitute with functional improvement-	1
Modification	This would explain where technology allows for significant task redesign. ¹	1
Redefinition	This would allow technology for the new creation of new tasks, previously inconceivable.	1

Themes Analysis

In response to research question #3, data was analyzed through thematic coding for trends across the five participants. The following themes emerged from the data: historical thinking concepts, triumphs, and issues of technology, and SAMR level. Over sixty points of data were used and sorted in a thematic coding chart.

Multiple Perspectives

Multiple perspectives are defined that students can identify consistencies and inconsistencies among various accounts. They gave reasoning on why the documents were similar and different between Dr. Holmes and Dr. Ward in the Google Form *Factory Life*. Not

only did students identify the different doctors, but they also identified how they compared and contrasted with one another. They were also able to show that they understood the concept of multiple perspectives. In their answers, they mentioned that they were both doctors and were testifying about the working conditions. They were different because they had different things to say from different perspectives. “Different doctors, different opinions, same purpose.”

Participants identified consistencies and inconsistencies among various accounts.

This was seen in the Google Form *Battle of the Somme* when subjects said, “B and C are written by people in the war. A is written by a newspaper.” As I analyzed the thematic coding responses, I wish that participants would have added more details of how Captain Phillips’ position on board the Middle Passage influenced what he wrote. Students were able to identify that there are differences; however, the background of the perspective was not scrutinized enough. Upon review of the data, further investigations should yield additional training in multiple perspectives and the influences that mold and shape them.

I found multiple perspectives concept is one of the easier ones to understand. In the exit interview question, it asked, “Do you prefer textbooks or primary documents?” All participants said primary documents. I should have included this question in the history interest survey because it would have been thought-provoking to see if their answers changed after the research.

Three out of five of the participants said that there was a difference between primary documents and textbooks. They wrote that primary documents are from that time, and it was real life and direct experience.

Another question I found related to multiple perspectives was from the *Middle Passage*, “Who was Equiano? How might his background have influenced what he wrote about the Middle Passage?” The participants wrote, “He was a former slave that was actually on the Middle

Passage. His background influences this because it actually gives a real-life experience” and Equiano was “a former slave on the boat.” Participants correctly identified that Equiano was a former slave on board. One participant gave reasons for how his background as a former slave influenced how he wrote since he actually had a real-life experience.

Multiple perspectives were in Jean Louise’s narration. In the final video project at 42.57 to 44.41 seconds, she said, “He was twice elected president, unanimously as president. We had a strong and well-financed national government.” I found it was a different approach to George Washington’s presidency since some may argue against it. Jean Louise said in her video at 67.1 to 69.565 seconds, “Many scholars and ordinary Americans alike ranked him among one of the great U.S. Presidents.” She did not attempt to name the scholars or ordinary citizens that felt this way.

Contextualization

Under contextualization, students applied prior and new knowledge to determine the historical setting of sources. In the history interest survey, it questioned, “If you could meet anyone from the past, who would it be and why?” Two participants said George Washington. Their reasoning was not only because he was the first president but also because of his political beliefs. The first participant posed the question, “I wonder what it would be like if we didn’t start political parties.” This brings an interesting point, and I categorized this under contextualization. Other answers included Jeffrey Dahmer, Benjamin Franklin, and one student’s grandpa.

There were some questions in the Google Forms that asked students to contextualize. Participants correctly identified the age of Mr. Birley’s account under *Factory Life*. When students were asked a question, such as figuring out the age of a person, they were able to do it

successfully. In the *Black Plague* module, participants had to answer why people trusted the documents from 1348 and said people did not have anyone to tell them differently, and thus the primary documents from the medical staffs were relied upon.

Participants were able to identify the location from the Portuguese textbook from the *Middle Passage* module. She did not demonstrate any depth in her answer on how the Portuguese textbook impacted the portrayal from the Middle Passage. Her comment did not surprise me since this is a U.S. History course and not a world history class. It would have been more interesting to use an excerpt from a textbook written in the 19th century. Students could have compared and contrasted the documents.

Sourcing

When students were sourcing, they evaluated two sources and had to determine which one was more trustworthy in *Factory Life*. All participants chose document A (which was Doctor Ward's testimonial) over document B (which was Dr. Holmes' testimonial). Even though both documents came from first-hand experience in the cotton factories, participants felt Dr. Ward was more trustworthy. They said it was because it was a primary source and that it made it trustworthy even though Dr. Holmes' was also a primary document. Their reasoning on why they chose the document was not substantial. In the *Battle of the Somme*, participants noted that B and C were most trustworthy because they were primary documents. I noticed that students thought that if it was a primary source, then it was more trustworthy. During direct instruction of the historical thinking PPT, students should also discuss whether or not primary sources were always trustworthy and the effect time had on memory.

The *Middle Passage* module had a similar question that stated, "According to the textbook, 'The time between the moment the slaves were bought and when they arrived at port

was very dangerous not only for the European traders but for the slaves as well.’ Why might the textbook’s authors have chosen to compare the experience of the ship’s crew to the experience of the slaves?” The subject had to analyze the quote and read the document to rationalize her answer. She wrote, “That they were both going through a dangerous time.” The participant’s answer did not elaborate on the details. Even though they noted that they were both going through a dangerous time, she did not discuss the crew’s experience and why it would also be a dangerous time for the slaves. Upon her reflection, I found it important to highlight because students were not thinking critically while they read textbooks or documents that they were exposed to in class.

I found another example of souring issues in the final video project of case study # 1, Jean Louise. She said, “He was an American military officer, statesman, and founding father who served as the first president of the United States from 1889-1897.” The participant had incorrect facts about George Washington and when he was president. Using citations and giving research tips could have been used. She had another incorrect fact about the Constitutional Convention at 31.56 to 33.26 seconds in her video. “Of 1887, which created the Constitution of the United States and the American federal government, Washington has been called the father of the nation for leadership of our country.” The Constitutional Convention was in 1787, a century before she credited it in her video. Her errors might have been a result of nervousness over making a final video project or a simple oversight. However, it might have been due to incorrect research.

Claim Evidence

Claim evidence appeared the most in my thematic coding analysis with fifteen hits. Under claim evidence, students were to formulate a plausible interpretation, argument, or claim

based on the evaluation of evidence found in primary and secondary sources. Questions from the Google Forms that asked students to analyze documents included from *Factory Life*: “Why is Dr. Ward being interviewed by the House of Lords Committee?” and “What does Baines mean in the second paragraph, when he states, ‘But abuse is the exception, not the rule?’” Participants were all able to identify the reasons why Dr. Ward was being interviewed. Based on the documents they read, they all created the same argument and reasoning on why the person was interviewed. They were able to evaluate the evidence found in a variety of primary and secondary sources. Upon reading the documents, students had to analyze the quote by Baines. Interestingly enough, their answers were the same; however, the reasoning was different. They understood it was the mistreatment of workers, but only two correctly understood how it was the exception, not the rule. It made me wonder if they have ever been exposed to this quote before.

Participants had to give similar answers to the Google form questions in all four learning modules. Questions included, “According to Document B: Ibn al-Wardi, where did the plague originate? What or who caused the plague?” One subject responded, “Hong Kong and it was from fleas and rats.” Participants correctly identified the location of the origin of the plague by al-Wardi and how it was spread. No details were given to really what or who caused the plague. As I analyzed the explanation given by the participants, they did not give any details on what or who really caused the plague. For this question, I should have also required them to give details from the documents to support their answer. I think I would have gotten more detailed answers, and I could have really seen how they connected to the text. It might have been beneficial to have a minimum number of characters for each answer; however, I am not sure if Google Forms has this option. I observed this during thematic analysis with the *Middle Passage* and the *Battle of the Somme* where answers were vague and lacked details. One example included “tried to help

keep them alive” to the question, “According to Phillips, what did the ship’s crew do for the slaves?”.

During thematic analysis, I noticed that subjects used information from the hook videos and discussions prior to exploring the website on their own. For the *Middle Passage* Google form question, “Why do you think slaves were punished for not eating?” they answered, “They were punished for not eating because if they died from starvation, then the white men wouldn’t get their profit,” and “because they were supposed to be kept alive so they can be traded.” They used information that we talked about during the historical thinking lesson and the analysis examples that we did in class to support their claims.

There were numerous examples of claim evidence in case study # 1’s final video project. The participant had both correct and sometimes incorrect information about George Washington and facts that can be confirmed with a quick Google search. At 72.88 to 79.528 seconds, Jean Louise narrated, “I believe he was a great president and above his and ahead of his time because he predicted that we did not need political parties, and today that is one of the problems we have. Much of the division is because of political parties. Thank you.” The participant alluded to the division and slavery debate earlier in the audio file. She also used information from the present day to express that he was a great president and cited the problems of political parties we have today. Nelle used claim evidence in her final video presentation about Adolf Hitler. She wrote, “Adolf Hitler was an Austrian-born German politician who was the dictator of Germany from 1933 until his death in 1945. He rose to power as the leader of the Nazi Party, becoming the chancellor in 1933 and then assuming the title of Fuhrer and Reichskanzler in 1934.” The participant used facts for the presentation. An image was used of Hitler. On slide number 3, Nelle wrote, “His concentration camps killed over 6 million Jews.” She never mentioned the

other 5 million people also killed during the Holocaust. She inserted an image of Hitler with a raised arm to go with the caption. This relates to the struggle noted with researching. There is a fountain of information on Adolf Hitler; however, only three slides were used. The participants did not go into details when analyzing documents or for their final video projects.

