A CASE STUDY OF 21ST CENTURY SKILL

ACQUISITION THROUGH THE USE

OF THE REACH PROJECT

by

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ABSTRACT

The purpose of this qualitative case study is to assess and analyze the impact of the teacher-created program called Reading Educational Articles for the Comprehension of History (REACH) on student acquisition of social studies content knowledge and 21st century competencies. The REACH project was developed by two experienced high school social studies teachers including the researcher, and its goal is to develop students’ content knowledge while promoting the mastery of 21st century skills. This case study was conducted with two high school United States history classes. Qualitative data were collected and analyzed through classroom observations, document analysis of student work, and interviews with the participating teacher and a focus group of students. Quantitative data were collected and analyzed through a comparison of test scores. The study found that the REACH program offers students the opportunity to build certain 21st century skills such as digital literacy (i.e., technology skills, information literacy, media literacy, and ICT literacy), communication, critical thinking, and collaborative skills. However, there was no evidence that the REACH program caused students to utilize the 21st century competencies of productivity, accountability, and leadership. Additionally, the research findings revealed that REACH participation enhanced student social studies content knowledge when compared to students who did not complete REACH assignments. This enhancement took place in both direct and indirect ways, and the adaptability and flexibility of REACH allowed the participating teacher to use the program in the manner he judged most academically productive for his students.
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CHAPTER I:
INTRODUCTION

Introduction

It is predicted that by 2026 most of the world’s population will have Internet access, and currently, half of the people on Earth are already online. However, “there is increasing evidence that online [activity] by adolescents is not very skilled, especially their ability to locate and critically evaluate information” (Leu et al., 2011, p. 8). Mastery of these and other “21st century skills” at the K-12 level is an essential educational goal in order for today’s students to thrive in a technology-centered world. The term “21st century skills” has come to describe competencies such as critical thinking, collaborative ability, creativity, and technological proficiency. Research has suggested that student mastery of these skills at the K-12 level is a necessary educational goal given the nature of “contemporary life in a complex world” (Rosefsky & Opfer, 2012, p. 8). Current literature further reveals that the integration of 21st century skill building with core-subject content instruction remains a challenge for secondary education teachers (Duran, Yaussy, & Yaussy, 2011). Duran et al. have contended that educators need proven strategies, techniques, and examples for how to effectively accomplish this integration. One such potential example that attempts to promote content knowledge while also building 21st century skills is a revised and digitized teacher-created program called Reading Educational Articles for the Comprehension of History (REACH).

The REACH project was originally developed in 2010 by two experienced high school social studies teachers and its purpose was to provide students with a connection between the
past and present while building reading comprehension, public speaking, and analytic skills. In spite of initial enthusiasm for the project, like many instructional ideas, its use in classroom practice was discontinued after only two academic semesters. However, the program was recently re-conceptualized and reformatted utilizing 21st century technologies such as social media applications with Web 2.0 and 3.0 components. The purpose of the revised REACH program is to focus specifically on student development of content knowledge while promoting the acquisition of 21st century skills. This restructuring of the REACH program provided a research opportunity that provides insight into 21st century skill acquisition in secondary instruction, the enhancement of social studies competencies and content knowledge, and the shift of student perceptions of social studies as a result of specific technology usage.

**Context for the Study**

I, the researcher and a high school educator, and a colleague created the REACH project. I have been a high school social studies teacher at the secondary level for 12 years. My colleague and frequent collaborative partner, John (pseudonym), taught for 13 years before moving into an administrative school position. We work at a large public school, Valley High School (pseudonym), which is located in west central Alabama. The school serves students in grades 9-12. Before John became an assistant principal, we had classrooms located across the hall from one another, and we both primarily taught the same grade level of students. Over the course of our careers, we regularly worked with one another on curriculum and instructional projects. During the spring 2010 academic semester, we created a classroom program called REACH to use with our freshmen students.

Our original goal for the program was to connect the historic topics we were studying in class with current situations taking place in the world. We started with this objective because we
both anecdotally recognized that social studies students had difficulty understanding the intricate connections that link the past and present. Often times, it seemed as if our students had no conception of how communities arrived at their present social, political, philosophical, and economic conditions. However, as we discussed and debated the logistics of the project, the goals of the program expanded and evolved. Not only did we want our students to see a connection between past and present, but we also wanted them to become critical consumers of the information presented to them in the print media while simultaneously developing public speaking, written communication, and analytic skills. Therefore, we committed to institute REACH in all of the classes we taught.

The REACH project entailed providing students with one teacher-selected current events article for each unit of history under study (see Appendix A for original REACH instructions provided to students). For example, when studying the causes and consequences of 19th century imperialism, the REACH selection for that unit was a 2010 article entitled *Minister Warns Google Must Obey Chinese Law* written by Geoff Duncan. The article deals with accusations of attempted cultural imperialism made by the Chinese government against Google. As students read each provided article, they were required to complete an article analysis sheet that guided them in a critical interrogation of the content and author while also requiring a connection to be made between past and present. The program organically evolved when John recognized that this project also provided an opportunity to foster student public speaking skills. Therefore, he proposed that students present and defend their article analysis in front of the class in addition to completing the written analysis. However, with the extra time this activity required, we were concerned about the amount of instructional time it would take to allow every student to present his or her findings. To account for this concern, for each unit several students were randomly
chosen to orally defend their analysis while all other students submitted work in written form. Over the course of the grading period, every student eventually had the opportunity to orally present his or her findings.

To assess student mastery of project objectives, the teachers designed a rubric that was based on a five-point grading scale. Students receiving a “5” were categorized as crafting a “highly developed” analysis and defense of the article. In order to receive this score, students had to meet the following criteria: address the question knowledgeably, articulately, and thoughtfully; cite specific information from the article; provide a written and/or oral response that clearly demonstrated the material was comprehended and analyzed; and provide a written and/or oral response that clearly demonstrated student understanding of how the material related to the unit of study. Students who received lower scores completed fewer of the criteria and to a lesser degree of satisfaction.

With the project details finalized, John and I enthusiastically introduced REACH to our classes. At the time, Valley High School’s school day consisted of four instructional blocks, each lasting 92 minutes with teachers having one block designated for planning. Therefore, each teacher taught approximately 90 students during the introduction of REACH, and we both attempted to create excitement among these students about the running project they would undertake. Additionally, our enthusiasm about the idea led us to present the details of REACH to department colleagues with the hopes that other social studies teachers would undertake a similar assignment. Over the course of the 2010-2011 school year, John and I had our students complete the REACH project for each unit of study. Nevertheless, within two academic semesters, we both completely abandoned the REACH assignment. The following factors contributed to the discontinuance of REACH: excessive instructional class time spent on presentations, difficulty of
managing productive student discussions given the format of REACH, and disappointment with
the analytic effort displayed by students. Nevertheless, in spite of the short-lived tenure of the
REACH project, both John and I still believed in the academic value of its basic structure;
therefore, four years later, the program was re-tooled using 21st century technologies with the
incorporation of 21st century skills.

Revised REACH Project

The redesigned REACH program was implemented in a colleague’s class who also
teaches at Valley High School. This teacher participant, Paul (pseudonym), was not involved
with the original REACH project. The redesigned REACH was housed on the social learning
platform Edmodo (see Appendix B for revised instructions). Ractham and Chen (2013) described
Edmodo as follows:

Edmodo is a web-based online social technology site, which allows students and
instructors to post materials, share links and videos, and access class assignments, grades,
and notices. Instructors and students can also store and share digital content such as links,
pictures, video, documents, and PowerPoint presentations on it. (p. 292)

In the program redesign, the project was structured so that it did not have to be incorporated into
every unit of study. Instead, the program could be completed with discrete content units when a
teacher determined there was time in the schedule for such work. Additionally, unlike the
original format of REACH, the revamped program includes three assignments that students
complete outside of the classroom. The first assignment, like the original project, requires
students to read and analyze a teacher chosen article concerning a current event that deals with
some issue or subject being studied in class. The second assignment has students reflect on the
assigned article and compose and publish a post in Edmodo. Additionally, students must respond
to posts made by classmates. The last assignment entails students finding a current events article
that relates to the class unit of historical study. Students then must create an original post in
Edmodo in which they provide the title and author of the article, give the web address of the article, and compose a summary and critical analysis of the article. Additionally, each student must finish the post by providing a thought-provoking question concerning the article, and the student must respond to a classmate’s question.

**Statement of the Problem**

A vital component of modern education at the secondary level is student acquisition of 21st century skills (Brusic & Shearer, 2014; Gunn & Hollingsworth, 2013; Jacobson-Lundeberg, 2013; Siu Cheung et al., 2014; Trilling & Fadel, 2009). The Partnership for 21st Century Skills (P21), an educational advocacy organization comprised of educators, researchers, business leaders, and the U.S. Department of Education, defines these 21st century skills as follows: information, media, and technology skills; learning and innovation skills which include critical thinking, communication, collaboration, creativity, and career and life skills (P21a, 2011). Some researchers, such as Brusic and Shearer (2014), have argued that creativity, critical thinking, collaborative dexterity, and technological aptitude are mislabeled as 21st century skills because generations of educators have sought to develop these proficiencies in students. In spite of this semantic disagreement, there is acknowledgement within the field of education that the competencies currently labeled as 21st century skills are useful to students and worthwhile as an educational goal.

However, problems of authentically integrating 21st century skill development with teaching content standards and knowledge, especially in high school social studies courses, is documented in the academic literature. Critics such as E.D. Hirsch and Diane Ravitch have argued that an educational focus upon specific skillsets, such as 21st century skills, diminishes the importance of content knowledge in classroom instruction (Sawchuk, 2009). This strand of
criticism advocates a pedagogical approach to education that is focused upon disciplinary knowledge. Given this robust academic debate between skills advocates and content-focused supporters, it is apparent that the development of instructional programs and practices that promote 21st skills while also fostering a deeper understanding of content materials remains a problem in the field of secondary education. The goals and structure of the REACH program indicate that it is intended to address this problem by building 21st century skills while also focusing upon content specific knowledge; the extent to which this goal is met is evaluated in this case study.

**Purpose of the Study**

The purpose of this exploratory single case study was to assess and analyze the impact of the REACH program on student acquisition of social studies content knowledge and 21st century competencies. Research has shown that 21st century skills are valuable to student development and should be included in curricular goals and practices (Rosefsky & Opfer, 2012). Students have the potential to acquire and refine these competencies while also gaining social studies content knowledge and understanding through their participation in the digitized REACH activities.

**Significance**

Proficiency in 21st century skills is a crucial component to the success and satisfaction of individuals in academic, employment, and social life arenas. Trilling and Fadel (2009) have argued that the United States shifted from an industrial age economy to what they term the “Knowledge Age” in the early 1990s. This shift brought with it changes in the economic organization of developed nations, and the skills needed for individuals to satisfactorily compete in this new economic climate became defined as 21st century skills. Competence in critical
thinking and creativity had been necessary for success long before this shift, but Knowledge Age societies made these, and other 21st century skills, nearly indispensable to personal survival and success (Brusic & Shearer, 2014; Trilling & Fadel, 2009). According to Trilling and Fadel (2009), “industrial work in Knowledge Age countries will continue to decline and … knowledge work will continue to grow well into the 21st century” (Learning Past and Future section, para. 3). However, the authors also acknowledge that the goals of formal education go beyond preparing students for economic participation in society at large.

Schooling practices must promote knowledge and skills that bring enrichment and satisfaction to students as individual beings, and the development of information and technology skills, along with collaborative, critical thinking and creativity capabilities are some of the necessary cognitive components for a satisfying modern life (Kliebard, 2004; Trilling & Fadel 2009). Additionally, Holland (2011) have contended that the content knowledge associated with social studies courses, and especially history classes, provides the contextual information individuals need to gain an understanding of themselves and the communities and societies in which they exist. REACH is a teacher-created initiative, which will potentially promote 21st century skills and social studies content knowledge. The extent of its usefulness to this end provides insight as to the effectiveness of similar programs in secondary classrooms.

**Research Questions**

21st century skills include broad cognitive activities that have existed throughout human history (P21, 2011a.; Rosefsky & Opfer, 2012). However, Leu et al. (2011) have suggested that these skills are particularly relevant in the 21st century when applied to material technology use and specifically Internet based activity. The researchers report that by 2026 most of the world’s population will have Internet access, and currently, half of the people on Earth are already online.
(Leu et al., 2011). The authors offer these statistics when arguing that Internet-based activity is the defining tool of literacy in the 21st century, and developing a proficiency in newer technologies will be “an important determinant of an engaged life” (Leu et al., 2011, p. 5).