Triumphs with Technology

The main triumphs with technology were engagement, the games, students' historical thinking presentation, independence of learning on *Digital Historians* website, and recognizing the importance the best of both worlds in a section called paper and plastic. These sections will be explored further below.

Engagement

Even though the average time of each user on *Digital Historians* was 5 minutes, the students in the class were actively engaged on the website. I observed students working excitedly through the games. They were disappointed that they were unable to see all the primary documents, and the videos held their interest.

Games

As I was examining the data, I came across the need to include a theme for triumphs and issues with technology. The main triumph I realized during thematic coding was the games. In the exit interview question, "What did you like best about the *Digital Historians* website?" three out of five said that they enjoyed playing the games. Two out of five said that it was easy to use and get around, and it was easily understandable. These students enjoyed playing games. The website was designed in a way that they could maneuver easily. I received similar answers to the question, "What features of the website did you find the most interesting?" The participants wrote that the videos and games were the most interesting. Four out five subjects said the

games. In my researcher's journal, I noted, "Next, they explored the website. Most students focused on the game that I created for each module. They really enjoyed playing it. We watched the *Fleas on Rats* video for the Bubonic Plague...The games are great! Use more of them to engage learners."

Historical Thinking Presentation

Another triumph was the engagement of the historical thinking concept presentation. In my researcher's journal, I wrote, "Even though the length of time was short, I felt that the students had a firm grasp on the concept of historical thinking. We went over primary and secondary sources, and we discussed how textbooks were secondary". They had ten items that they had to decide whether were primary or secondary. Everyone got those items correct. Next, we discussed multiple perspectives. I didn't get a chance to show them *The True Story of the 3 Little Pigs*, but they understood the concept. Afterward, we discussed sourcing. I had a quote and asked who they thought wrote it. Someone said it was a good quote even if it came from Hitler.

We discussed claim evidence and used the bus car crash scenario. They picked up right away how I asked about the evidence used to confirm or deny the bus car crash scenario. I received answers to what I was looking for. Even though it was a PPT, I found that keeping students' attention with activities helped to overcome the boredom of sitting through a lecture.

I was hesitant to how students would feel about creating and directing their own videos. I was unaware if they have done any form of video recording in the past. During the exit interview, I asked, "How did you feel about researching and creating your own video?" Students had mixed feelings about the final video project. This is evident in the submission of the final video project. Even though some thought it was an interesting project, others were nervous

about it. If the other three students were less confused about the requirements, I might have received more submissions.

Independence on *Digital Historians*

Another moment of great success or achievement was that students worked independently on the website. There was no need for direct instruction after the historical thinking lesson, and they completed the forms with little guidance from me. I felt this type of technology would be relevant to virtual classes where students explore the content on their own. Students were able to move at their own pace on the website, and the role of the teacher turned into one of facilitator.

Paper and Plastic

My AHA moment came on May 25, 2022, as seen in my researcher's journal: "I realized today that technology and book work doesn't have to be exclusive. A lot of times, teachers think that they have to do all technology with a lesson. I had created a lesson with all technology, but the students learned just as well with paper and pencil as they did with technology. You can use both." I found this to be a triumph because often the fear of technology will keep teachers from using it. By producing my own website and completing the steps, I was able to appreciate the struggles that educators and IT departments experience.

In the overall review of the website, participants felt the ease of the actual Google Site. They had a positive experience and said it was helpful and easy to navigate and gain information. I think embedding the Google Suites helped the students to navigate the website. In the exit interview questionnaire, I posed the question, "How did you experience the use of a Google site for learning?" They said that it was beneficial and easy to navigate to gather information. I did note in my researcher's journal on May 24, 2022, "I overestimated the time it took for the

students to click through the website. They were able to finish both modules in less than 60 minutes. The audio files did not work. But they did do the Google form and Padlet. They enjoyed the Padlet and worked hard on it. Suggestions for next time: check ahead of time for the website and approved websites that they use like see if they already use *Padlet* instead of having to individually whitelist each site.”

Issues with Technology & Research

Issues with technology were defined as “the thing to consider to be the most important part of a situation, discussion, or problem.” The following issues were noticed during analysis of the data includes lack of communication with IT department, frustration with blocked websites, lack of enthusiasm for final video project, time of year, issues with cell phones, lack of time on *Digital Historians* and unanticipated research issues. Each of these will be explored in the following sections.

Lack of Communication with IT Department

In my researcher’s journal on May 23, 2022, I wrote about my experience with my website being blocked. Even the students noted the frustration and wrote the following responses: “The links could be easier to get to and not blocked”, “The passages didn’t work, so maybe try making sure all of the sources work.” I reflected that even though we were unable to get it unblocked until later the next day, this experience really opened my eyes to the importance of the roles of a technology department, IT technicians, and teachers. I would not have been able to do it without the aid of Mr. Harding or the IT tech. I really should have contacted Mr. Harding prior to beginning the case studies instead of assuming my site was unblocked.

One suggestion that I saw appear in the exit interview was not to have so much on one page and to have text that was easier to read and understand. A website should not be lengthy to

where students lose focus. A long webpage can be daunting. For the next time, I would only use half of the page and reduce the number of links but provide more videos and games. It is imperative to make sure everything works prior to research. I suggest seeking out school personnel and testing the website and link for errors beforehand.

Lack of enthusiasm for Final Video Project

Another problem I encountered was the lack of enthusiasm and the mixed feelings about researching and creating videos. Most of the participants were nervous about the final project. When I spoke to Ms. Applebee about the final project, she mentioned to me that she would like to do more activities like that in her class. Since her class was EOC, she had to finish the pacing guide to be ready for the EOC, so she merely did not have the time. Every student had a Chromebook, so the resources were there. As a teacher, I noticed that some educators did not want to spend days on a Project Based Learning (PBL) activity because they felt that the students were not learning. When my students created videos, campaign ads, music videos, and various hands-on activities, they retained the information much better. I wondered if the students were unsure of this project because they were never exposed to anything like it.

Time of Year

Another issue I noted in my researcher's journal was timeline modifications. Even though the principal and teacher knew of the research, and I was told by the principal that it would not be a problem, that they all had Chromebooks for three days, my research was crunched to only a few days. It was the end of the school year, and I was not able to plan for interruptions. It was something that neither the teacher nor I had any control over. This is expected at any job, especially in education, where anything can happen and usually does.

Issues with Cell Phones

Cell phones were an issue during the research process. In my researcher's journal on May 23, 2022, I wrote the following: "They were a polite audience even though most of them had their cell phones and using them. I had one student take notes as I presented. I was shocked by the permission of the cell phones in the class. When I taught, cell phones were allowed in school but had to put up during class." Since I teach in a prison, my students are not allowed to have cell phones, so they are never seen in class. I must admit, it is one of the perks of working at a prison. My students are not distracted by cell phones, tablets, or Chromebooks. This was not the case at the high school. Students had cell phones in class. At one point during my research, one student even made a call and listened to a voicemail. Cell phone etiquette was something I was not prepared for and did not include it in my research guidelines or study. I did recommend to the students that they could use their cell phones for research and creating their videos, but they were not used in that way.

Lack of Time: Google Analytics Results

As a researcher, I wanted to analyze all possible data to conduct a deeper dive. Google Analytics is a web analytics service that provides statistics and basic analytical tools for marketing purposes. It is free to anyone with a Google account. It is used to track website performance and collect visitor insights. Google Analytics uses a JavaScript page tag that is inserted into the code of each page. It collects data and sends it to Google Analytics. I decided to look at the analytics of my website to see exactly the average of each view, how many times has each page been viewed, and the number of users.

At the time of data analysis in June 2022, *Digital Historians* attracted a total of 72 users with 97.70% on desktops, and 2.30% on cell phones. A user is a unique or new visitor to the website. There were 118 different sessions or individual logins. Each session is the number of

individual sessions initiated by all the users of the website. “Users” refers to the number of unique visitors to it. The average duration was five minutes and fifteen seconds. The average session duration is how long on average each visitor stays on the site. According to Google Analytics, there were 271 pageviews with 67.42% of users in the location of Clearview School District. “Page views” is the total number of pages viewed. For every time the page is viewed, it is recorded in Google Analytics. 91% of viewers used Chrome for their browser. The following is a breakdown of the page view for each section:

- The Home page -154 pageviews
- Black Plague-17 pageviews
- Middle Passage- 14 pageviews
- Factory Life 9 pageviews
- Battle of the Somme 7 pageviews

The “bounce rate” was 32.75% and \$0 was made in revenue. The “bounce rate” is the percentage of visitors who viewed only a single page. By reviewing the Google Analytics from Google, it provided a picture that the participants did not spend the amount of time I expected on *Digital Historians*. The average duration was a little more than five minutes. To read the primary documents, answer the Google form questions and play the games should have been longer than five minutes. Students’ answers were short, and the duration would give an indication that the time was not spent as I would have liked. In my researcher’s journal, I noted the use of cell phones. The time concentrated on *Digital Historians* may have been less than 5 minutes.

The Home page received the most views with 154. This is not surprising since this is the home page of the website. I assumed that this page would receive the greatest number of views.

Factory Life and the *Battle of the Somme* were the least view with only a combined total of 16 views. If this research was conducted at a different time of year, these page views may have been more.

Unanticipated Research Issues

It is imperative to note the following situation occurred during the time of research for *Digital Historians*. When I began the process of writing chapters one and two for this dissertation, I contacted a local AP United States History teacher at a school district in North Carolina. She agreed to participate in my study. We arranged that I would conduct research in her AP class. In October of 2021, I successfully proposed my study to my committee and was granted approval to begin the research phase. I completed Duquesne University's IRB process and was granted approval in January of 2022. I contacted the aforementioned teacher, and I emailed the school's principal. After a few months of emailing backing and forth with the principal, I was told to complete a research request form, and it would be given to the school district. In April, I submitted my forms, and by mid-April, I was informed by their committee that my research did not meet their current education philosophies. Considering my deadlines, I contacted another state and school district to conduct research there. I was given permission and met with the school's principal and high school teacher. Since it was at the end of the year, I had to wait until after the administration of the End of Course Tests to be given for U.S. History. On my second day of presenting information to the students, I was informed that their Chromebooks had to be turned in in two days. I only had a total of four days to work with the students, and even though they were told about the final project weeks prior to the due date, only two of my participants completed it. I met with my dissertation committee in July 2022 to discuss the small sample size and decided to focus on analyzing through the lens of a case study.

CHAPTER 5: DISCUSSION AND CONCLUSION

Discussion of the Findings

An educator's feelings of excitement about a topic like the Dust Bowl might not produce the same in her students. A student can get his or her best nap in a history class or he or she might even turn into a brain eating monster. The question that has been plaguing twenty-first century teachers is "Why should I teach it, when my students can just Google it?" The internet age provided a wealth of information not only for the youth but for the educators. Engaging students in learning is imperative to the digital natives that sit in these classrooms.

Teachers have struggled with the question, "What should we teach when students can quickly ask Alexa how many seats are in Congress?" The twenty first century has left us with Chromebooks instead of textbooks, Smartboards instead of chalk and Google Classroom instead of face-to-face classes. The drive of this dissertation was to determine if there was a new way to teach with an interactive website and how do students react when asked to create their own video. Even though studies have shown that technology does not correlate to higher order thinking, during this research, it has shown that an interactive website can hold the interest of 11th grade honors class. When asked on the exit interview question, "How did you experience the use of a Google site for learning?", they responded that "It has been good", "helpful", and "easy to navigate and good information."

With 13 years of service in education as a history teacher, and a master's degree in social studies education, I sought a way to bring two passions together to see how a website can impact learning. I incorporated different theorists on TPACK, SAMR and historical thinking for my theoretical framework. TPACK refers to the integration of technology, pedagogy and content

knowledge and the intersection of these circles to encourage curriculum development to become a more effective teacher.

I studied the philosophy of Prensky's digital natives, Puente's definition of SAMR technology integration levels, and Jonassen's Mindtools. Hands on learning, personal connections, and scaffolding are needed for students to be successful in using technology as a tool that is more than just a search engine.

TPACK

Mishra & Koehler (2006) theorized a framework where technology knowledge, pedagogy knowledge, and content knowledge intersected to form an interdependent new way of thinking. In this dissertation, I combine my two areas of interest, technology and social studies, to determine what effects it had on learning. With a TPACK framework, I built a website on historical thinking that engaged learners. I found the use of TPACK vital to the development of this dissertation, because it provided a system where I can test different learning theorists to determine how well the website and activities were experienced.

In an action research plan, a teacher becomes a researcher. I witnessed a problem that I viewed in the courses that I taught, students' apathy towards social studies lessons, and I decided to see if there was a way to overcome it. By conducting a qualitative research study, I realized it does not necessarily take a doctorate degree to bring about change that is needed. This dissertation focused on ways to encourage educators in using technology. Even though the statistical data was the first intention, it became more important to focus on the practitioner nature during analysis. My data was qualitative, and this allows for a different narrative dialogue to emerge as told by my participants; allowing me to go forth and share how social studies

teachers can change and become even better. Methodology classes and professional developments can be arranged to share with the practitioner.

Technology Knowledge Learned

Upon reflecting on the two case studies' scores and analysis, I think of the old phrase, "You can lead a horse to water, but you can't make it drink." A person can develop an interactive website, and activities on historical thinking; however, it does not mean that the participants will be able to incorporate technology and create a video. A teacher cannot expect her students to think historically without guidance. The lesson learned is similar to Jonassen's (19998) Mindtools theory. Computers cannot do the thinking for students. I believed that if I had enough interactions like games and videos then they would learn historical thinking, but this was not the case. I learned that a teacher is still needed to facilitate historical thinking. Students do not just acquire it on their own. Even though students might have a Chromebook, a phone with a camera, and every encyclopedia on the web, it does not mean that he or she can magically begin to think historically. It is a topic that takes time over the course of weeks or months to learn, not in the short amount of time that I had.

During thematic coding analysis, "Triumphs with technology" was defined as an important topic or problem for debate or discussion in the area of technology. The momentous triumphs for technology were the games. Students loved the games I created in *Classtools.net*. They challenged each other and enjoyed seeing their scores. The games were in the last part of each module and contained ten questions. When asked, "What features of the website did you find the most interesting?", four out of five said the games were the most interesting.

There were technological issues that included the *Digital Historians* website being blocked on the students' computers. There was a lack of communication between the IT

department and the teacher as we worked to livestream the website. I noted in my researcher's journal on May 23, 2022, "Even though we were unable to get it unblocked until later the next day, this experience really opened my eyes to the importance of the rapport of technology department, IT technicians and teachers. I wouldn't have been able to do it without the help from Mr. Harding or the IT tech. I really should have contacted Mr. Harding at the very beginning instead of assuming that it was unblocked." Another issue was the web pages being too long and students use of personal cell phones in the class during instruction and learning. The time of year became a large hindrance since students had to turn in Chromebooks, and research was cut short.

For SAMR, I saw that as students used more historical thinking skills and research, they would use technology in new and better ways than just an oral presentation. As students research more, they will find more pictures and video footage to use for their presentations. Resnick & Science National Research Council (1987) that higher order thinking took place when learners got to choose what they wanted to do. Students were not assigned historical figures to complete the final video project. It became even more meaningful to the student because they received the choice of their person.

Project based learning can be daunting to a teacher because it takes time for students to research and produce. There are no quizzes or tests to check for understanding and the fear that students are falling behind can result in the cancellation of a PBL. Time needs to be budgeted. I realized during my dissertation that time worked against me, and with the end of the school year quickly approaching, I did not have enough of it. Time needs to be available to allow young students to research and find facts to direct their own videos.

Google Suite is extremely easy to use. In a short amount of time, I constructed a website and embedded documents, YouTube videos, and games for my study. I was able to launch a website that was embedded with all Google suite apps with relative ease. Ms. Applebee shared the website that she built in Google Sites with me. Websites can be operated in various ways. Teachers can generate a website to embed Google Forms for exit tickets. The information from the exit tickets will be displayed in an easy-to-read graph. Instructors can take Google Bootcamp classes and become Google certified. School districts are moving to Google Classroom and apps as a learning management system. Pupils can create their own websites for projects. Schools may also want clubs or organizations to maintain information on the web.

There are various free websites that are available for educators to use. *Weebly*, *Wix*, and *Squarespace* are a few. I preferred to use Google Sites to manufacture my *Digital Historians* website. Through my learning at a Google Bootcamp, it took me a short four months to construct the website. I mastered how to insert and embed YouTube videos, audio files, and Google forms. I designed *Digital Historians* to allow users to stay on the website instead of opening new tabs. If I needed to make any changes to the website, I was able to republish it, and the website would automatically update. I was able to make changes an hour before beginning my study, and I did not have to worry about what the subjects saw.

Pedagogy Knowledge Learned

Tate (2016), Hofer & Harris (2015), and Jonassen (1998), Carr & Hsiu-Ping (1998) shared the same beliefs that students learn better if they construct their own products. I had my participants direct their own videos even though they were nervous about it. I did not survey students after the final video project to analyze the data on how they felt afterwards. Even Ms.

Applebee agreed that if they had the time in school, she would allow her students to complete these type of projects.

I did learn that scaffolding and aiding students is imperative to see a success of a final video presentation. The teacher cannot be afraid of allowing technology in the classroom. She will need to relinquish control of the content and give it to the students to explore. In the past, I have felt nervous completing a final video project like in this dissertation. I was afraid my students would not master the subject area. This fear is holding teachers back. As I began incorporating more projects in my class, I realized that they learned far more than I anticipated. It is amazing to see passion light up a student's face. Given our limited time together, my participants did not show the same excitement, their presentations showed that researching information and deciding on pictures is as important as lecturing on a topic.

Scaffolding is critical for teachers and students. Using SAMR to help guide instruction is feedback that can be given to teachers. Teachers benefit from a technology coach. Professional development that is required by teachers to attend could result in higher usage of technology. Administrators could include a SAMR reflection grid on observation forms that would provide feedback to educators as well.

If educators are expected to teach like historians, then there must be professional development opportunities for them to learn. In preparing professional developments for teachers, they will become familiar with the process and thus their students will learn, too. There is a need to incorporate read-alouds and think-alouds by educators and historians to provide practice and scaffolding for students on how to read primary sources especially since the United States history textbook is flawed (Loewen, 2007).