Internet based activity has the potential to lure students into a variety of tasks including social interaction, problem-based inquiry, decision making, and the active location of information that meets a user’s needs; all of which Rosefsky and Opfer (2012) contended define 21st century competencies. However, Leu et al. (2011) noted that simply engaging with 21st century technologies does not necessarily promote student proficiency in 21st century skills. In fact, the authors argue that “there is increasing evidence that online [activity] by adolescents is not very skilled, especially their ability to locate and critically evaluate information” (Leu et al., 2011, p. 8). According to Leu et al. (2011), these specific skills are the most critical of the 21st century competencies because their mastery will be essential for functioning in a world of ever advancing technology. Given this information, the structure of the revised REACH project in which students are responsible for locating and critiquing online information takes on particular significance for instruction at the high school level. To explore the ways in which the digitized REACH program facilitates social studies content knowledge while at the same time developing 21st century competencies, this exploratory case study examined the following questions:

1. What can be learned from the digital REACH project concerning student acquisition of 21st century competencies; and

2. What impact did student participation in the digital REACH project have in the enhancement of content knowledge and understanding, including the ability to critically analyze connections between past historical events and present world conditions?
Theoretical Framework

This case study will be based on pragmatic (as in practical, methodological research) beliefs and will utilize the Framework for 21st Century Learning developed by P21. Creswell (2013) has maintained that a pragmatic interpretive lens focuses research on the outcome of the study, and any practical implications that study may reveal while still taking into account the context in which actions are completed. This approach fits well with the research questions being explored in this case study because these questions are concerned with the practical outcomes of the REACH program within the context of a specific high school setting. Additionally, Creswell (2013) proposed that pragmatic studies “look to the ‘what’ and ‘how’ of research” (p. 28) and allow freedom in choosing a variety of data collection techniques. This practical approach was utilized as a broad guide for the case study while the Framework for 21st Century Learning provided structure in the area of expected outcomes of student learning.

The purpose of this study was to explore the influence of REACH on student proficiency with 21st century skills while also assessing its impact on the promotion of content knowledge. Therefore, it was necessary to identify performance outcomes by which to analyze student development of these skills; P21’s Framework for 21st Century Learning was used in this capacity. The student outcome section of P21’s framework establishes “the skills, knowledge and expertise students must master to succeed in work and life; it is a blend of content knowledge, specific skills, expertise and literacies” (P21, 2011a, p. 1). The complete Framework for 21st Century Learning consists of both student outcomes and professional support systems; however, for the purposes of this study, only the student outcomes tier of the framework (see Figure 1) was utilized. The three major areas of the Framework are life and career skills; learning and
innovation skills; and information, media, and technology skills. Each of the skills areas has outcomes associated with them consisting of the following:

- **life and career skills**
  - flexibility and adaptability
  - initiative and self-direction
  - social and cross-cultural skills
  - productivity and accountability
  - leadership and responsibility

- **learning and innovation skills**
  - creativity and innovation
  - critical thinking and problem solving
  - communication and collaboration

- **information, media, and technology skills**
  - information literacy
  - media literacy
  - ICT (information, communication, and technology) literacy. (P21, 2011, p. 2)

This Framework for 21st Century Learning guided the development of measures and interpretation of data that were collected in the study (P21, 2011).

![Figure 1. Framework for 21st Century Learning: Student Outcomes](image-url)

This chart illustrates the framework for 21st Century Learning, emphasizing student outcomes in life and career, learning and innovation, and information, media, and technology skills.

**Figure 1.** Framework for 21st Century Learning: Student Outcomes
**Assumptions of the Study**

Several assumptions were made regarding this case study. The researcher assumed that the questions asked of interview participants elicited responses that directly related to the research questions and that all student and teacher participants responded honestly when interviewed about their experiences and perceptions using the REACH program. Regarding the teacher participant, Paul, this assumption was tenable due to a pre-established professional relationship that had been developed between the researcher and the participant. McDermid, Peters, and Jackson (2014) have argued that this kind of pre-existing relationship “can be advantageous when undertaking research as [it] provides familiarity, respect, and rapport” (p. 29). The rapport that pre-dates the study helped to ensure that Paul felt comfortable expressing his observations of REACH even when he found areas of the program to be flawed or unproductive. Additionally, student focus group interview participants were assured that their honesty in answering questions in no way negatively or positively impacted their grade in their social studies class or their general academic standing. To encourage honest interview interactions, all participants were also assured that pseudonyms would be used in all drafts and in the final case study dissertation and that no personally identifiable information would appear in any material related to the study.

The study also assumed that during classroom observations the structure of the class was not significantly altered due to the presence of the researcher. In order to lessen the likelihood that Paul would modify his teaching style, he was assured that the purpose of each observation was not to evaluate his teaching techniques or skill. Instead, the observations were used as a methodological tool to evaluate the impact of REACH assignments on student acquisition of 21st century skills and content knowledge.
Limitations of the Study

Limitations exist with this case study. The most glaring limitation is the specificity of the REACH program and the limited nature of the study. The fact that only two classes of students were examined using a teacher-created initiative which other educators do not have access to restricts the generalizability of the study. However, researchers such as Flyvberg, Guba, and Lincoln have challenged the notion that case study research cannot contribute to academic advancement based on issues of generalizability (Flyvberg, 2008; Hellström, 2008). Lincoln and Guba have argued that a single case study may offer a transferability of findings to other contexts given that the contexts are sufficiently similar (Hellström, 2008). The authors further asserted that case study research has the potential for transferability if the research leads a reader to an examination of established practices (Lincoln & Guba, 1998). Both of these conditions of transferability may be met with this research study.

Definition of Terms

21st Century Skills- The interpretation of 21st century skills used for the purposes of this study was developed by the Partnership for 21st Century Skills. The skills include: flexibility, adaptability, initiative, self-direction, social and cross-cultural skills, productivity, accountability, leadership, responsibility, learning and innovation skills, creativity, critical thinking, problem solving, communication, collaboration, technology skills, information literacy, media literacy, and ICT literacy (P21, 2011).

21st Century Learning- 21st century learning refers to educational endeavors that promote the use and development of 21st century skills.
21st Century Skills Movement- The 21st century skills movement denotes individuals and organizations who advocate for the use of 21st century skills in curriculum development and classroom practice.

REACH- REACH stands for Reading Educational Articles for the Comprehension of History. REACH is a classroom program developed by the researcher and a fellow teacher.

Reconstruction era terms- This case study was conducted when the participating class of students was studying the Reconstruction period of United States history. Therefore, several terms associated with this era are used throughout the study. Definitions taken from the textbook used by participating students are provided below.

Reconstruction- “The period of rebuilding that followed the Civil War during which the defeated Confederate states were readmitted to the Union (1865-1877)” (Danzer, de Alva, Krieger, Wilson, & Woloch, 2012, p. R 55).

Black Codes- “The discriminatory laws passed throughout the post-Civil War South which severely restricted African Americans’ lives, prohibiting such activities as traveling without permits, carrying weapons, serving on juries, testifying against whites, and marrying whites” (Danzer et al., 2012, p. R45).

13th Amendment- “An amendment to the U.S. Constitution, adopted in 1865 that abolished slavery and involuntary servitude” (Danzer et al., 2012, p. R57).

14th Amendment- “An amendment to the U.S. Constitution, adopted in 1866 that makes all persons born or naturalized in the United States, including former slaves, citizens of the country and guarantees equal protection of the laws” (Danzer et al., 2012, p. R48).
15th Amendment- “An amendment to the U.S. Constitution, adopted in 1870 that prohibits the denial of voting rights to people because of their race or color or because they have previously been slaves” (Danzer et al., 2012, p. R48).

Jim Crow Laws- “Laws enacted after Reconstruction by Southern states and local governments to separate white and black people in public and private facilities” (Danzer et al., 2012, p. R50).

“Regular Classes/Students”- In this case study the participating teacher, in whose classroom research was conducted, is quoted as using the terms “regular class” and “regular students.” “Regular class” is used to describe a course that fulfills the high school graduation requirement for one unit of social studies credit for a standard diploma as opposed to an advanced course that provides one unit of social studies credit towards an advanced high school diploma. The participating teacher refers to students enrolled in the standard history course as “regular students,” indicating their status as students seeking a standard high school diploma. These terms are not used pejoratively and are accepted pieces of terminology used by teachers, students, and administrators at the research school.

Web 2.0- Web 2.0 refers to web-based tools and technologies that promote communication and interaction among users by establishing expanded communication capabilities while also “providing the potential for intellectual rigor, frequent updating, and collective knowledge sharing” (Fahser-Herro & Steinkuehler, 2010, p. 56).

Summary

This dissertation is comprised of five chapters. Chapter I introduced the REACH program and the case study, stated the issues being analyzed, provided a purpose for the case study, explained the significance of the research, detailed the research questions, established the work’s
theoretical framework, analyzed the assumptions of the study, acknowledged the study’s limitations, and defined relevant terms that will be used throughout the dissertation. Chapter II offers a review and analysis of relevant research literature concerning 21st century skills in education and specifically social studies education. Chapter III details the research design and methodology of the study. Chapter IV presents the findings of the study including emergent themes from document analysis, test score analysis, interviews, and observations. Chapter V discusses the findings and conclusions, and presents recommendations for further research and implications for educational practice.
CHAPTER II:
LITERATURE REVIEW

Introduction

This literature review explores several aspects of the REACH project. One of the central factors of REACH is the development of 21st century skills through participation in the project; therefore, several features of 21st century learning are reviewed. A history of 21st century learning with a focus upon P21 is detailed along with an analysis of the significance of 21st century skill acquisition. However, as with many curricular issues, debate does exist over the use of a 21st century learning framework for K-12 instruction; these critiques are explored as part of the literature review. This case study also seeks to examine the impact of REACH participation on student understanding of social studies content knowledge. In order to explore this topic the meaning and purpose of social studies education must be understood. Therefore, the review of literature provides an overview of accepted purposes of social studies education. Finally, very little research or analysis exists concerning the specific structure of the REACH project. Consequently, the review concludes with a general discussion of how the component assignments associated with the program may be used for social studies instruction including the use of REACH as a literacy tool in social studies courses.

21st Century Learning

History and Significance of 21st Century Competencies

The notion that a specific set of skills would be needed for survival in the 21st century developed well before the year 2000. A major impetus for defining these skills was a changing
national and global economic dynamic. In the early 1990s, economists and policy makers began to assert that developed nations had transitioned, or were in the process of transitioning, from industrial societies to knowledge societies (Trilling & Fadel, 2009; Voogt & Pareja, 2012). In knowledge societies, competencies such as creativity and critical thinking became commodities that must be possessed by the majority of those entering the workforce and not simply by an elite class of professionals, academics, and entrepreneurs (Goldman & Scardamalia, 2013; Voogt & Pareja, 2012).

In his 1992 book *The Work of Nations: Preparing Ourselves for the 21st-Century Capitalism*, Robert Reich (1992) became one of the early economists to articulate this commodification process. Reich, who served as Secretary of Labor during Bill Clinton’s administration, argued that a globalization of the economy was inevitable, and, as a result of this globalization, large numbers of low-skill industrial jobs would be drained from knowledge societies and siphoned into less developed economies. Therefore, he proposed that knowledge nations, specifically the United States, educate a workforce that was able to compete for skilled jobs in high-value businesses as opposed to high volume industries, which relied upon workers with little training or specialized skill. Reich advocated that high value workers have problem-solving, communication, and collaborative skills, as well as technological proficiency, all of which became the foundation of the 21st century skills movement in education. Reich is just one example of an early 1990s academic who began to assert that changing economic patterns required a new educational focus upon specific skills.

As the 2000s progressed, the concern over 21st century skills became progressively more prominent in educational literature (Dede, 2010; Voogt & Pareja, 2012). According to Voogt and Pareja (2012), from 2000-2003 three scholarly publications on the specific topic of 21st century
skills or 21st century competencies were released; however, for the 2008-2010 period over 100 pieces of literature on the topic were produced. The authors reported that from this literature eight major frameworks of 21st century learning from Europe, Asia, and the United States can be identified: Partnership for 21st Century Skills, EnGauge, Assessment and Teaching of 21st Century Skills, National Educational Technology Standards (NETS), Technological Literacy Framework for the 2012 National Assessment of Educational Progress (NAEP), 21st century skills and competences for new millennium learners, key competences for lifelong learning, and ICT competency framework for teachers. Voogt and Paraja (2012) have determined that in spite of differences in terminology, all of the frameworks promote student acquisition of collaboration, communication, and social/cultural skills and ICT literacy. The majority of the eight frameworks also emphasize creativity, critical thinking, problem-solving, and the development of quality products (Voogt & Paraja, 2012). P21’s Framework for 21st Century Learning: Student outcomes incorporates all of these skills and was used as the basis of this study.

The Partnership for 21st Century Skills

In 2002, P21 was founded to promote 21st century skills for all U.S. students, and by 2009 the following non-inclusive list of influential companies had joined the group: Adobe, Apple, Cisco, Dell, Microsoft, Ford, McGraw-Hill, the National Education Association, Educational Testing Service, and the U.S. Department of Education (P21, 2011b; Trilling & Fadel, 2009). P21 stated that its current goal is to “enact change on the local, federal, and state level to shift the conversation for kids and ensure they are ready to lead and take on the challenges of the 21st century” (P21, 2011b, Relevant for Today’s and Tomorrow’s World section, para. 2). The organization has attempted to accomplish this goal by influencing curriculum formation particularly through the Framework for 21st Century Learning (P21, 2011)
A standards, assessment, and professional development committee was chosen by P21 leadership to compose this framework document (Trilling & Fadel, 2009). Kelley (2013) summarized the Framework for 21st Century Learning as follows:

The organization sought to combine the traditional “three Rs” of education with newly identified competencies, and then promote the use of this educational framework at the local, state, and federal levels. The 21st Century Framework has identified four Cs necessary for learning to prepare youth for the 21st century. The identified four Cs are Creativity, Critical Thinking, Communication, and Collaboration. Embedded within each of these identified skills for success are key elements and pedagogical approaches for teaching design thinking. (p. 19)

Using this framework as a basis for educational reform, P21 has actively lobbied Congress while also working with Congressional 21st century skills groups to promote its 21st century competencies curriculum agenda (Meyer, 2012; P21, n.d.).

Critique of 21st Century Learning Goals

It is important to note that the curriculum goals promoted by advocates of the 21st century skills movement do not have universal acceptance. One of the critiques of 21st century skills is
that at their core they contain nothing pedagogically or academically new (Brusic & Shearer, 2014; Mathews, 2009). Researchers have noted that throughout human history, progress has hinged upon creativity, critical thinking, and collaboration; the development of large-scale sea travel, agriculture, and civil engineering required high levels of critical thinking and creativity (Rotherham & Willingham, 2010). Rotherham and Willingham (2010) further suggested that the skills associated with 21st century learning are also not new to schooling or educational thought. They argue that as far back as the 380s BC, Plato’s *The Republic* contained elements of what is now called 21st century education. While this strand of analysis questions the innovation of 21st century skills, others have argued that some of the specific skills associated with 21st century learning are ill-defined making it problematic to identify and assess them in educational settings.

Many of the skills associated with 21st century learning carry with them an ambiguity of meaning, which makes it difficult to assess their acquisition accurately (Kyllonen, 2012; Silva, 2009). Critical thinking, accountability, and problem solving may be defined in various ways depending on the circumstances of a particular situation, and yet all of these abilities fall under the umbrella of 21st century learning skills. One example of the ill-defined nature of some 21st century skills is creativity, which P21 lists as one of the skills associated with learning and innovation. Mishra and Henriksen (2013) have argued that “lack of a common definition of creativity prevents us from having a shared understanding of the construct” (p. 11). Campbell (2008) posed a similar argument when discussing ICT 21st century skills. The researcher asserted that the glut of definitions associated with ICT literacy obscures a common understanding of what the skillset entails. Without this accepted understanding of 21st century skills, what constitutes effective instruction to develop these skills becomes difficult to ascertain. This was an obstacle that was encountered when conducting research for this case study and is discussed in
more detail in Chapters IV and V. Along with the strand of critique that questions the vagueness of 21st century learning, some researchers have also charged that P21’s concept of 21st century skills is similar to the heavily criticized and discredited skills movements of the 20th century.

In his analysis of the K-12 U.S. curriculum, *The Struggle for the American Curriculum: 1893-1958*, Kliebard (2004) detailed the history of skills movements in U.S. education. The author argues that curriculum shifts in the early 20th century could be attributed to tension and debate among educational advocates of humanism, social efficiency, developmentalism, and social meliorism. However, Kliebard claimed that during and after World War II, eclecticism in curriculum reform blurred the lines among these traditional curriculum forces, and this amalgamation produced reform efforts focused on specific skillsets such as vocational education, life adjustment education, and the attempted abolition of traditional disciplinary subjects (Kliebard, 2004). However, Kliebard (2004) concluded that with the Soviet Union’s launch of an unmanned satellite named *Sputnik*, the direction of curriculum reform shifted away from skills based education. A perception developed within the United States that the nation was being intellectually outpaced as compared to Soviet advancements, and skills focused curriculums were blamed for the United States’ technological failure (Kliebard, 2004). Therefore, it became a matter of national security to develop the intellect of all U.S. students by concentrating on discipline-based education (Kliebard, 2004).

Ravitch (2010) has supported Kliebard’s interpretation of curriculum history and equates the 21st century skills movement to those of the past. “There is nothing new in the proposals of the 21st century skills movement. The same ideas were iterated and reiterated by pedagogues across the 20th century” (Ravitch, 2010, p. 44). She and other opponents of P21’s curriculum vision argue that just as previous skills movements were an attack on content specific
knowledge, the 21st century skills movement also diminishes the importance of content knowledge to the educational detriment of students.

Critics of 21st century skills as an educational framework, particularly as conceived by P21, argue that skills such as information literacy, creativity, innovation, critical thinking, and problem solving are most effectively developed as a byproduct of rigorous content instruction (Sawchuk, 2009a). Sawchuk (2009a) reported that “statements in P21’s foundational documents [suggest] that critical-thinking and analytical skills can be taught outside of specific content” areas (see Questions of Content section, para. 2). However, Hirsch rejected this position. While he has conceded that competencies defined as 21st century skills are indeed important for students to acquire, he maintains that students master and internalize these competencies by gaining a broad body of knowledge and exercising 21st century skills within the study of that content (Sawchuk, 2009a). P21 has responded to this line of criticism by asserting that its framework for skills learning does not diminish the value of content learning in schooling practices. Instead, P21 (2011a) literature discusses the need to promote 21st century competencies “within the context of core knowledge instruction” (p. 1). P21 correlates core knowledge to traditional content-based subjects taught in K-12 schools such as English, language arts, languages, fine arts, mathematics, science, economics, geography, history, government, and civics (P21, 2011a). A final criticism of the 21st century skills movement deals with the involvement of technology corporations in its funding and promotion.

Opposition groups to P21’s vision of curriculum development have suggested that the organization is simply providing an avenue for technology based enterprises to sell products to school systems and to promote in students a skillset that will predispose them to purchase and use specific types of technology (Sawchuk, 2009b). In 2002, P21 was founded with the support
of the U.S. Department of Education; however, in the years since, the organization has added numerous for-profit technology-based companies as partners (Sawchuk, 2009b). Those who question the size and scope of these partnerships concede that the Department of Education has a reasonable stake in the educational framework being promoted by P21. However, the business of partners such as Apple Inc., Microsoft Corporation, and Cisco Systems is not K-12 education. Rather, those companies are based around the production of innovative personal and professional use technologies, making it in their best financial interest that students learn a specific set of technological competencies and ideologies (Sawchuk, 2009b). In spite of these charges, Sawchuk (2009b) has contended that business-education partnerships are not new to U.S. education, and this arrangement does not necessarily indicate undue influence by private industry in educational matters. Additionally, when Voogt and Pareja (2012) compared major frameworks of 21st century learning from across the globe, they found that the structure and goals of P21’s framework was comparable to the other frameworks, some of which had little or no official affiliation with technology companies.

**Technology Use for 21st Century Skill Acquisition**

21st century learning does not necessarily involve the use of technology. However, a substantial research base exists that suggests the use of technology is critical in the delivery and development of 21st century skill acquisition. Mishra, Cain, Sawaya, and Henriksen (2013) have argued that this technology does not have to be new or cutting-edge to promote 21st century learning. Instead, technology is valuable when individual educators have the opportunity to utilize it in ways that work for them (Mishra et al., 2013). This is of particular interest to this research study due to REACH’s reliance on online research tools, a digital learning platform, and online student discussion components.
Bassendowski and Petrucka (2013) have explored the importance of a “pull” model of educational instruction in which students are meaningfully and actively engaged in the learning and schooling process. The researchers contrast a “pull” philosophy of education with “push” models in which information is passively imparted to learners from those designing the instruction (Bassendowski & Petrucka, 2013). The goals of “pull” learning as presented by Bassendowski and Petrucka (2013) mirror P21’s conception of 21st century skills. Competencies such as collaboration, initiative, and creativity are achieved through pull learning, all of which are skills associated with 21st century learning, and Bassendowski and Petrucka (2013) have contended that pull approaches to teaching are best achieved through the use of 21st century technologies. According to the authors, “push” educational practices of the 20th century were dictated, in part, by the limited availability of technological resources. However, the advent of sophisticated communication and research technology can drive the process of knowledge creation and the promotion of skills such as flexibility, adaptability, critical thinking, problem solving, and communication. Online discussion boards, like the one provided through Edmodo and used in the REACH project, are a technological tool that can promote 21st century pull learning.

Lane (2014) suggested that educators are responsible for teaching both content information and skill acquisition, and she argues that online discussion forums are useful for both of these goals, especially in social studies courses. While she asserted that this online tool is useful for facilitating digital conversation, she also argued that discussion boards can act as “workspaces for constructivist activities” (Lane, 2014, p. 198). Lane (2014) suggested that instructors craft activities in which students are required to find and analyze historic documents and other relevant sources and then articulate their findings in an online forum in order to
encourage discussion. She argued that these activities develop a variety of 21st century skills while also promoting skills specific to historical study. Other researchers have shown that online discussion boards offer an equitable medium that allows students to interact and debate in the process of building collaboration skills.

Samuels-Peretz (2014) monitored student discussions via an online discussion board used in an undergraduate university course. The students participated in a three-week assignment in which they were required to post conversation pieces and respond to other student posts. Samuel-Peretz (2014) classified student participants as “stars,” “isolates,” or “ghosts” according to their presence in the online discussion assignments. “Stars” were students who had an original post, which became the focus of positive discussion on the board; “isolates” were participants whose posts received explicit or implicit negative attention in postings by classmates. “Ghosts” were students whose posts were ignored. Ultimately, Samuel-Peretz (2014) found that the discussion board allowed for equitable debate to take place over the course of the three-week module. She drew this conclusion by discovering that no one student was locked into the role of “star,” “isolate,” or “ghost” for the entire module. A participant who was a star in one thread of postings did not necessarily retain that role in other threads. Additionally, Samuel-Peretz (2014) found that no one could be classified as an isolate in which his or her ideas were derided in a negative manner. These results indicate that discussions conducted in a digital environment allow a space for all students to express opinions and engage in academic debate. Tutty and Kline’s (2008) research on computer-mediated collaborative tools supports this outcome, and the researchers assert that these tools are effective in building skills such as critical thinking, collaboration, and communication.
Technology Use for Content Instruction in 21st Century Learning

In its original form, REACH did not contain a technology component. However, the revised project revolves around the use of technology to accomplish student-learning goals, and available research has shown that technology use in social studies instruction effectively develops 21st century skills. Holcomb, Beal, and Robertson (2009) have maintained that social studies education at the secondary level has historically been mired in forms of instruction that place too much emphasis on student consumption of knowledge as opposed to instruction that fosters critical thinking and knowledge creation, which are cornerstone skills of 21st century learning.