Museums have primary and secondary documents on websites to guide teachers. As with the web, it is hard to see since there is so much of it out there. Teachers need professional developments in technology and how to integrate it in their classroom. Professional development on Google sites will trickle down to the students. School districts, IT coaches and subject experts can share these best resources that are relevant to historical thinking. Building a website might not be the first avenue a teacher is willing to take but there are classroom activities and assignments that can be found.

Students have the capabilities to learn with little scaffolding when it comes to using websites. For this study, I did not give explicit instructions on how to navigate *Digital Historians*. As soon as the website was live, students began perusing it and voiced their concerns when something did not work. I was surprised during the exit interview that students did not want to annotate on the computer, but, instead, preferred paper and pencil. When the primary documents were on the computer and they could access them, they preferred annotating the hard copies of the document that I had printed off. Thus, I came to the realization that students neither want all technology nor all traditional bookwork, but they will thrive in an environment with a combination of the two. Teachers do not have to be technology gurus or textbook lovers; they can be a combination of both. I noted in my researcher's journal on May 25, 2022, "I realized today that technology and book work doesn't have to be exclusive. A lot of times, teachers think that they have to do all technology with a lesson. I had created a lesson with all technology, but the students learned just as well with paper and pencil as they did with the technology. You can use both."

As researched in the literature review, Prenksy called this generation "digital natives." Digital natives love online gaming. The students in my case study enjoyed playing the games I

composed through *Classrooms.net*, thus supporting Prensky's claim. Educators need to incorporate more games into their classrooms. There are different websites available from *Jeopardy* to *Kahoot* and *Quizizz*, and some are free and easy. Students can even build their own, and this is a learning opportunity. Jonassen, Carr, and Hsiu-Ping (1998) referred to it as knowledge construction tools. This is a process of knowledge construction resulting from creating products. Upon reflection from the exit interview, my subjects not only enjoyed playing games, but they were also competitive to see who could make the top score. Gaming should not replace direct instruction. However, it could motivate students to work harder.

Content Knowledge Learned: Historical Thinking

High school students are capable of historical thinking and are familiar with similar concepts through critical thinking. If they are confused about anything, they will quickly look it up through the Google search engine. I was concerned about an issue that arose during the study. The participants' reasoning was not fully developed. Piaget called it formal operational stage. Students will reason logically about abstract concepts and develop the ability to derive conclusions (Bee, Boyd, & Johnson, 2006). This does not imply that they can, but they have the ability. Thus, if students are not learning to think critically in other subjects and history, then they will not develop hypothetic- deductive reasoning skills. They often thought that if the document sounded professional then it was true and was a viable primary document. I witnessed this in the Google form reflection questions. Educators should be aware of this tendency in youth's thinking. It is vital to understand the human development of high schoolers if one is teaching them. The frontal lobe has not fully developed by the end of high school for most, and the comprehension is not the same as adults in their mid-twenties when the frontal lobe finishes developing (Bee, Boyd, & Johnson, 2006). Adults would recognize the perils of reading primary

documents; however, youth do not have the experience or background to second guess documents that simply sound professional. Participants were able to identify on Google Docs if the document was primary or secondary, but when asked about which was the most trustworthy, they felt that just because it was a primary document, it could be trusted. They forgot to consider the bias that primary documents also pertain. They said that primary documents were different from textbooks because, “they were from that time and someone lived it”, and “were real life experience”.

Through thematic coding analysis, I learned that students were better able to understand concepts like “multiple perspectives” and “claim evidence.” They were able to identify the difference between primary and secondary sources. However, they were unable to differentiate between published dates and when the document might have been written. This could be addressed through repetitive practices in the classroom. It is similar to teaching political cartoons. A person cannot memorize all the facts that makes a political cartoon; however, with practice, she can see the clues in the cartoon and make inferences.

Another area to note was the lack of information or supporting details to the answers on Google Forms. An example from the *Black Plague* asked participants, “Who wrote Document A? When and where was this document written? Why was this document written?” Students struggled with sourcing the documents. They were unable to think of the context of the writings and, instead, relied on a present-day mindset while viewing documents. A minimum word count or paragraph text for answers might have resulted in higher order thinking answers.

The participants that were analyzed as case studies, Jean Louise and Nelle, did not use the historical thinking concepts learned in the presentation for the final video. Some facts were incorrect, and it appeared they Googled answers. I assumed that the eleventh graders would

know how to conduct research at the time of the study. As I viewed the final video presentations, the students lacked skills for researching and citing information. This was seen in case study # 1, Jean Louise, and the incorrect facts of George Washington's presidency and the date of the Constitutional Convention. She said, "He was American military officer, statesman, and founding father who served as the first president of the United States from 1889-1897".

Final Video Projects

One Ben Franklin's aphorism said, "Tell me and I forget. Teach me and I remember. Involve me and I learn." Creating, generating, producing, and constructing are all elements that instructors are striving to apply in their classrooms. Revised Bloom's Taxonomy (2001) is taught in education preparation courses. The highest cognitive process is to create. This is generating, planning, and producing to help thinkers encounter and work with knowledge. When I decided on this dissertation, I wanted my subjects to direct their own video on historical thinking. Tate (2016) and Hoefer & Harris (2015) agree that students need to construct their own learning and will understand the concept being taught. I assumed the subjects knew how to direct their own movie projects; however, this was not the case. During the Exit interview, the participants expressed nervousness about the final movie. Teachers need to be aware that learners need scaffolding on projects. Even though they are digital natives and make Tik Tok videos, they do not know how to generate one for educational purposes.

Recommendations

The following are recommendations or changes I would advise on in future studies in the areas of technology, historical thinking and research. As with any study, challenges arose, and I was able to work through them. The largest take away is not self-evident. I made many assumptions during this dissertation. I was unaware of some of the elements because I simply

did not think of things. I feel that one problem was due to time. However, this was due to pushing my research at the end of the year. If I had contacted the other school district earlier or did my best to reach out to the principal, I might have been rejected sooner, which would have allowed me to begin research earlier at Clearview School District.

Communication is key. By simply emailing Mr. Harding, IT director, my website ahead of time, I could have saved a precious day. I should have reminded the principal in emails about my research and communicated better, and perhaps, Chromebooks could have been turned in later. I should have had open dialogue with Ms. Applebee and discussed with her the videos for a second rating, and her thoughts on *Digital Historians*. I thought of myself as super Wonder Woman that could change the world of technology in one dissertation, and I did not need anyone. In reality, I needed every soul to help. From a participant to an IT tech, to my office clerk that stapled my booklets together, I needed their assistance. It is realizing that you do not have to be alone during the dissertation process that can make it bearable.

Technology Recommendations

If I were to repeat this study, I would still use Google Sites and everything through Google Suites. I found the ease of using Google Suites and incorporating the different forms very important on the website. Google Suites is not only free, but it allows a seamless transition from YouTube to Google Forms and audio files through Google Drive. The data from the Google Forms was undemanding, and I was quickly able to analyze it. The *FlipGrid* was another website that the students enjoyed. Students were able to upload their videos with few challenges.

I would change the communication between the IT department and myself and ask which websites are blocked before launch. It is imperative that not only the principal and teacher are

comfortable with the study, but the IT department needed to be aware of my research as well. I overlooked this part and losing a day while I was already crunched for time was a researcher's mistake. I would recommend that a researcher contact the district's IT department to either whitelist the websites or determine which sites are not restricted. I recommend an open dialogue between researchers and technicians to ensure all participants can access the website or any sites a teacher is wielding. A researcher needs to know the school district's technology restrictions. I happened to lose sight of this while I was constructing my website. I believed that schools would have access to Padlet and Classtools.net. A researcher must know the technology policies that are in place prior to creating, because some websites will not be available.

The researcher needs to build a rapport with not just the students, but with the teacher, principal, and IT department. I was pressed for time, and I should have spent more time building it with these people.

I would recommend more dialogue with the classroom teacher and asking for input from her. I focused on the students' voices; however, I muted the teacher's. It would have provided a different viewpoint that is imperative to the research. This is another example where I failed as a researcher. I did not build a rapport with the teacher, and I should have asked more of her opinion during my research if it was possible.

School districts should provide and allow for more professional development for Google Bootcamp and the Google Suite. Teachers can attend and learn to generate their own websites. This can be an alternative to relying on textbooks. Students can construct their own websites for lessons as a form of review or product on a project-based learning study.

In future endeavors, there should be more time on final projects and adequate scaffolding for different video making apps or websites. Another consideration is allowing students to work

in pairs or small groups to complete the final video project. PBL Works.org advertises that PBLs can be transformative for students and provide real-world relevance for learning. It provides a deeper understanding and greater retention of content knowledge. Students need to learn more than just technology tools, but also collaboration and research through production and presentation.

The length of the website itself can be restructured. Students enjoyed answering questions in Google Forms. Google Forms allowed me to analyze data in a spreadsheet quickly, and they provided graphs and pie charts. As the students were working on *Digital Historians*, I observed that they did not spend that much time on the site itself: only an average of six minutes according to Google Analytics. Participants were able to traverse two mini-lessons and play the games in ninety minutes. I was shocked by the short amount of time. For the next study, shorter documents or passages would be relevant. Students were daunted by the length and did not read all the way through.

Historical Thinking Recommendations

Wineburg, Martin, Monte-Sano (2012), Loewen (2007), Steffey & Hood (1994) stress the significance of providing primary and secondary documents instead of relying on textbooks. As I reflect on my dissertation, the primary documents for each mini lesson should have been shorter. Some were two pages long, and I observed that the students stopped reading after the second paragraph. I would recommend that educators check the readability of the text. It appeared to me that primary documents can be difficult to understand. Scaffolding would need to take place for learners to analyze documents at a higher Lexile level. Going over Google Docs and how to use it would have been relevant to the students. I did not have the opportunity to show students how to annotate a document on Google Docs. This is a lesson that could have

been presented during the initial historical thinking day. I assumed that the students knew how to use Google Docs. I did not keep in my mind my participants. I should have had a survey where students could answer if they have experience with Google Docs, and if I saw the area lacking, I could have gone over it or I could have provided a space online or in the classroom like a parking garage where they can feel more comfortable asking questions.

I would recommend that the study of historical thinking take place over the course of a semester. By learning a concept at a time, students will be able to understand it. It might have been interesting to build a website based on historical thinking concepts instead of events for it. Instead of having four topics, I could go over more history under each concept. At the end, students could receive more options than just creating a video. Students could be given the option of building a website, designing a poster, or even directing a music video.

Social studies instructors should go over historical thinking in their classes and review with pupils that if a document sounds professional, it might still be a secondary source. An activity that can be utilized is providing students with two documents without the author. One could be a primary document, the other, a secondary source. Students can analyze both and see which is more reliable. They can also create a Venn Diagram and write an argumentative essay on the difference between the two. I did not realize how important this was until I read the results from students, and they believed every primary document was reliable.

Research Design Recommendations

Participation in any study is an area in which researchers often struggle. I wonder if using an incentive such as gift cards, prizes, or simply allowing the teacher to grade it would have made a difference in the number of participants who turned in IRB forms and final video

projects. End of projects would have created more buy-ins for my participants by allowing them to make posters, dioramas, or websites instead of just using technology.

I believe using pre-test and post-test multiple choice questions would have provided more statistics on what students knew and what they learned during this journey. The pre-test and post-test could have been created in Google Forms especially related specifically to historical thinking concepts. A pre-test with historical thinking concepts questions and how to navigate Google Docs is relevant to see what the students know. I could have asked students what topics they were interested in on the pre-test or survey. A pre-test and post-test would not have taken long to build; however, the information gathered from these data sets would have been imperative.

More scaffolding for research is necessary. Worksheets and links to help students search for information and even examples to guide students to make sure that they hit all historical thinking concepts are required. They would have to cite evidence. Research tips or helpful hints should be a page on the website. I assumed that the students in 11th grade honors section would know how to conduct research, and thus, I did not think to include it in my research. I soon found out during my study that one should never assume and think of all possible pitfalls and plan for them. A review of how to conduct research and how to create a video in FlipGrid would have made a difference. Scaffolding is vital to a teacher, and when conducting a research study where everything is new to the participants, these small yet significant educational approaches could hinder or help the study.

More participant involvement from the students and teacher would be helpful. This includes their opinions on Flipgrid and Google forms should be voiced at the end of the research project. FlipGrid or Google forms might not have been as easy as I imagined it to be. It would

have been relevant to see how students felt about it. The teacher would be applicable to hear how she thought the research went and what areas needed to be improved. A simple survey or exit interview with Ms. Applebee would have been a great data source. For future studies, researchers need to survey the population to decide on the mini-lesson topics. This would give those participating more buy-in.

The study could even be utilized in different subject areas or cross-curricular modules. On the GED test, social studies and RLA tests are closely linked. The passages on the RLA test are often related to social studies. There are movements for other content areas to think like a scientist (GoNoodle video). Critical thinking is in every subject area. The ELA standards by grade level in South Carolina include inquiry-based literacy, reading literacy text, reading informational text, and communication. The Fundamentals of Reading, Writing, and Communication calls for integrating an information system that includes meaning, structure, visual, and pragmatics to make meaning from text (SC College and Career-Ready Standards, 2015). In Science and Engineering Practices for South Carolina, their units consist of analyze and interpret data, obtain, evaluate and communicate information.

Delimitations

Delimitations are choices made by the researcher and the boundaries that are set for a study. For this dissertation, I decided to conduct my research face to face in a public high school. This resulted in staying within a small circumference of school districts in my area. I narrowed my dissertation to one small class due to scheduling around my work and the teacher's class.

Another delimitation was selecting a school that had access to Chromebooks and 1:1 technology implementation. The class was required to have Google Suite to participate in the

study. Even using Google sites and Google apps such as Google forms, Google slides, YouTube, and Flipgrid were delimitations because I could have operated from a different website or learning management system.

The four subject topics were a delimitation, because they were selected by the researcher. Prior to the study, a survey could have been given to students to gauge their interest in topic areas. I could have selected a different website other than *Reading Like a Historian* for text selections.

The last delimitation was I only sought research in a U.S. History course, and the course was an honors section. These students' answers would represent those in harder classes. I could have researched in different ability level classes.

Limitations

The limitation of this study is the sample size. I only had five participants and two videos to analyze for research questions 1 and 2. I was disappointed that out of the 16 potential subjects, I had five submit IRB forms. My ideal sample size was ten.

Another limitation was the time of year. Due to the End of Course testing, I was not able to begin my study until two weeks before school was released for summer. Students' attention at the end of the school year focused on summer vacation and not on a final video project.

During my research, the school had end-of-the-year activities. One class was cut short because their homeroom was extended. Instead of ninety minutes for a session, I had thirty minutes for the historical thinking presentation. I was able to present the information to the students; however, I felt rushed to finish it. They were able to comprehend the material. During another session, there was a band concert, and I had only six total pupils in the class. It is worth noting that as an outside researcher, I believed that teachers have their students most of the time,

and there are no interruptions from the administration. With the end of the year programs, my time was cut short, and I had no control over it.

Chromebooks were collected during the week of my study, and students were unable to finish their final video projects if they did not have access to technology at home.

For the final video project, clearer instructions could have been written and explained to students. Scaffolding on how to use iMovie, Movie Maker or *Flipgrid* would have benefited participants. Subjects had to complete the final video by themselves instead of in pairs or small groups.

Final Thoughts

The worst nightmare for an educator is not to see the glazed eyes of a zombie student, instead, to not be able to teach them. The real fear that plagues teachers are not the students, but the Smartboard on the wall. I cannot sit back and continue to bore my students to death and expect them to pass state assessments or prepare them for the real world. My website showed that given time and access, students will work hard and be engaged.

On the final video project page, I began with the quote from T.S. Eliot “We shall not cease from exploration; And the end of all our exploring; Will be to arrive where we started; And know the place for the first time.” The results of this dissertation may not be recorded in scholarly journals or cited in conferences; however, upon working and reflecting on the process to arrive to this point, I was fortunate to have an amazing chair and committee, and support from my loved ones. Even though I had the goal to finish this dissertation and defend it, I realize now it is just the beginning.

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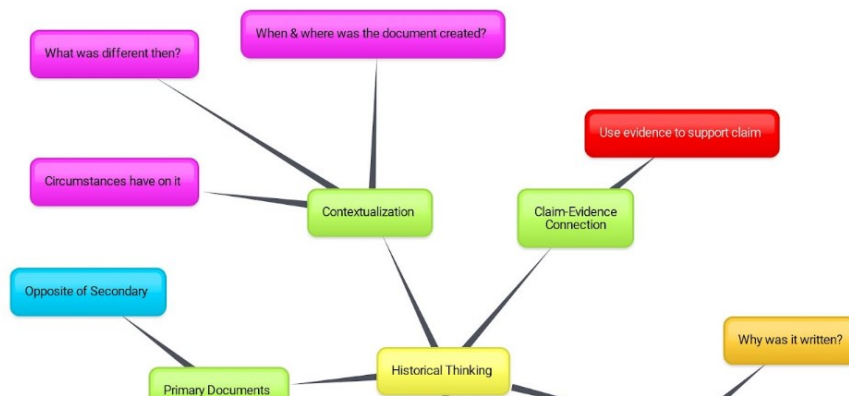
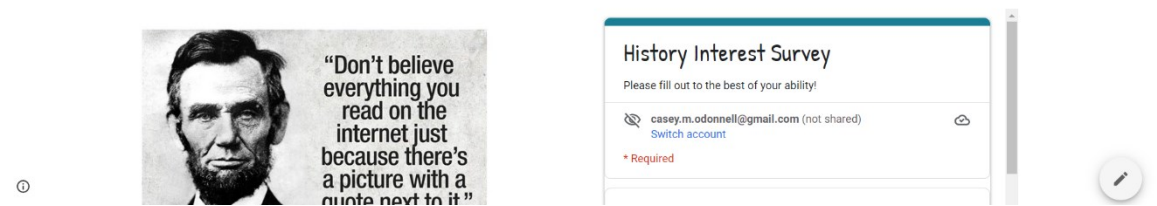
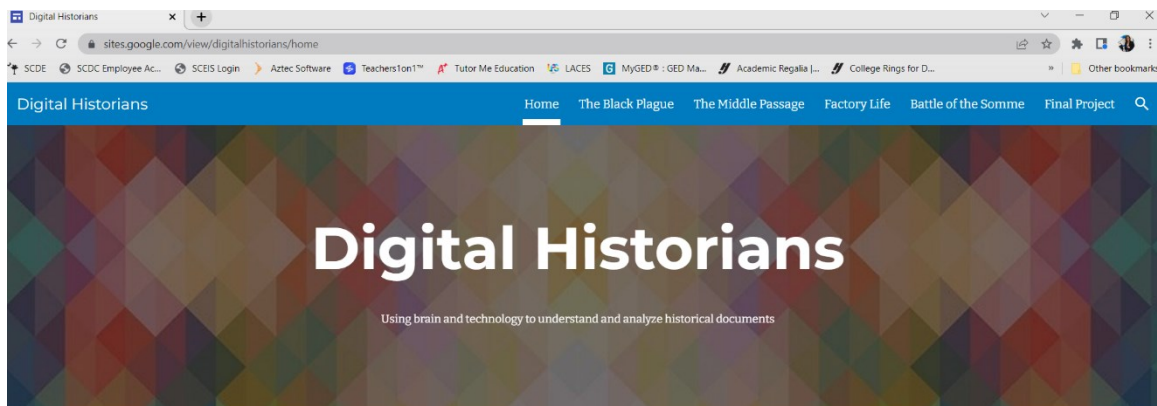
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APPENDIX A: Screenshots of Digital Historian Website



The Black Plague was a disease caused by rats and fleas and people were told to stay inside for 3 days.