Gallavan and Kottler (2012) concurred with this perception of social studies education and argue that social studies classes must promote divergent thinking in order to accomplish 21st century skill acquisition. The authors contended that divergent thinking entails the mental deconstruction of a topic or concept in order to analyze its constituent parts in novel and creative ways (Gallavan & Kottler, 2012). The researchers acknowledged that promoting this kind of 21st century skill building can be a difficult task for classroom educators, but the use of technology makes this manner of teaching possible (Gallavan & Kottler, 2012). In line with this research, Holcomb and Beal (2010) argued that over the past decade any “pedagogical changes [in social studies classrooms] have resulted from the effective integration of technology” (p. 28). The authors stressed that online technologies “support active learning while extending teaching and learning beyond the four walls of the classroom” (Holcomb & Beal, 2010, p. 29). Specifically, online technologies that are classified as Web 2.0 have great potential for social studies instruction, and the structure of the REACH program extensively utilizes Web 2.0 technology.
In 2004, hi-tech entrepreneur Tim O’Reilly articulated the concept of Web 2.0 and explained the impact of this technological shift on private industry and commerce. Analysis of Web 2.0 in the business world tends to focus on the potential value these tools offer in providing a platform for a collective consumer intelligence in which the marketing of products and services grows at an exponential rate and is perpetuated by the consumer (Stephens, 2009). This focus on interactivity and knowledge sharing is also a common theme when the term Web 2.0 is used in an educational context; still, no firm definition of Web 2.0 exists in academia (Fahser-Herro & Steinkuehler, 2010). However, an examination of the literature reveals several consistent themes: collaboration, interactivity, and high user engagement (Fahser-Herro & Steinkuehler, 2010). Therefore it is appropriate to define Web 2.0 as web-based tools and technologies that promote communication and interaction among users by establishing expanded communication capabilities while also “providing the potential for intellectual rigor, frequent updating, and collective knowledge sharing” (Fahser-Herro & Steinkuehler, 2010, p. 56). Dowling (2011) asserts that Web 2.0 applications, and specifically the Edmodo learning platform utilized by the REACH program, promotes practice in the 21st century skills of critical thinking, collaboration, and global thinking. The literature further reveals specific examples of how Web 2.0 technologies are being successfully implemented in social studies classrooms to promote content knowledge with 21st century skill building.

Luckhardt (2014) reported on the effectiveness of using online discussion boards, a commonly acknowledged Web 2.0 tool, to promote historical literacy. She argued that it is challenging for students to develop critical thinking and analytic skills in history courses in which there has been an instructional tendency to focus on isolated events, people, and places. Luckhardt (2014) found, however, that when students were asked to engage in online discussion
about historic topics, they had a greater tendency to provide analytically sophisticated responses. Holcomb et al., (2009) reported similar findings when comparing the effectiveness of interactive with non-interactive Internet activity in social studies courses.

Holcomb et al. (2009) conducted a case study of traveling researchers in Russia who initially posted information concerning the nation to a non-interactive Web 1.0 website. The authors connected teachers to this site and guided them in using the content in social studies courses. However, they found that real educational value, particularly in the 21st century skill of collaboration, was gained when an interactive tool called Electronic Exchange: Partners Across Learning Spaces (EE-PALS) was introduced. This tool allowed U.S. and Russian students to communicate directly with one another (Holcomb et al., 2009). Holcomb et al. argued that the use of EE-PALS and other interactive technologies signaled an important change in the delivery of social studies instruction. The authors asserted, “This shift is more than technological updating… it is philosophical in nature because it recognizes the value of learning from others” (Holcomb et al., 2009, p. 47). These and other case studies are potential evidence that interactive technologies have educational value for students in social studies education; however, the literature also has suggested that many social studies teachers are not utilizing technology in ways that promote 21st century skills and deep content understanding.

**Critique of Technology Use in K-12 Education**

While a substantial body of literature exists validating the importance of technology use to modern social studies education, research also reveals that technology integration in classroom practice does not automatically equate to productive instruction. The specific technologies that are utilized must be purposeful, relatively seamless, and appropriate to the goals of individual classrooms and teachers. According to Lei (2010), “The quality of technology use- how, and
what, technology is used- is a more significant factor than the quantity of technology use” (p. 455). Lei (2010) argued that simply using technology in secondary classrooms will not have a positive impact on student achievement; technology use must be targeted around specific learning outcomes. In fact, he found that when used improperly, technology use may actually inhibit the goals of social studies education such as the fostering of authentic inquiry in classroom activities (Lei, 2010). Harris and Hofer (2011) echoed these sentiments placing emphasis on technology integration that is built around curriculum considerations and learning processes. However, Shiveley and VanFossen (2009) found that many social studies teachers have not altered their traditional methods of teaching even when Internet use is incorporated into instruction. The researchers contend that this condition in social studies classrooms is counterproductive to the stated goals of the National Council for the Social Studies, which are to provide transformative instruction (Shiveley & VanFossen, 2009). This transformative instruction as described by the authors includes developing in students 21st century skills such as ICT literacy, creativity, innovation, critical thinking, problem solving, and collaboration.

**Social Studies Education**

**REACH for Social Studies Instruction**

The reintroduction of REACH in a digital format does not separate 21st century skill development from content instruction; instead, it is intended to specifically address the acquisition of these skills as part of a social studies course. Therefore, it is important to evaluate not only 21st century learning, but also accepted meanings of social studies education, particularly as it applies to the teaching of history. The National Council for the Social Studies (NCSS) provides legitimate direction as to the purpose of social studies education in U.S. schools.
NCSS was founded in 1921 as an advocacy organization for social studies education in grades K-12 in the United States (NCSS, n.d.a). This influential organization developed and published a set of nationally applicable curriculum standards in 1994 and released an updated version titled *National Curriculum Standards for Social Studies: A Framework for Teaching, Learning, and Assessment* in 2010 (NCSS, n.d.a). These standards establish that “the primary purpose of social studies is to help young people make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world” (NCSS, n.d.a, para. 1). The standards stress that social studies education must go beyond mere knowledge acquisition to address the building of specific skillsets, including the analytic ability to assess information from multiple perspectives and make connections concerning that information from the past to the present in order to promote an effective citizenry (NCSS, 2011).

Like the NCSS’ focus upon the need for the contextualization of content knowledge, Liss (2003) argues that content information in social studies courses must be situated within the context of a student’s present life and world. Liss (2003) is hypercritical of social studies courses that “place facts and knowledge over critical thought and the application of that knowledge” (p. 247). He has advocated that social studies classrooms should focus on interrogating history and society rather than pander to an “answer dominated” (Liss, 2003, p. 248) curriculum. Ritter (2012) echoed these sentiments in his support of a social studies education that promotes “social understanding and civic efficacy of students” (p. 118) which aligns with the NCSS’ conception of social studies in grades K-12. He suggests that “powerful social studies” (Ritter, 2012, p. 123) is not a static collection of content related terms, names, and battles; but, like Liss, the content that comprises social studies courses must be viewed through multiple lenses and situated in varying contexts. These overarching goals and purposes of powerful social studies education as
defined by the NCSS and researchers such as Ritter and Liss are potentially met through the individual assignments that comprise REACH as well as its end product.

However, Saye and Brush (2002) have asserted that the kind of academic inquiry and dialogue promoted by the NCSS is difficult to achieve in secondary classrooms. Nevertheless, the REACH project aims at incorporating these strategies into classroom practice. In REACH’s original and revised form students are required to critically analyze a current events article using guided questions. This analysis first calls on students to develop a basic understanding of the article in order to answer the question, “Who or what is the article regarding?” The analysis tool then guides students in a deeper critical analysis of the material by requiring them to explain the purpose of the article, determine what kind of reasoning was used by the author in his or her presentation of conclusions, give examples of potentially misleading information, and make connections between the article and the historical unit of study. Fehn and Koeppen (1998) have argued that the process of document inquiry and analysis, like the one used in the REACH assignment described above, directly addresses the NCSS’ position that social studies education must nurture in students’ “interpretive skills and afford students opportunities to evaluate evidence” (p. 462).

The revised REACH project also includes an assignment in which students must conduct online research in order to locate and critically analyze a content-related article of their choosing. Additionally, the assignment requires students to engage in an online academic conversation with their peers concerning perceptions and analysis of the material. These elements associated with the REACH project align with the NCSS’ assertion that high school social studies students must possess the ability to evaluate the content and credibility of sources while also developing the civility to appreciate and respect the perspectives of others who may hold a differing opinion.
Likewise, Reisman (2012) went so far as to argue that proficiency in these skills of critically analyzing documents, including contemporary publications, is a key component of democratic citizenship. The author stated, “The difference between basic comprehension [of documents] and high-level analysis is the difference between disenfranchisement and opportunity” (Reisman, 2012, p. 258). While the NCSS offers a broad understanding of the purpose of social studies that aligns with Reisman’s concept of education for democratic citizenship, the organization has also established ten specific themes that must comprise the organizing principles of social studies education.

The NCSS’ national standards isolate ten specific themes to guide social studies curriculum development on a large scale level, but they are also intended to inform the classroom practices of individual teachers (Golston, 2010). The ten themes are

1. Culture;  
2. Time, Continuity, and Change;  
3. People, Places, and Environments;  
4. Individual Development and Identity;  
5. Individuals, Groups, and Institutions;  
6. Power, Authority, and Governance;  
7. Production, Distribution, and Consumption;  
8. Science, Technology, and Society;  
9. Global Connections; and  
10. Civic Ideals and Practices. (NCSS, n.d.b)
With the development of these themes, the task of classroom teachers becomes the creation of authentic learning activities that address the intent of each theme in a meaningful manner, and the structure of the REACH program offers the opportunity to accomplish this goal. The program may be adapted to any history, government, or economics course and allows teachers the freedom to choose articles that may reasonably relate to any of the NCSS themes. For example, a teacher may choose to have students read an article concerning the influence of religious or government institutions on certain aspects of society in order to address the Individuals, Groups, and Institutions theme (NCSS, 2011). In addition to this content related adaptability, REACH is structurally compatible and malleable to many styles and practices of classroom education.

Reisman (2012) has contended that the flexibility of a social studies instructional strategy is vital to its long term use in typical classroom practice, and this contention is verified through an examination of the New Social Studies movement. Reisman (2010) argued that during the 1960s and 1970s, a curriculum shift in United States education brought about a different focus for social studies instruction at the K-12 level; this shift came to be termed the New Social Studies. Byford and Russell (2007) reported that during the 1950s events such as a lack of clear U.S. success in the Korean War and the U.S.S.R.’s 1957 launch of Sputnik spurred curriculum developers to question the success of the collective social studies curriculum in promoting inquiry, critical thinking, and citizenship traits. Therefore, the New Social Studies movement developed as a reactionary effort that attempted to position students as knowledge creators as opposed to passive receivers of information (Byford & Russell, 2007; Reisman, 2012). To this end, over 50 curriculum initiatives, including the Harvard Social Studies Project, and the Carnegie-Mellon University Social Studies Curriculum, were funded and implemented (Byford & Russell, 2007). However, Byford and Russell (2007) have contended that many of the specific
programs associated with the New Social Studies failed to achieve long term implementation at the classroom level because they radically altered the way classroom education was structured making sustained implementation unrealistic. The design of REACH avoids this failure by not requiring significant alterations to any classroom practices.

**Competing Definitions of Social Studies Education**

While substantial research exists supporting NCSS’ conception of the purpose of social studies education, it is important to note that this is a matter of some debate in political and educational settings (Hartman, 2013). Hartman detailed the struggle between two broad political factions he terms “liberals” and “neoconservatives” over the creation of a nationally accepted set of curriculum standards for K-12 United States history courses. In 1994, philosophical and pedagogical differences caused the publication of the National Center for History’s *National History Standards* to be met with opposition so rancorous that the *Wall Street Journal* published an opinion piece entitled “The End of History” which claimed the document was revisionist extremism (Hartman, 2013). In the wake of such criticism, the *Standards* were revised several times, but still no official sanction of the document was ever received (Hartman, 2013). Other researchers such as Schug and Western (2002) specifically criticized the NCSS’ interpretation of the purpose of social studies education. The authors argued that content knowledge is completely ignored in the NCSS’ *National Curriculum Standards for Social Studies* in favor of listing broad themes that detail the competencies students should develop in social studies courses. The REACH project, both in its original and proposed digital forms, attempts to unite both the NCSS’ standards and Schug and Western’s concerns by promoting content specific knowledge acquisition while also attempting to develop in students a transferable skillset.
REACH as a Literacy Tool in Social Studies Instruction

An essential aspect of the REACH program deals with the issue of literacy. All of the constituent assignments that comprise REACH revolve around students developing and displaying the ability to read, comprehend, and analyze written materials. Robin (2008) argued that these literacy competencies are crucial components of the larger concept of 21st century learning. However, the literature suggests that high school social studies courses have not traditionally placed adequate emphasis on literacy instruction.

Reidel and Draper (2011) reported, “Literacy instruction has not typically been included in conventional conceptualizations and enactments of social studies or citizenship education” (p. 124). The authors assert that one of the primary goals of social studies instruction is the creation of an informed citizenry that has the ability to critically examine information. However, they found that many high school social studies teachers are reluctant to include any purposeful literacy instruction in day-to-day classroom activities (Reidel & Draper, 2011). The authors stressed that this is particularly problematic in the current digital age in which students are barraged with visual and written information. Monte-Sano (2011) supported these conclusions and contends that secondary social studies classes focus upon only the most basic reading comprehension skills as opposed to analytic skill development. She has viewed social studies as a fundamentally interpretive field, which requires students to possess complex literacy skills in order to analyze and evaluate subject matter information. Collectively, the literature echoes the conclusions drawn by these authors concerning the state of social studies literacy inclusion in high school classrooms across the country.

Massey and Heafner (2004) suggested that like other content area teachers, social studies educators generally do not view literacy instruction as a responsibility they hold. The authors
have argued that at the secondary level the perception of teachers is that students must have a basic level of literacy to have advanced beyond elementary school (Massey & Heafner, 2004). In fact, Massey and Heafner (2004) have reported repeatedly hearing the following sentiment from social studies teachers, “I’m not a reading teacher; students should already know how to read when they get to middle school. My job is to teach them social studies content” (p.26). The usefulness of this position is called into question when considering the importance of 21st century digital literacy development.

Voogt, Erstad, Dede, and Mishra (2013) suggested that a key component of 21st century learning is student preparedness for “careers that do not yet exist” (p. 403) through digital literacy. The European Information Society’s definition of digital literacy stated:

Digital literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse [sic] and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process. (Ng, 2012, p. 1067)

Given this definition of literacy for the 21st century, some scholars contend that traditional conceptions of literacy which simply involve the encoding and decoding of words and phrases has become outdated (Buschman, 2009; Knutsson, Blasjo, Hallsten, & Karlstrom, 2012; Voogt et al., 2013). In the 21st century, literacy must include “tool literacies” (Voogt et al., 2013, p. 404) which involve having the skill and adaptability to use ever-evolving technologies, particularly those associated with Internet-based activity.

Leu et al. (2011) asserted that Internet-based activity is the defining tool of literacy in the 21st century. However, Shiveley and VanFossen (2009) reported, “The available research literature… tells us that most teachers do not use the Internet on a regular basis” (p. 24). The researchers have contended that while many secondary teachers see the value of using Internet
resources, they still tend toward the use of traditional textbook materials because they see
Internet resources as largely unorganized and cumbersome to use (Shiveley & VanFossen, 2009).
This condition is particularly damaging to literacy instruction. Behjat et al. (2012) explained that
widespread Internet access spurs students to read expansively, and Leu et al. (2011) further
suggested that newer interactive technologies have the power to utilize Internet based reading for
educational purposes. The interactive nature of the online experience promotes high levels of
complicated reading comprehension skills because text and other information are not presented
in a static manner. In fact, Leu et al. (2011) argued that Internet based reading lures readers into
a variety of tasks including social interaction, problem-based inquiry, decision making, and the
active location of information that meets a user’s needs. However, the bombardment of sensory
information that accompanies online text creates a modern challenge for readers.

Lin et al. (2011) researched the issue of reading comprehension in “media multitasking
environments” (p. 183) such as in online settings. The researchers found that students’ ability to
retain information and evaluate a text is negatively impacted in multitask-heavy situations in
which they have access to varying media. The conclusion can be drawn from Lin et al.’s study
that while online access to informational texts may provide an interactive experience that fosters
the in-depth analysis associated with a mastery level of reading comprehension, this environment
also exposes students to potential distractions that may limit the development of literacy skills.
These results make it important for young readers to learn how to glean information in a
sometimes distracting online environment.

The literature clearly builds a case for the importance of literacy instruction in secondary
social studies courses that utilizes both traditional texts and 21st century mediums. However,
research also indicates that, historically, social studies classes have not necessarily promoted this
kind of instruction. The REACH program inherently addresses these issues of literacy and reading comprehension while also allowing for meaningful content instruction. Assignments associated with REACH require students to critically engage with both traditional and online reading materials. Students are reading to gain a basic understanding of a chosen article or piece of text. However, they are also involved in the process of questioning the author and his or her reasoning and motives, critiquing arguments presented in the text, and assessing the impact of the events, ideas, and concepts presented in the material. This element of REACH aligns with Beck and McKeown’s (2002) strategy of “Questioning the Author” in order to promote active reading and deeper comprehension. With this approach, students are taught to question the ideas presented in printed works in order to promote the notion that reading comprehension involves more than simple word recognition. Beck and McKeown (2002) have discussed that this method has proven successful in social studies classrooms, and when students recognize the potential fallibility of authors, texts become less threatening. Additionally, the structure of the REACH program allows classroom teachers the flexibility to choose articles for discussion and analysis that appropriately match the reading comprehension level and analytic ability of their specific students. As students become more proficient critical readers and evaluators, teachers can increase the reading difficulty and analytic sophistication of the articles chosen for the first REACH assignment. As argued by Reisman (2012), this flexibility associated with the REACH program increases the likelihood that the project will be implemented in a consistent and enduring manner.
Summary

This literature review provided a history of the 21st century skills movement. The research base reveals that the concept of 21st century skills was born well before the 21st century. Policy makers and educators saw a need for students to acquire specific cognitive skills that would allow them to function successfully in high value knowledge societies as opposed to those based on high volume industrial production. Research also reveals, however, that critics of a 21st century skills curriculum argue that nothing new exists in these frameworks. Instead, they propose that students are best prepared for economic and personal satisfaction through rigorous content-based instruction. The review also focused on social studies instruction including its established purposes and the role of technology in bringing those purposes to fruition. Extensive research indicates that social studies teachers understand the academic value of technology use for instruction. Nevertheless, research also reveals a lack of productive technology use in social studies classrooms, which results in instruction that often times lacks “powerful teaching and learning” (Shiveley & VanFossen, 2009, p. 4). Additionally, the literature suggests that K-12 social studies instruction does not place enough emphasis on literacy training. In its conceived form, the REACH project aims to harness powerful teaching and learning by promoting 21st century skills, including digital literacy, while students are engaged in meaningful content instruction.
CHAPTER III:

METHODODOLOGY

Introduction

Research has shown that the realities of modern economic and social life require a specific set of 21st century skills (Rosefsky & Opfer, 2012; Trilling & Fadel, 2009; Voogt & Pareja, 2012). However, educators also have the professional responsibility of educating students according to established content and purpose standards. The REACH project is an effort by two classroom teachers to accomplish both of these goals. The purpose of this exploratory single case study was to examine the following: knowledge gained from the digital REACH project concerning student acquisition of 21st century competencies, and the impact of REACH on the enhancement of social studies content knowledge and understanding. In this chapter, the study methodology is presented including: research rationale and design, researcher positionality, analysis of the discontinuance of the original REACH project, participants and setting, instruments, data collection, and data analysis.

Rationale for Case Study Research Approach

Exploratory case study research is uniquely suited for the particulars of the REACH situation. The definition of case study has been a matter of some debate within the academic community, but Yin offers a working definition that is suitable for this research project (VanWyensbergh & Khan, 2007). Yin (2014) has proposed that “a case study investigates a contemporary phenomenon…in its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident” (p. 2). Likewise, Baxter and Jack (2008)
posited that case study is ideal for exploring the context in which a phenomenon is taking place and how that context is woven into the case itself. This attention to context is important when considering the REACH project, school climate, participant backgrounds, and community status are all central to understanding its meaning. Furthermore, the exploratory single case study type is appropriate for the particulars of this case.

Yin proposed that exploratory case study is suitable for areas of research in which “what” questions are under investigation. Concerning the case of REACH, these questions abound in areas such as teacher and student motivation and perception, academic benefits, and implications of technology use on meaningful analysis and dialogue. Baxter and Jack (2008) contended that an exploratory case study is used if a researcher seeks to “explore those situations in which the intervention being evaluated has no clear, single set of outcomes” (p. 548). Yin (2014) further explained that research methods such as experimentation, survey research, and archival analysis may be reasonably used when one is seeking to answer “who” or “where” research questions. However, when the area of research deals with exploring specifics of the “how” and “why” of a phenomena, an exploratory case study is a preferable research method (Yin, 2014). Consequently, this case study type is applicable when undertaking research on the REACH program and specifically how this program may influence the understanding of content knowledge in the social studies classroom while also fostering 21st century skills.

**Researcher Positionality**

Bourke (2014) stressed that a researcher’s positionality plays a central role in the research process; this is particularly true in this study of the REACH program. I, as the researcher, have a unique perspective on the REACH program and its implications for use in history classrooms at the secondary education level. I have been a high school social studies teacher for over a decade,
and my goal as an educator has always been not simply to teach facts that students memorize. Instead, I aim to lead students in the direction of critical analysis of the past, present, and future. This goal was paramount in my creation, revision, and implementation of the REACH program. Additionally, as a long time faculty member and chair of the social studies department at the school in which I teach, I am invested in promoting creative and effective instructional practices that have transferability from classroom to classroom. However, the close ties I have to the REACH project and to the research school position me as an “insider researcher” in relation to this study.

Kerstetter (2012) detailed the debate that exists within the realm of qualitative research concerning the usefulness of insider research versus outsider research. Kerstetter (2012) reported that outsider researchers, or those not originally associated with a research community or site, may bring to a research project a detachment that allows for objectivity in analyzing data and drawing conclusions from that analysis. However, the literature also suggested that there is value in having insiders conduct research (Greene, 2014; Kerstetter, 2012). An insider researcher is one who is intimately and organically connected to a group, community, or phenomenon being studied which allows these individuals the ability to gain an authentic understanding of the research subject (Greene, 2014; Kerstetter, 2012). However, Chavez (2008) suggested that potential bias exists when one is considered an insider in the research process. According to Chavez (2008), “For an insider bias may be overly positive or negligent if the knowledge, culture, and experience she/he shares with participants manifests as a rose-colored observational lens or blindness to the ordinary” (p. 475). Given my relationship to the REACH project and the research site, this manner of potential bias was a methodological consideration. In particular, the researcher’s personal connection to the project had the potential to hamper the ability to allow
Paul his own voice in the case study, as the researcher may have unconsciously ascribed her own perceptions to him. Therefore, conscientious attention was given to data collection and analysis to ensure that the data were not interpreted and presented in invalid ways due to bias.

**Discontinuance of Original REACH Project**

Educational research over the past 20 years has revealed that effective collaboration between and among classroom teachers promotes measurable academic benefits for students (Kuusisaari, 2014; Musanti & Pence, 2010; Szczesiul & Huizenga, 2014). Kuusisaari’s (2014) research have suggested that the symmetrical collaboration of educators involves a partnership between professional equals in which both parties contribute ideas to the creation and development of instructional lessons. However, research also makes clear that disagreement, debate, and shared resolution concerning what is taught, how it is taught, and why it is being taught is a vital element of productive teacher collaboration (Musanti & Pence, 2010; Szczesiul & Huizenga, 2014). My colleague, John, and I employed these characteristics of effective collaboration during the development of the original REACH project. The goals, structure, and learning outcomes of the REACH program were debated, and compromises were agreed upon as to how the program would be enacted. After the initial implementation of the assignment, the teachers jointly graded the first round of student REACH presentations in order to achieve continuity in how the assessment rubric would be utilized. Additionally, student performance was collaboratively analyzed and discussed throughout the first phases of program enactment. In spite of these steps, the REACH program failed to become a long-term instructional tool in either teacher’s classroom; instead, it was completely abandoned within two academic semesters of its initial use.
In analyzing and discussing the discontinuance of the program, several deciding factors have been determined. One of these was the amount of time that was taken with the assignment. Both John and I covered approximately fifteen units of content material per semester, and we both found it daunting to devote class time each unit to the REACH assignment. Additionally, the amount of outside grading and attention that the project consumed limited other writing assignments that we knew to be educationally valuable. Beyond time concerns, we were also disappointed with the academic results of the program. It was difficult to moderate and facilitate discussion between the student presenting an analysis and 25 to 30 classmates, and more often than not a relatively few outspoken students dominated the conversation. Furthermore, we anticipated that choosing students at random to present an article analysis would prod all students to give extensive effort in the completion of the REACH assignment. However, the opposite effect seemed to take place; because there was the possibility that students would not have to orally defend their work, they provided minimal analytic effort on the assignment as evidenced by their written work.