It was spread by rats and fleas on ships.

it was a disease carried by rats that killed millions of people

It was a disease that became a pandemic. It came from rodents and killed millions of people

Many people were killed because of rats

It was a deadly disease that killed a lot of people

It was a disease that eventually became a pandemic. It came from rodents like rats and fleas and when people started getting it, they most likely died.

The Black Plague was a disease caused by unsanitary living conditions, rats, and fleas. It

The Black Plague

The Black Plague was an infectious disease that was believed to have originated in rats. I learned in a book that it was later falsely assumed to be waterborne because people got sick after drinking well water but was actually an airborne disease. It killed hundreds of thousands of people and mainly infected Europe and Asia. It is also known as the Bubonic Plague and had two main waves. It turned people's bodies black as their skin tissue died. They had to undergo quarantine in their house if they started to show signs of the Black Death and even their families couldn't see them.

The following music video will help you to remember what caused the Black Plague

Black Death ("Hollaback Girl" by Gwen Stefani)

Watch later Share

Ooh, Fleas on rats

Watch on YouTube



Background Information

The following is the link so that you can download the primary documents for The Black Plague. You will have your own personal copy of the primary documents. You will be able to mark up your document and highlight in them.

Document A: The Report of the Paris Medical Faculty (Original)

We, the Members of the College of Physicians of Paris, have, after mature consideration and consultation on the present mortality, collected the advice of our old masters in the art, and intend to make known the causes of this pestilence more clearly than could be done according to the rules and principles of astrology and natural science; we, therefore, declare as follows:

It is known that in India and the vicinity of the Great Sea, the constellations which combated the rays of the sun, and the warmth of the heavenly fire, exerted their power especially against that sea, and struggled violently with its waters. (Hence vapours often originate which envelop the sun, and convert his light into darkness.) These vapours alternately rise and fall for twenty-eight days; but, at last, sun and fire acted so powerfully upon the sea that they attracted a great portion of it to themselves, and the waters of the ocean arose in the form of vapour, thereby the waters were in some parts so corrupted that the fish which they contained died. These corrupted waters, however, the heat of the sun could not consume, neither could other wholesome water, hail or snow and dew, originate therefrom. On the contrary, this vapour spread itself through the air in many places on the earth, and enveloped them in fog.

Such was the case all over Arabia, in a part of India, in Crete, in the plains and valleys of Macedonia, in Hungary, Albania, and Sicily. Should the same thing occur in Sardinia, not a man will be left alive, and the like will continue so long as the sun remains in the sign of Leo, on all the islands and adjoining countries to which this corrupted sea-wind extends, or has already extended, from India. If the inhabitants of those parts do not employ and adhere to the following or similar means and precepts, we announce to them inevitable death, except the grace of Christ preserve their lives.

We are of opinion that the constellations, with the aid of nature, strive by virtue of their Divine might, to protect and heal the human race; and to this end, in union with the rays of the sun, acting through the power of fire, endeavour to break through the mist. Accordingly, within the next ten days, and until the 17th of the ensuing month of July, this mist will be converted into a stinking detestable rain, whereby the air will be much purified. Now, as soon as this rain shall announce itself by thunder or hail, every one of you should protect himself from the air; and, as well before as after the rain, kindle a large fire of vine-wood, green laurel, or other green wood; wormwood and camomile should also be burnt in great quantity in the market-places, in other densely inhabited localities, and in the houses. Until the earth is again completely dry, and for three days afterwards, no one ought to go abroad in the

Click here to open up your primary document!



Document A - The Report of the Paris Medical Faculty



Digital Historians: The Black Plague

Complete this form after reading the primary documents related to the Black Plague

casey.m.odonnell@gmail.com (not shared)
[Switch account](#)

* Required

Name *

Your answer

Teacher's Name *

Your answer

Who wrote Document A? When and where was this document written? *
 Why was this document written?

Your answer

Do you think people in 1348 trusted and believed these authors from Document A & B? *

Your answer



See what you remember about the Black Plague!

Google Forms This content is neither created nor endorsed by Google.

See what you remember about the Black Plague!

Choose your game to answer questions about the Black Plague. Select which game you like to play and have fun!

The Black Plague (10 questions)

Level 1
Score 20
Time Left 40

entrance
snake
bandage
Causes of World War One (60 questions)
Use the arrow keys to move the snake.
Score
Eat the fruit that matches the correct answer.

ClassTools.net GO PREMIUM! [Learn More](#)

What game would you like to play?

Select an option

ClassTools.net

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[View Fullscreen](#)

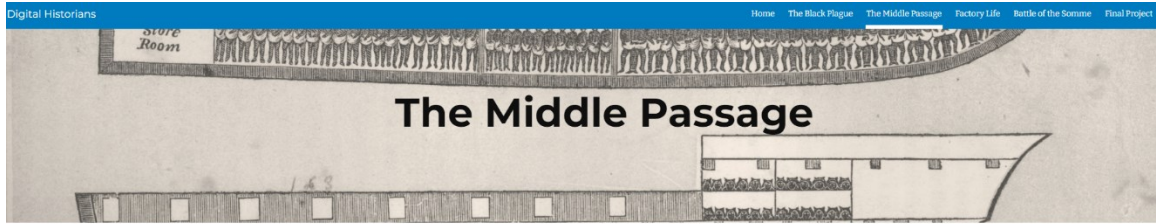
NEW BOOK: Buy

A HISTORY TEACHING TOOLBOX
 VOLUME TWO
 BY RUSSEL TARR

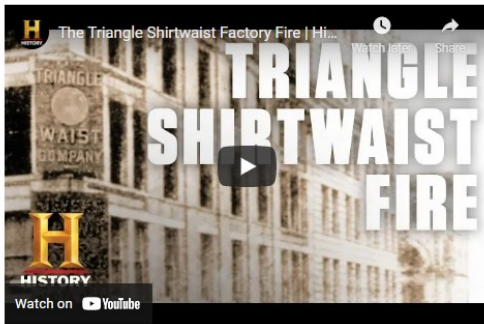
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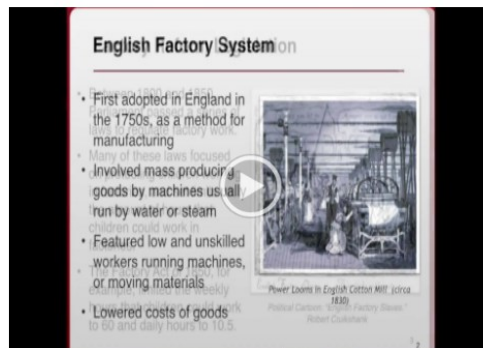


Show What You Know:



Background Information

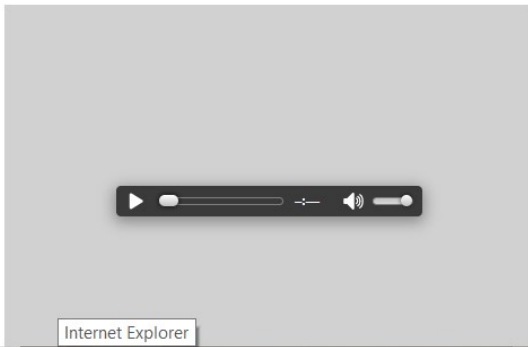
The following video is intended to give you background information. It is not a history lesson on this subject.



Document A - The Daily Express



Document B - British Soldier



APPENDIX B: Rubrics

Historical Thinking Rubric

Historical Thinking Skills Scoring Rubric – Secondary

Criteria	Close Reading Strategies		Strategies/Procedural Concepts		Procedural Concepts	
	Sourcing	Critical Reading	Corroboration	Contextualizing	Claim	Evidence
4	<p>Identification: Fully understands the meaning and content of sources.</p> <p>Attribution: Cites all authors and all original dates of primary and secondary sources.</p> <p>Perspective: Evaluates the reliability of sources based on the author's perspective and when and why they were produced.</p>	<ul style="list-style-type: none"> Questions the author's thesis and determines viewpoint and evidence to evaluate claims, highlighting what the author leaves out. Cites accurate examples of how the author uses persuasive language and specific words and phrases to influence the reader. Seeks answers to questions left unanswered in the source to formulate an interpretation. 	Constructs an interpretation of events using information and perspectives in multiple sources. Identifies consistencies and inconsistencies among various accounts.	Applies prior and new knowledge to determine the historical setting of sources. Uses that setting to interpret the sources within the historical context as opposed to a present-day mindset.	Formulates a plausible interpretation, argument, or claim based on the evaluation of evidence found in a variety of primary and secondary sources.	Justifies claims using appropriate direct evidence from a variety of reliable sources.
3	<p>Identification: Mostly understands the meaning and content of sources.</p> <p>Attribution: Cites most authors and most original dates of primary and secondary sources.</p> <p>Perspective: Examines the reliability of sources based on the author's perspective and when and why they were produced.</p>	<ul style="list-style-type: none"> Analyzes the author's thesis, determines the viewpoint and evidence to evaluate the claims; may highlight what the author leaves out. Cites examples of how the author uses persuasive language and specific words and phrases to influence the reader. Notes that the author has left some questions unanswered. 	Explains similarities and differences by comparing information and perspectives in multiple sources.	Applies prior and new knowledge to determine the historical setting of the sources. May attempt an interpretation of some sources with a present-day mindset or with a limited application to the historical context.	Generates a reasonable interpretation, argument, or claim based on an evaluation of the evidence found in selected primary and secondary sources.	Justifies claims using some appropriate direct evidence from a variety of reliable sources.
2	<p>Identification: Understands the meaning and content of sources with appropriate scaffolding and support.</p> <p>Attribution: Cites some authors and some original dates of primary and secondary sources.</p> <p>Perspective: Attempts to evaluate the reliability of sources.</p>	<ul style="list-style-type: none"> States the author's claims and evidence presented to prove those claims. Determines the author's viewpoint. Notes how language is used to persuade. 	Identifies similarities and differences in information in multiple sources.	Attempts to determine the historical setting of sources without fully understanding the historical context.	States an interpretation, argument, or claim that may or may not be based on evidence found in selected primary and secondary sources.	Justifies claims using generalizations or limited appropriate direct evidence.
1	<p>Identification: Attempts to understand the meaning and content of sources with the appropriate scaffolding and support.</p> <p>Attribution: Cites few authors and few original dates of primary and secondary sources.</p> <p>Perspective: Does not adequately examine reliability.</p>	Attempts to identify the author's claims, viewpoint, or evidence.	Demonstrates little to no attempt to examine sources for corroborating or conflicting evidence.	Demonstrates no attempt to understand the historical setting of sources.	Does not state an original claim, argument, or interpretation.	Does not justify or support claims using appropriate direct evidence.

UMBC Center for History Education, 2013. Adapted from the work of the Stanford History Education Group. * and Bruce VanSledright, *Assessing Historical Thinking and Understanding: Innovative Ideas for New Standards*, (New York: Routledge, 2014).

SAMR Rubric

Level Score	Level of Integration	Level Definition	Examples
1.	Substitution	technology acts as a direct tool substitute with no functional change	Bare-bones direct replacement Ask yourself what students gain by replacing traditional tools with technology
2.	Augmentation	technology acts as a direct tool substitute, with functional improvement	Directly substituted for a traditional tool but with enhancements to the student experience Using a presentation with interactive links
3.	Modification	technology allows for significant task redesign	Change to the lesson's design & learning outcome A new product or synthesis of existing material
4.	Redefinition	technology allows for the creation of new tasks, previously inconceivable	Incorporating technology into a meaningful way

APPENDIX C: Google Form Questions & Surveys

History Interest Survey

Name

What school do you attend?

Who is your social studies teacher?

If you could meet anyone from the past, who would it be and why?

On a scale of 1-5, how much do you like history?

What is one thing you want to learn most about history?

What do you like doing in history class? Click all that apply:

Read non-fiction books, magazines, and newspapers

Do projects/hand out activities

Create posters, charts and diagrams

Watch videos

Journals and writing

Role play historical and or current events

Research on internet

Create presentations for classmates and teacher

Write all that you know about the term 'historical thinking'

The Black Plague

Padlet Response

Show What You Know on The Black Plague: Choose a video, picture or a sticky note with what you know about the Black Plague (No right or wrong answers)

Digital Historians: The Black Plague Google Form response:

Complete this form after reading the primary documents related to the Black Plague

Name

Teacher's Name

Who wrote Document A? When and where was this document written? Why was this document written?

Do you think people in 1348 trusted and believed these authors from Document A & B?

According to Document B: Ibn al-Wardi, where did the plague originate? What or who caused the plague?

How do these documents illustrate how people understood the "Black Death"?

The Middle Passage

Padlet Response:

Show What You Know about the Middle Passage- Choose a video, picture or a sticky note with what you know about the Middle Passage (No right or wrong answers)

Digital Historians: The Middle Passage Reflections

Name

Teacher's Name

Document A: Portuguese Textbook: Where was this textbook written? How might this have influenced how it portrayed the Middle Passage?

According to the textbook, "The time between the moment the slaves were bought and when they arrived at port was very dangerous not only for the European traders but for the slaves as well." Why might the textbook's authors have chosen to compare the experience of the ship's crew to the experience of the slaves?

Who was Phillips? How might his background have influenced what he wrote about the Middle Passage?

According to Phillips, what did the ship's crew do for the slaves?

Who was Falconbridge? How might his background have influenced what he wrote about the Middle Passage?

Why do you think slaves were punished for not eating?

Which of these documents do you believe is the most reliable source of information about the Middle Passage?

Factory Life: The Industrial Revolution

Padlet Response:

Show What You Know- Factory Life

Choose a video, picture or a sticky note with what you know about Factory Life. (No right or wrong answers)

Digital Historians: Factory Life

Name

Teacher's Name

Why is Dr. Ward being interviewed by the House of Lords Committee?

How is the source information for Document B similar to and different from document A?

Which document, A or B, do you think is more trustworthy? Why?

How old was John Birley when this account was published?

What does Baines mean in the second paragraph, when he states, "But abuse is the exception not the rule"?

Do you think that English textile factories were bad for the health of working class families?

Battle of the Somme

Padlet Response:

Show What You Know- Battle of the Somme

Choose a video, picture or a sticky note with what you know about the Battle of the Somme. (No right or wrong answers)

Digital Historians: Battle of the Somme

Name

Teacher's Name

Why are Documents B & C so different from Document A?

Which of these documents is most trustworthy? Why?

Who won the first day of the Battle of the Somme?

FlipGrid Final Presentation Video

You have analyzed, contextualized, and scrutinized documents after documents! It is now time to take what you have learned and create an accumulated masterpiece!

Your task: Research a historical figure- perhaps someone you know a little bit about and discover the story that no one knows! We all have a secret identity, and the history books cannot include everything. Your job as a Digital Historian is to discover the history mystery.

You will create a multimedia presentation that is at least 3 minutes long. You can create the video in iMovie, Movie Maker or any other software editing program. It will include information about the hidden history of your historical person.

You will upload it to *FlipGrid* (see videos below on how to upload).

Interview Questions for Participants:

What did you like best about the Digital Historian website?

What do you think could be different about it?

What does historical thinking mean to you?

How did you feel about researching and creating your own video?

How did you experience the use of a Google site for learning?

What features of the website did you find the most interesting?

What did you like annotating on the most- paper or the computer?

Were the primary documents you read different from textbooks? How?

Do you prefer textbooks or primary documents?

Is there anything else you wish to share with the researcher?

APPENDIX D: Case Study #1 Final Video Transcript

Hi, my name is {Participant #2} and I will be doing George Washington.

George Washington was born on February 22nd, 1732 and died December 14th, 1799.

He was American military officer, statesman and founding father who served as the 1st President of the United States from 1789 to 1797.

Appointed by the Continental Congress as commander of the Continental Army, Washington led the Patriot forces to victory in the American Revolutionary War and served as president of the Constitutional Convention.

Of 1787, which created the Constitution of the United States and the American Federal government, Washington has been called the father of the nation for his leadership of our country.