Overview of the Research Study

The current study was conducted during the spring semester of the 2014-2015 academic school year. Two United States history classes from the participating teacher’s course load were chosen as study participants. One class completed the REACH program while a control group class did not. Other than REACH assignments, the two participating classes completed identical coursework as part of their social studies course. During the time in which the study was conducted, the classes began and completed a unit of study that dealt with the Reconstruction period (1865-1877) in United States history. Therefore, all REACH assignments dealt with this topic. The unit of study lasted three weeks during which students in the REACH class completed
three REACH related assignments. On the last day of the unit, both the REACH and non-REACH completing classes took a cumulative Reconstruction test that was created by the participating teacher. All observations, document collection, interviews, and test score data collection took place over this three-week time period. The participants, setting, data collection, and data analysis are described in more detail throughout the remainder of this chapter.

**Participants and Setting**

The participants for this study were two classes of students who were taking a standard United States history class at a public high school in the southeastern United States. Valley High School offers three academic levels of the U.S. history course in which participating students were enrolled. Table 1 details the description given in the school system catalogue regarding the requirements for the standard United States History I: Beginnings to the Industrial Revolution course as well as the more academically rigorous equivalent courses.

Table 1

*School System Description of United States History I: Beginnings to the Industrial Revolution*

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States History I: Beginnings - Industrial Revolution (Standard course involved in the study)</td>
<td>Course is the first part of a two course study of U.S. History. This 10th grade course examines the social and political history of the United States.</td>
</tr>
<tr>
<td>United States History I: Beginnings - Industrial Revolution, Advanced</td>
<td>Course is the first part of a two-course study of U.S. History. Advanced analysis of historical content, research writing, and critical thinking skills are aspects of this 10th grade course. The course examines the social and political history of the United States.</td>
</tr>
<tr>
<td>United States History I: Beginnings - Industrial Revolution, Honors/Pre-AP</td>
<td>Course will cover American history from the discovery of the North American continent to 1877. This course is designed to provide students with the analytical skills and factual knowledge necessary to deal critically with the problems and materials of U.S. history. Solid reading and writing skills, along with a willingness to devote considerable time to homework and study, are necessary to succeed. Students will learn to interpret and evaluate the significance of primary and secondary sources.</td>
</tr>
</tbody>
</table>
One class of students participated in the REACH project while the other class acted as a control group and did not complete REACH assignments. A deciding factor in choosing the participating classes was the homogeneity of students who compromised the two classes. The size of each class was similar, and students in each class were pursuing a standard high school diploma. Both classes had a similar number of students who qualified for special education services, and the participating teacher subjectively assessed that the academic ability and achievement of the student population of the REACH and non-REACH classes was comparable. After completion of the project, test score analysis of the REACH participant class and the non-participating class was undertaken and provided comparative data concerning the impact of the program on social studies content knowledge. The student participants included in the study ranged in age from 15 to 18. The class participating in REACH had 19 student participants, and two of these students had learning exceptionalities, which classified them as special education learners. The control class that did not complete REACH assignments had 18 student participants and three of these students had exceptionalities, which qualified them for special education services. The researcher had no control over the students placed in the participating classes.

Paul, the teacher of the classes in which research was conducted, is also considered a study participant and is a colleague of the researcher. Paul’s perceptions and analysis of the digitized REACH program are essential to understanding its impact on 21st century skill building and content acquisition. Paul had been teaching at the research school for one year after completing a first year of teaching in a different school system. However, Paul had a history with the research school. In the fall of 2012, he completed his student teaching internship at the school in order to earn a Bachelor of Science in Education and gain teacher certification. Additionally, Paul coached basketball at the research school before being hired as a faculty member.
The research school serves approximately 1,350 students in grades 9-12 and has 75 members of the certified faculty including 12 social studies teachers (Public School Review, 2014). Minority enrollment at the school is 43% with 39% of the student body eligible for free or reduced fee lunches (Public School Review, 2014). Student participants and the faculty participant were chosen as part of a convenience sample due to the fact that the researcher is a teacher at the school where the research was conducted.

**Instruments**

The attainment or creation of an effective measurement device to determine the effectiveness of REACH in promoting 21st century skills was a challenge of the study. Research has shown that reliable assessment of 21st century skills is difficult to achieve, and there appears to be little consensus among interested parties concerning the most effective manner to assess these skills (Kyllonen, 2012; Silva, 2009). Silva (2009) argued that this ambiguity of assessment “is a … driver in the 21st-century skills debate” (p. 630) with some opponents of the movement arguing that accurate assessment of skill acquisition is unrealistic. In spite of the paucity of specific 21st century skills assessment instruments, P21 advocates the use of rubrics in assessing student development (P21, 2009). Therefore, student responses to REACH assignments were analyzed and evaluated using a rubric (see Figure 3) created by the researcher during the initial REACH project. The rubric addresses specific 21st century skills such as critical thinking, problem solving, and creativity. In addition to the rubric, an observation protocol and interview protocols were utilized as research instrumentation.
Field notes were taken during observations using Dyson and Genishi’s (2005) observation guidelines. Dyson and Genishi (2005) asserted that during observations “rough notes” (p. 48) should be taken and then organized and typed into field notes soon after the observation is complete. An observation protocol (see Appendix C for protocol) was used in real time classroom observations to structure the process of field note taking. This protocol focused observations on the following: descriptive and reflective notes of the classroom space; student interactions and speech; teacher interaction and instruction, and the flow and structure of the instructional period; specific instances of student demonstration of 21st century skills and the context in which these demonstrations occurred; and after observation reflective notes (Creswell, 2013; Dyson & Genishi, 2005). Additionally, an interview protocol was used for each of the four interviews conducted during the study, and open-ended questions were prepared before the interview process began (see Appendix D for teacher interview protocols and questions; see Appendix E for focus group interview protocol and questions).
**Data Collection**

Creswell (2013) has emphasized that when a study is approached from a pragmatic point of view, a variety of data collection methods and analyses may be utilized because the ultimate goal of the study is to uncover its real-world implications. Furthermore, Yin (2014) has advocated the use of multiple data sources in order to utilize data triangulation so as to convincingly corroborate findings. To this end, the following activities were undertaken to gain relevant data: document collection, classroom observation, participant interviews, and test score collection. Before any data were collected, written permission was obtained from the following parties: school system assistant superintendent, research school principal, teacher participant, parents/guardians of student participants, and student participants (see Appendix F for “Consent/Assent to Participate” documents). Data were not collected from any student who did not submit parental/guardian permission or did not assent to participate in the study. Additionally, the researcher obtained research permission through the Institutional Review Board (IRB) before the project began (see Appendix G for IRB approval documentation).

**Document Collection**

The REACH project produced several types of relevant student work in both digital and hard copy form. The first assignment of the project required students to complete an article analysis tool (see Appendix H) concerning the contemporary news article *Why Reconstruction Matters* by Eric Foner (see Appendix I). In the analysis, students were asked to determine information such as the purpose of the article, the reasoning used by the author, any detected bias, and how the article related to the current unit of study. The second REACH assignment produced digital documents in which students posted an extended analysis of the previously assigned article and responded to a classmate’s posting. The last assignment also produced
digital documents in which students posted, via Edmodo, contemporary articles they researched and critiqued. All of these documents, both digital and hard copy, from each of the three REACH assignments were collected for analysis. In addition to document collection, classroom observation took place.

**Classroom Observation**

The REACH project took place over a three-week period of time; this equated to 15 class periods, each of which lasted 45 minutes. Students worked on the project through Edmodo outside of the classroom; however, it was anticipated that student engagement with REACH would influence class discussions and inquiry. Therefore, the researcher conducted 15 classroom observations over the time period in which REACH was ongoing. Cramer (2007) suggested that 21st century learning can be observed through an analysis of student conversations, discussions, and behavior. Consequently, the observations focused upon how students incorporated knowledge gained from the REACH project into classroom discussions and assignments and how they displayed 21st century skills in typical classroom activity. These observations were documented using field notes organized by the previously described observation protocol (see Appendix C for protocol).

**Interviews**

Data were also collected through a series of interviews with Paul, the participating teacher, and a focus group of student participants. Cruickshank (2012) asserted that “a qualitative interview is an excellent method if you want to gain insight into the intentions, feelings, purposes and comprehensions of the interviewee” (p. 42). Paul’s perceptions and interpretations of REACH’s influence over his student’s 21st century skill building and knowledge acquisition speak to the ultimate purpose of the case study. Due to the previously established working
relationship shared by the researcher and Paul, a strong rapport exists which makes it more likely that he was comfortable sharing his honest thoughts on the direction of the project, even when he found aspects of the REACH project to be unsuccessful. According to Creswell (2013), this candor is important in qualitative interviewing, “For one-on-one interviewing, the researcher needs individuals who are not hesitant to speak and share ideas” (p. 164).

Paul was interviewed three times regarding the REACH project. The first interview took place after the students had completed the first assignment of REACH; the second interview took place after completion of the second assignment. The final interview was more extensive and was conducted after the completion of the REACH project. The interviews utilized open ended questions and focused upon the following topics regarding REACH: perception of student engagement in the project and attitudes towards the project, perception of 21st century skill building, and perception of content acquisition. All interviews took place in Paul’s classroom during his afternoon preparation period. The first two interviews took approximately 30 minutes; the last interview was approximately 45 minutes in length. In addition to interviewing Paul, a focus group of students who completed the REACH project was also interviewed.

In order to gain a deeper understanding of the REACH program as it relates to the research questions, a sample of six students were chosen as a focus group and interviewed after the completion of the project. Rankin and Ali (2014) have contended that focus group interviewing is sometimes preferable to individual interviews because this kind of interview actually increases the sense of anonymity felt by participants and allows them greater freedom in disclosing information. Kitzinger (1995) supported this contention and adds that the interaction among focus group interview participants provides insight “not only [concerning] what people think but how they think and why they think that way” (p. 299). In order to form the focus group,
the researcher and teacher participant identified from the participating class of students two individuals who were high REACH performers, two average REACH performers, and two low REACH performers. Determinations on performance were based on the article analysis assessment rubric (see Figure 3). The focus group interview took place at Valley High School and lasted approximately 30 minutes (see Appendix F for consent to participate form). All interviews were audio recorded and as per Dyson and Genishi’s (2005) method, the researcher “[chose] to transcribe segments of the interviews that [were] relevant to the questions shaping the case” (p. 71). The transcription process took place during the data collection phase of the case study.

**Test Score Acquisition**

The participants for this study were two classes of students who were taking United States History I: Beginnings to the Industrial Revolution. As previously mentioned one class of students participated in the REACH project while the other class acted as a control group and did not complete the REACH program. However, both classes of students took the same summative test at the completion of the unit. The test was created by the participating teacher as a concluding activity to the unit of study. He did not alter the test in order to make accommodations for the research study, and the exact same assessment was administered to all of his classes including those that did not participate in the study. Students in each of the participating classes took this test during their normally scheduled history period. The tests were then made available to the researcher after they had been graded by the participating teacher.
Data Analysis

Test Score Analysis

Yin (2009) proposed that qualitative case studies can effectively use both quantitative and qualitative data in order to fully explore the research questions and that this methodology is a valid analytic strategy in case study work. The method of using quantitative and qualitative data was utilized as part of this research study with an independent t-test providing the statistical measure to produce the quantitative material. An independent t-test was conducted using the unit test scores of the REACH participating class and the non-REACH participating class. Fink and Kosecoff (1998) have asserted that an independent t-test is an appropriate statistical test in this situation because the measure allows a researcher to “determine the probability that any differences between [two groups] are real and not due to chance” (p. 61). This test specifically addressed the following research question: What impact did student participation in the digital REACH project have in the enhancement of content knowledge and understanding, including the ability to critically analyze connections between past historical events and present world conditions?

Data Analysis Method

Using the procedures detailed throughout this chapter, a large amount of data was collected, which made it difficult to find an entry point into analysis. However, Creswell (2013) has articulated the model that was used for data analysis in this qualitative study:

Data analysis in qualitative research consists of preparing and organizing the data (i.e., text data as in transcripts, or image data as in photographs) for analysis, then reducing the data into themes through a process of coding and condensing the codes, and finally representing the data in figures, tables, or a discussion. (p. 180)

Data collection and data organization took place simultaneously. Observation field notes, analysis of student work, and interview transcriptions were typed and digitally organized. Data
were organized chronologically according to the date on which they were collected. After the data collection process, the researcher undertook analytic coding in which interview transcripts, observation field notes, and student work analysis were examined in order to determine any “words, phrases, or patterns of behavior that [seemed] relevant” (Dyson & Genishi, 2005, p. 85). During the coding process, P21’s Framework for 21st Century Learning guided code development (P21, 2011a). After cycles of coding were complete, themes were developed from codes, which were similar in nature (Creswell, 2013; Saldaña, 2012). As proposed by Creswell (2013), after these themes were established, the researcher used them in order to interpret the data with the goal of answering the established research questions. Finally, the complete data analysis was articulated in narrative form (Creswell, 2013). Figure 4 visually illustrates the data collection and analysis process used in the study.