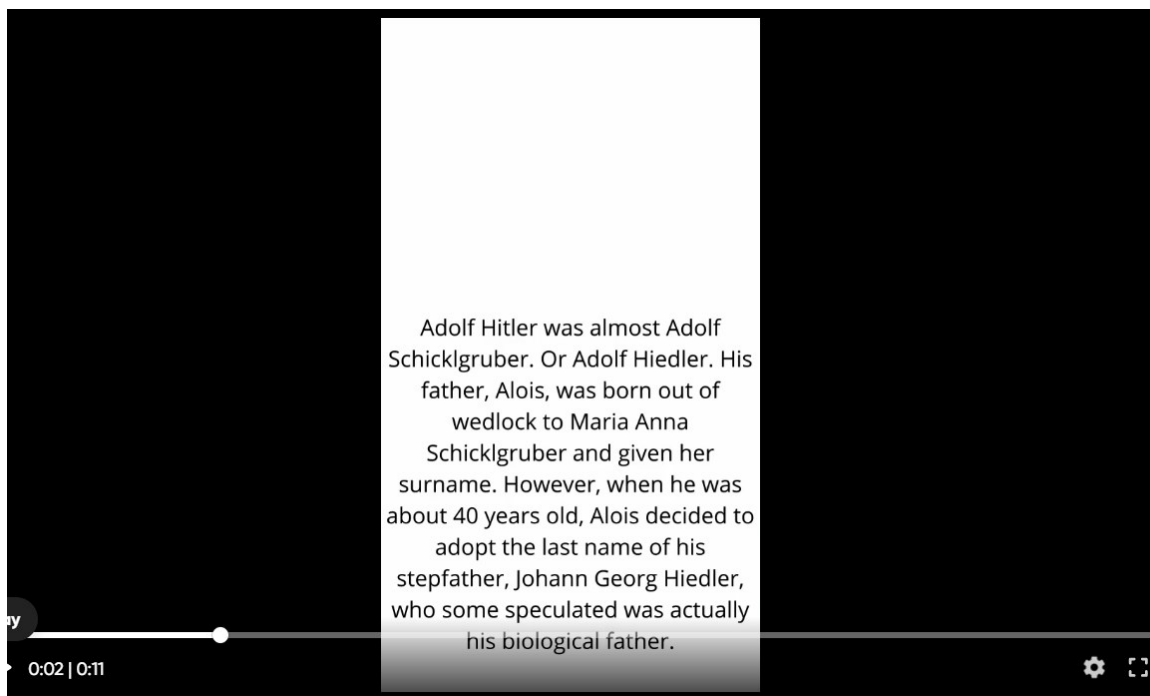
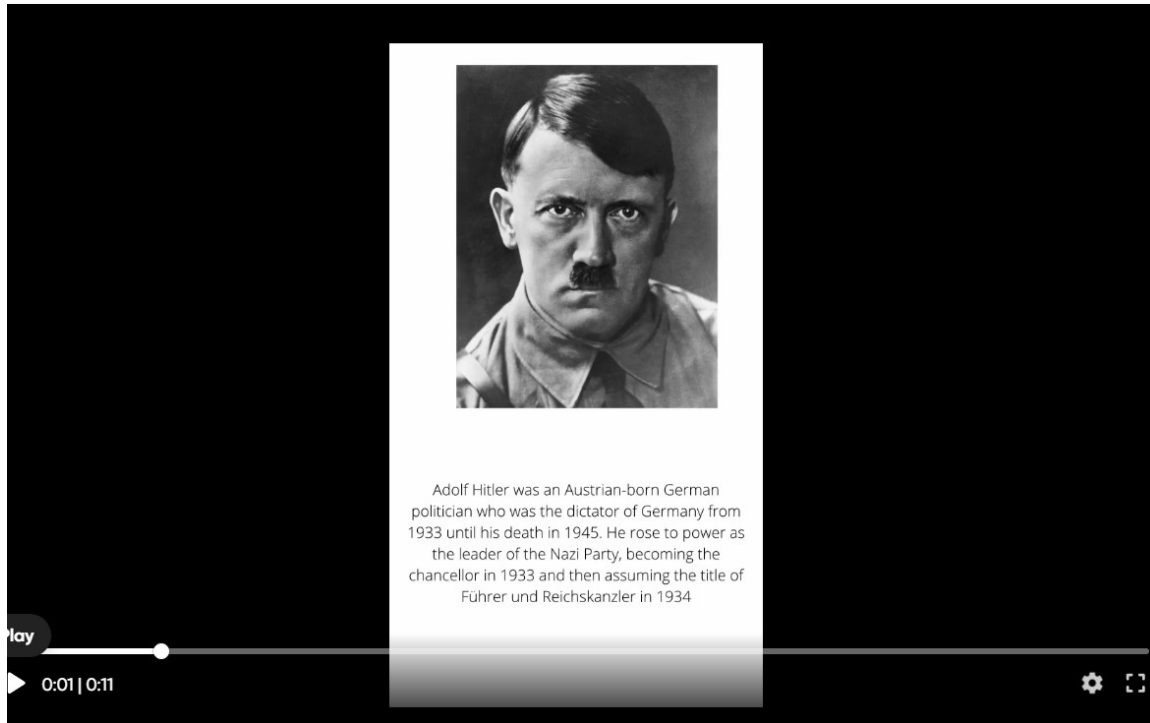
He was twice elected president, unanimously as president, we had a strong and well financed national government. Washington was a slave owner who had a complicated relationship with slavery.

As President he signed laws, laws passed by Congress that both protected and reduced slavery.

He was remember he was a member of the Anglican Church and the Freemasons, and he urged religious freedom and his roles as general and president.

Many scholars and ordinary Americans alike ranked him among one of the great US presidents. I believe he was great president and above his and ahead of his time because he predicted that we did not need political parties and today that was one of our problems we have. Much of the division because of political parties. Thank you.

APPENDIX E: Case Study # 2 Final Video Project





His concentration camps
killed Over 6 millions Jews.

Play



0:07 | 0:11



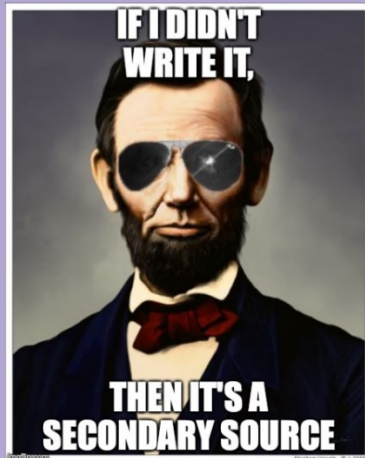
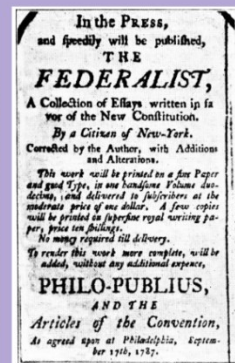
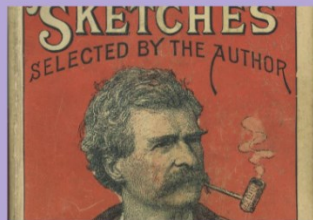
APPENDIX F: Historical Thinking Concept Presentation Slides

Historical Thinking Concepts

Presented by Ms. O'Donnell-Chavis

Did you know, there are two types of documents in the world?

Primary & Secondary!



Good rule of thumb,
if the person who
was there wrote it or
created it, then it is a
primary source.
If it was filtered
through someone
else's eyes, then it is
a **secondary source**.

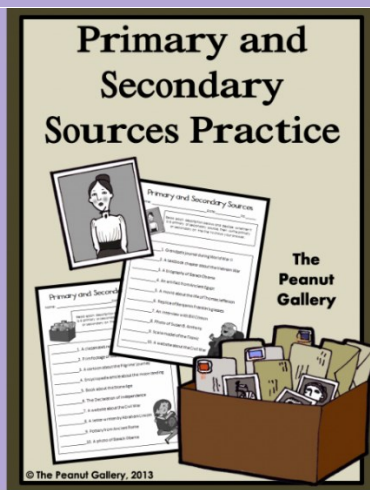
Types of Documents:

Primary Source Examples

Diary entries
Photos
Government documents
Autobiographies
Film footage of an event
Letter
Pottery
Work of Art

Secondary Source Examples

Textbook
Biographies
Newspapers
Political Cartoons
Encyclopedia



Primary and Secondary Sources

Name: _____ Date: _____ Pd. _____



Read each description below and decide whether it is a primary or secondary source. Then write primary or secondary on the line to show your answer.

- _____ 1. Grandpa's journal during World War II
- _____ 2. A textbook chapter about the Vietnam War
- _____ 3. A biography of Barack Obama
- _____ 4. An artifact from Ancient Egypt
- _____ 5. A movie about the life of Thomas Jefferson
- _____ 6. Replica of Benjamin Franklin's glasses
- _____ 7. An interview with Bill Clinton
- _____ 8. Photo of Susan B. Anthony
- _____ 9. Scale model of the *Titanic*
- _____ 10. A website about the Civil War



© The Peanut Gallery, 2013

Primary and Secondary Sources

Name: KEY Date: _____ Pd. _____



Read each description below and decide whether it is a primary or secondary source. Then write primary or secondary on the line to show your answer.

- primary 1. Grandpa's journal during World War II
- secondary 2. A textbook chapter about the Vietnam War
- secondary 3. A biography of Barack Obama
- primary 4. An artifact from Ancient Egypt
- secondary 5. A movie about the life of Thomas Jefferson
- secondary 6. Replica of Benjamin Franklin's glasses
- primary 7. An interview with Bill Clinton
- primary 8. Photo of Susan B. Anthony
- secondary 9. Scale model of the *Titanic*
- primary 10. Autobiography of George Bush



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School Bus Car Crash

Imagine that there is a car/school bus crash.

No one was injured!

The police have arrived and have to take reports. As they listen to different sides of the story, they realize that no one is lying.

As officer in charge, who are involved in the car and bus crash? How will these accounts differ from one another? What might make one person believable or plausible from another?



What are Multiple Perspectives?



Multiple Perspectives

More than just one person point of view

Example: Imagine only learning about the Middle Passage from a slave captain & not the captives

Sourcing

- Who wrote this?
- What is the author's perspective?
- Why was it written?
- When was it written?
- Where was it written?
- Is this source reliable? Why? Why not?

Who do you think wrote this quote? How do you feel about it?

“Think Thousand times before taking a decision But - After taking decision, never turn back even if you get Thousand difficulties!”

Claim Evidence Connection

Must take evidence to make claims

Contextualization

Contextualization asks locate a document in time and place and to understand how these factors shape its content. When reading a document, consider these questions:

- When and where was the document created?
- What was different then?
- What was the same?
- How might the circumstances in which the document was created affect its content?

Was Abraham Lincoln Racist?

"I will say here...that I have no purpose directly or indirectly to interfere with the institution of slavery in the States where it exists. I believe I have no lawful right to do so, and I have no inclination to do so." Reply to Douglas during the Illinois debate

Why do you think he said what he said?