**Summary**

This exploratory single case study focused on the acquisition of content knowledge and 21st century skills through the use of the teacher created REACH program. Participants included 10th grade United States history students at Valley High School in west central Alabama and their classroom teacher. Qualitative data were collected through classroom observations, document analysis, and interviews with the participating teacher and a focus group of students. The data were analyzed through the coding and classification process suggested by Creswell (2013), and findings are presented in narrative form. Quantitative data were also collected and analyzed through a comparison of test scores.
Figure 4. Chart illustrating data collection and analysis processes. The diagram used for this study was adapted from the work of Miles and Huberman (1994) and Van Do, Dorner, and Gorman (2010).
CHAPTER IV:

FINDINGS

Introduction

The purpose of this study was to evaluate the effect of the REACH program on student acquisition of content knowledge and 21st century competencies. Chapter III detailed the methodology for the study; this chapter presents the findings and analysis. Data were produced from document analysis, classroom observations, individual and focus group interviews, and test score analysis. The first section of this chapter discusses relevant contextual elements in which the study took place. The remainder of the chapter focuses on findings of the study as they relate to the research questions. All of the collected data underwent analytic cycles of coding. These coding cycles produced clear themes that directly addressed the research questions, and the findings are organized and presented according to these themes. The themes that emerged for the first research question are as follows: development of communication, critical thinking, and collaboration skills; digital literacy development; and a lack of evidence of certain 21st century skills development. The themes for the second research question include direct and indirect influence of REACH on content knowledge, student progression in content analysis sophistication, adaptability and flexibility of REACH, and time issues regarding REACH.

Context

Yin (2014) stated that contextual conditions must be considered in case study research because “neglecting those conditions… may yield a case study with an incomplete if not misleading understanding of the case” (p. 162). Therefore, in analyzing the collected data for this
case study several contextual elements were taken into consideration. These elements included classroom structure, school-wide disruption to student routine, participant demographic considerations, course content, and national political events.

Class and School Contextual Elements

The participating teacher, Paul, perceives that his teaching style is structured, and a typical class period revolves around the completion of several activities. According to Paul,

I usually follow the same schedule each day. When the kids come in they have a warm up activity that they have about five minutes to finish. Then, we work on the content of the day’s lesson, and we usually finish with a reinforcing activity. We don’t do the same activities every day, but I like to follow the pattern of an opener, content, and reinforcement.

Given the structured nature of John’s approach to teaching, it is important to note that during the period of time in which his students completed the REACH project there were several school wide disruptions to the typical bell schedule and student attendance. Over the three week period of time during which data were collected for the study, the non-REACH completing class did not attend Paul’s class on two separate days in order to accommodate for ACT testing. Additionally, the project was completed during the last month of the school year, and several non-academic activities pulled students from Paul’s class. These activities included in-school theater performances and playoff sporting events that students were allowed to attend during school hours. These contextual elements may have influenced student participation in the REACH project and student understanding of the content material.

Participants

As discussed in Chapter III, two classes were chosen to participate in the research study. One of the classes completed the REACH project while the other class acted as a control group; the students’ test scores were then compared. One of the goals of the study was to examine the
effects of REACH on a typical high school social studies class. Given this goal, it was most appropriate to choose participating classes in which the students were pursuing a standard high school diploma as opposed to an advanced diploma or remedial level diploma. This consideration guided the choice of the class that would complete the REACH project and be observed by the researcher. After that determination was made, the class not completing the REACH project was chosen from Paul’s remaining classes. This decision was based upon the class that most closely matched the diploma level and student population of the REACH class.

The class chosen to complete the REACH project was comprised of 22 students, all of whom were seeking a standard high school diploma and were currently enrolled in standard level core academic courses. Nineteen of these students chose to participate in the study and returned the proper consent and assent documentation. The non-REACH class was comprised of 21 students, all of whom were also seeking a standard high school diploma and were currently enrolled in standard level core academic courses. Eighteen of these students assented to participate in the study and returned parental/guardian consent to participate forms. Table 2 and Table 3 provide basic demographic and educational information about the participants of the study. Pseudonyms have been assigned to all students in the REACH participating class because they are referenced throughout this chapter.
### Table 2

**Demographic Information: Class that Completed REACH**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age</th>
<th>Race</th>
<th>Gender</th>
<th>Learning exceptionality that qualifies student for special education services (Yes or No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emma</td>
<td>17</td>
<td>African American</td>
<td>Female</td>
<td>No</td>
</tr>
<tr>
<td>Lucas*</td>
<td>15</td>
<td>African American</td>
<td>Male</td>
<td>No</td>
</tr>
<tr>
<td>Jacob</td>
<td>17</td>
<td>Asian</td>
<td>Male</td>
<td>No</td>
</tr>
<tr>
<td>Ava</td>
<td>16</td>
<td>Caucasian</td>
<td>Female</td>
<td>No</td>
</tr>
<tr>
<td>James*</td>
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<td>No</td>
</tr>
<tr>
<td>Alex</td>
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<td>Yes</td>
</tr>
<tr>
<td>Maria</td>
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<td>Lily</td>
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<td>Ella*</td>
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<td>Susanne</td>
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</tr>
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<td>Male</td>
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<td>William</td>
<td>16</td>
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<td>No</td>
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<tr>
<td>Elizabeth*</td>
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<tr>
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<td>Nora</td>
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<td>No</td>
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<tr>
<td>Matthew*</td>
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<tr>
<td>Abigail*</td>
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</tr>
</tbody>
</table>

*(Students with asterisks were part of the six student focus group.)*
Table 3

Demographic Information: Class that Did Not Complete REACH

<table>
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<tr>
<th>Age</th>
<th>Race</th>
<th>Gender</th>
<th>Learning exceptionality that qualifies student for special education services (Yes or No)</th>
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</thead>
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<tr>
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<tr>
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<tr>
<td>16</td>
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</table>

General Student Attitude Regarding REACH

The overall attitude of students for the REACH project was not enthusiastic. Students viewed the work associated with REACH as “just more homework to do,” as one focus group member stated. In spite of this general outlook regarding the program, the vast majority of students completed all of the REACH associated assignments, and the findings revealed that students engaged in meaningful academic dialogue as a result of participation in the program.
Content Elements

A goal of the REACH program is to guide students in gaining a deeper understanding of how past historical events and circumstances are connected to real-time conditions. Therefore, it is important to the findings of this case study to note both the time period in United States history that was being studied by the participating classes and the social and political events that dominated the news cycle while REACH was completed. The broad topic that was covered in Paul’s class during the REACH project was Reconstruction in the American South; this time period immediately followed the American Civil War. The following is a general outline of the material that was taught during this unit of study:

- Reconstruction overview
  - Cost of the Civil War- human and economic
- Plans of Reconstruction
  - Lincoln’s Plan
  - Johnson’s Plan
  - Congressional Plan
  - Politics and conflicts surrounding the Reconstruction plans
- Treatment of former slaves/Freedmen
  - Black Codes
  - Racial divide in America
  - 14th Amendment
  - 15th Amendment
  - Virtual enslavement
- End of Reconstruction
  - Political, social, economic reasons for Reconstruction’s end
  - Compromise of 1877

Of these topics, the condition of race relations in the American South and American North during the period from 1865 to 1877 was extensively discussed, including federal pieces of legislation dealing with this issue. While Paul was covering these subjects from the historical perspective of Reconstruction, rioting in Baltimore, Maryland, broke out in April, 2015 and dominated national news coverage.
The seeming immediate cause of this rioting was the injury of an African American man named Freddie Gray while in police custody (Calvert, 2015; Stolberg & Babcock, 2015). Gray apparently suffered spinal damage while being detained by police and subsequently died (Calvert, 2015; Stolberg & Babcock, 2015). This event came in the wake of several other nationally covered incidents in which African Americans were killed by police including confrontations in Ferguson, Missouri, and New York City (Berman, 2015). This contextual information is relevant because students participating in REACH focused upon the Baltimore riots in classroom discussions and Edmodo postings.

**Research Questions Findings**

Two research questions structured this case study. The following sections present the findings of the case study that are relevant to these research questions. These findings are discussed in terms of themes that emerged during the coding of data. The data used to develop these findings included: three individual interviews with the participating teacher, a focus group interview with six student participants, 15 classroom observations, unit test score comparison, and document analysis of student work on the three REACH assignments.

**Research Question 1**

*What can be learned from the digital REACH project concerning student acquisition of 21st century competencies?*

**Theme 1: Development of communication, critical thinking, and collaboration.** One of the findings of this study was that participation in the REACH program facilitated student use and development of communication, critical thinking, and collaboration; all of which P21 classifies as 21st century skills that students must acquire in order to achieve success in the modern world (P21a, 2011). However, the literature reveals that one accepted definition of
critical thinking and collaboration is not agreed upon within the field of education (Shaw, 2014; Weissberg, 2013; Witney & Smallbone, 2011). Therefore, varied definitions of these concepts were reviewed in order to establish a working understanding of them for the purposes of this study. When considering the literature on critical thinking, several common elements became apparent including the ability of students to not only gain factual knowledge but to actively use that knowledge in order to problem solve and create independent thought (Shaw, 2014; Weissberg, 2013). Furthermore, the literature reveals that effective collaboration is accomplished when “learning is generated” (Witney & Smallbone, 2011, p. 103) through the process of students working together. Finally, P21 promotes the idea that effective communication must be mastered by students in both digital and face-to-face environments (P21a, 2011). Focus upon these skills, as defined and explained above, was a strong theme that emerged from the study’s data.

Throughout the course of Paul’s three interviews, he continually came back to the development of communication, critical thinking, and collaboration skills as a goal of his overall teaching practices and what he hoped his students would gain through participation in REACH. In the first interview, conducted after students completed the first REACH assignment, Paul was asked about his knowledge of 21st century competency development and its importance to his teaching. He responded,

Looking at this list of the 21st century skills [a list of P21s 21st century competencies was given to Paul during each interview], critical thinking and collaboration stand out to me as being really important, along with types of literacy. Being a new teacher, I know that it’s important to work these skills into my teaching, but I feel like I need to do a better job of coming up with activities that require the kids to really critically think, but I think that REACH will be an activity I can do that does get my students to be critical thinkers or at least practice critical thinking, and it will force them to collaborate with each other in Edmodo.
While he was not satisfied that his students had mastered the first REACH assignment, he did see the potential for the exercise to build critical thinking skills,

I really think the first assignment is asking students to think critically about what they are reading, and my kids weren’t very used to doing this. They didn’t do a great job analyzing the article, but this was the first time they had done that kind of analysis, and I think they’ll get better as they go along.

After the completion of REACH, Paul detected an improvement in his students’ ability to critically think and collaborate using the sources of information presented in the REACH project,

I could see a big improvement in how the kids read and thought about the articles from the beginning of REACH to the end. By the last assignment, they were really able to critically analyze the articles they got to choose, and most of the kids gave well thought-out and really well-reasoned replies to other students. Having to communicate and collaborate with other students in the class through Edmodo made everybody seem to really think about what they were posting pretty carefully.

In addition to Paul’s observations concerning critical thinking, collaboration, and communication, the display of these skills was made evident during classroom observations and analysis of student work.

As part of the second and third REACH assignments, students were required to analyze articles and post responses in Edmodo as well as reply to another student’s postings. This afforded students the opportunity to communicate with one another on academic matters outside of the classroom setting. In particular, students who were generally reticent to speak in class had a platform in which to express themselves. Abigail, Lily, Aria, and William were four students who never participated in any class discussion or asked any content related questions during the three week observation period but who all posted article analyses in Edmodo that displayed critical thinking elements through the creation of ideas that went beyond factual information. Additionally, these students gave thoughtful replies to classmates’ post in which their responses engaged others in meaningful academic communication. The following quote is an excerpt of a
student’s initial posting for the third REACH assignment; she chose to critique an article concerning the death of Freddie Gray:

Most police you have don’t care, they don’t think what they do is wrong. Just because they are law enforcement what they do doesn’t matter, because they can get away with anything they do. You may come around to those ones who care but most don’t care because they don’t think they will get caught in the act of doing anything.

Aria, one of the students mentioned above, chose to reply to this response in the following manner,

I think the article you chose was a really good one. It explains a little more of the racial problems going on in America. You said in your answer that you don’t think most of the police in America are fair or really follow the laws themselves; with everything that has happened lately I can see how you would think that, but it also may be that we don’t hear about all the cops who actually do their jobs right and follow the law to protect people. What do you think we need to do with the police to fix the problem? Do you think the problem is only with the police or are there other problems in America that go along with this?

The response given was clearly communicated, and Aria attempted to guide the initial poster to think more critically about the position she held. William, another of the student’s mentioned above, also displayed this kind of critical thinking, collaboration, and communication when responding to a post. A posting student chose an article dealing with voting rights for the third REACH assignment; the following is an excerpt from that post:

The title of the article I’m doing is called ‘No need to fix anything’. So voting rights have been a problem for a long time. From not letting women vote to not letting black people vote. Now it’s the 50th anniversary of voting rights and our country believes we’re in the right spot. But for a long time we hadn’t been where we needed to be when it came to voting rights. Now voting rights are given to all citizens. We as a nation for the most part have come together as a whole and have become more and more equal as time goes by.

William replied to this post in the following manner:

Your article and post were great. You made some good points and I totally agree that voting rights were a problem for a long time. But, when I was finding my own article for this part of REACH I went to an article that talked about part of the voting rights act being taken away by the Supreme Court last year- I think it was last year- and this has
actually hurt allowing people who can legally vote get the right to do that. So, I agree with a lot of your post but I also think we still have an issue of voting rights in America.

Once again, the response was clearly communicated and illustrated that William was actively using knowledge gained through participation in REACH to create independent thought.

These types of exchanges caused Paul to be impressed with the level of analysis and engagement students provided,

I think what [Abigail and Aria] and a lot of the other students did with the second and third parts of REACH really shows why I liked this project. They gave a really good analysis of both articles in Edmodo, and then made really good points when they replied to other kids. Honestly, I was surprised at the responses those two in particular gave because all year they haven’t really said much in class. They are the kind of kids who aren’t a problem, so they can kind of get lost in class when you’re dealing with everybody else. So, I was really impressed with the answers they gave in Edmodo.

In addition to Paul’s recognition that communication and collaboration were fostered through REACH, student focus group participants also found these aspects of REACH valuable.

While students in the focus group were not enthusiastic about completing REACH work outside of class time, they did respond positively to the collaborative nature of the REACH project. According to Lucas, an average performing REACH student, “It was interesting to be able to answer the questions other people posted in Edmodo. The posts [in Edmodo] about what’s going on with the police and Baltimore and then even Trayvon [Martin] were interesting.” Ella, a low performing student, supported Lucas’ statement, “Yeah, it was interesting to see how everybody thought about what was going on in the news especially about the Baltimore stuff.” These Edmodo discussions that focus group students found valuable led to in-class conversations on a number of occasions.

For the first week of the REACH project, during the time in which students were working on the opening REACH assignment, REACH remained separate from the day to day instruction that took place in Paul’s class. There was little evidence during classroom observations that
participation in the project influenced students’ academic behavior. Paul introduced the program and reminded his class of due dates, but this was the extent of REACH’s influence on classroom instruction. However, by week two of the project, when students began communicating and collaborating with one another through Edmodo, there was evidence that participation in REACH became integrated with classroom instruction. Paul used examples from the article Why Reconstruction Matters, which was used for the first and second REACH assignments, when lecturing on topics such as black codes, plans for Reconstruction, and the challenges of rebuilding the South. During one instance, students made a connection between what was contained in the article and information that was presented in their textbook.

In Why Reconstruction Matters, the author argued that if Reconstruction was a failed attempt to rebuild the South materially, socially, and politically, this failure is due to acts of terrorism and violence committed by those loyal to the former Confederate States of America. However, the textbook used at Valley High School alludes to the idea that Reconstruction was unsuccessful because of corruption and waste of newly installed Reconstruction governments. During a class period in which students were reading aloud portions of the text, a student pointed out this discrepancy, and Paul was able to facilitate a discussion on the topic during which the majority of students in the class contributed at least one remark. This discussion involved historical issues surrounding the end of Reconstruction, but students were also afforded the opportunity to critically examine written information from accepted sources. Paul found this exchange particularly useful because his students were confronted with the notion that the material in their textbook was, in part, simply an author’s interpretation of factual information. According to Paul,

Most of the time, I think kids just take what the textbook says at face value as information that doesn’t really need to be questioned. I guess teachers do that a lot too, I
know that I do. So it was a really good conversation to have with them that history can be interpreted in a lot of different ways and just because something is in the textbook doesn’t necessarily mean it’s the only interpretation. To me, getting them to understand that is really part of critical thinking.

This type of REACH influence over classroom instruction was seen to an even greater extent during completion of the last assignment.

On several occasions, it was observed that students had informal conversations concerning REACH, particularly before class began or while students were completing starter activities. In one instance, one student asked another if they had posted their REACH assignment to Edmodo; this led to a discussion about what search engines and sources each student used to find their chosen article. On another day, one student asked another about the topic she had chosen for the third REACH assignment. When the student replied that she was analyzing an article concerning the Baltimore riots, this led to a conversation about the culpability of the police in Freddie Gray’s death. In addition to these informal classroom exchanges, Paul formally addressed an issue that was brought up in the Edmodo postings.

As mentioned previously, the majority of articles chosen for analysis in the third REACH assignment dealt either directly or indirectly with the April 2015 Baltimore riots. Student responses tended to harshly critique police involvement in Baltimore and general police performance in the nation at large. Below are excerpts from several student responses posted to Edmodo.

Alex: Police are caring less about African American lives and refuse to give Freddie Gray the emergency help he needed while in custody and he died.

Jacob: The riots started because they haven’t given him [Freddie Gray] or his family justice for any of the police officer’s wrong doing.

Ava: There have been many deaths by white police officers that I feel could have been avoided in many ways. The article about the Chinese-American cop shooting and killing an African American shows how unequal the world is, because unlike the white officers
he is being charged with murder although it could have been an accident as the article says.

Michael: There are more and more deaths of everyone by cops, I feel that cops do let the authority of the uniform go to their heads. There are good & bad cops sadly the bad cop’s numbers are growing more and more.

Paul deemed it necessary to address these responses in class, “After reading a lot of posts in Edmodo about the police and the situation in Baltimore, I felt like it was really important that we talk about it in class.” When a lesson topic dealt with the Compromise of 1877, which ended Reconstruction, Paul addressed the REACH discussions and postings concerning Baltimore; Ferguson, Missouri; and police involvement. He facilitated a conversation in which he challenged students to articulate their viewpoints on these cases and issues. Elements of critical thinking, communication, and collaboration were present in this particular classroom discussion as students were urged to engage with one another in expressing a viewpoint while also considering the views of others. In the final interview, Paul referenced this classroom discussion when addressing 21st century skill acquisition,

During that discussion, the kids had to utilize several of the skills listed [from the list of P21’s 21st century skills, which Paul was provided for the interview] like creativity, critical thinking, problem solving, communication, collaboration. All of those elements had to be used by the students, and this was not the kind of discussion I had with my other classes. I tried to talk to them about Baltimore and Ferguson, but they just didn’t have enough knowledge about the incidents to have a meaningful discussion like the REACH class did. Also, if the class hadn’t done REACH, I don’t know that I would have attempted to even have a conversation about the police and Maryland in any of the classes.

In addition to evidence of communication, critical thinking, and collaboration, the data indicate that issues of technology instruction were addressed with REACH.

**Theme 2: Digital literacy development.** P21 identifies information literacy, media literacy, and ICT literacy as separate 21st century competencies; other researchers and organizations collectively group these literacies into the category of digital literacy (P21, 2011a;
Smith, 2014). P21 establishes that ICT literacy involves using technology for multiple purposes such as research, organization, evaluation, and communication (P2, 2011a). The organization maintains that media literacy includes the capability to critically analyze information presented in media sources, particularly those that are digitally distributed (P2, 2011a). P21 defined information literacy as the ability to find the information that an individual needs and to use that information in a creative and accurate manner in order to meet an individual’s needs (P21, 2011a). With these definitions guiding data analysis, the findings indicate that REACH students varied in their development of digital literacy and technology competencies.

All six focus group students were asked to individually describe the process they underwent in completing REACH assignments, including how they went about finding the article they used for the final REACH assignment. The explanation of this process revealed that the technology skills used for REACH were fairly basic for some students while others were exposed to new competencies. Only one of the students had used the social learning platform Edmodo before, but all focus group students reported that they had only minor difficulties, if any, in navigating the site, posting work, and responding to other students. When discussing how they found an article for assignment three, the focus group participants fell into two categories.

Four of the students, two high performers; an average performer; and a low performer, used a search engine style approach to locate an article. The other group, one average and one low REACH performer, directly accessed a site from one of those Paul mentioned in class as offering legitimate news items that could be used for the REACH project. Both of these students, James and Elizabeth, used The Washington Post site. Elizabeth reported that she “used either the first or second article she saw on the website.” While James stated,
I just Googled ‘Washington Post’ and picked the first site that came up. When I got to the page, there was an article about Baltimore that I knew could fit with Reconstruction, so I picked that one. I think I only went to one article, and that’s the one I used.

This process of accessing a news site was fairly straightforward and did not expose James or Elizabeth to much information that was tangential to their task of finding a REACH article. However, the process was more involved for those students who used news specific search engines in finding material for the third REACH assignment.

When Paul introduced the REACH project, he suggested that students use a news search engine in order to find material for the third REACH project. The Google News site was listed on the REACH instructions, but Paul also mentioned students could use search tools such as Rocket News and Yahoo! News. Three of the focus group students used Google News, and one used a Yahoo! News search to locate his chosen article. Matthew, a high performing REACH student, who used Google News, described his experience:

I know we talked in class about the 15th Amendment and voting rights, so when I was looking for the article [for the last REACH assignment], I typed in “voting rights” for my search. A bunch of random results came up about voting in other countries, and, I think, about how Congress would have to vote on a deal the President made with Iran over nuclear bombs or something. So, I changed my search to “voting rights in the United States,” and the results were more what I needed. I probably ended up looking at five or six articles that I didn’t use because it seemed like the sites weren’t really reliable, and I didn’t think Mr. [participating teacher] would let me use them. I also ended up watching a video on the CNN site about voting rights that helped me kind of know what was going on in the article I read. I picked an article about the anniversary of the [1965] Voting Rights Act.

Lucas, an average performing REACH student described a comparable process:

When I went to Google News, in the “Top Stories” section, there was a story on what was happening in Baltimore with the riots and stuff, and I picked a link that said “explore” or “explore deeply” or something like that, and a whole list of articles about the Freddie Gray and Ferguson case came up. I knew I could connect Reconstruction to that, so I looked through probably four or five articles. I couldn’t find an author on one of the articles, I think, so I didn’t use it.
When asked why he discarded the use of some links, Lucas replied,

Like Matthew said, one of the things [links followed] I picked was a video about what was going on; one was like a timeline, map thing of shootings of black people by police, and the other articles I didn’t use because I didn’t really understand what they were saying in the article, so I couldn’t summarize it and use the analysis sheet to write my post, and one of them didn’t have an author so I couldn’t put that in the Edmodo thing I had to post.

Those students who used other search engines described similar experiences in which they went to multiple news sources and news sites, viewed the information on those sites, and chose not to use the information for reasons such as non-written media, questions of the site’s legitimacy, and comprehension issues.

Both approaches that the two groups took in completing the final REACH assignment required the use of technology skills, information literacy, media literacy, and ICT literacy. However, the group that employed search engines to find an article for the third assignment was exposed to multiple information sources and media forms. This group of students was forced to make decisions regarding the reliability of the sources they chose and were tangentially exposed to different views and perspectives as a result of the process they employed to complete the REACH assignment. Not only were these students exposed to a wider range of information, they were able to remember and articulate pieces of that information days after the assignment was complete. The focus group students who simply picked the first or second article they came across were not as extensively exposed to elements of digital literacy.

**Theme 3: Lack of evidence of certain 21st century competencies.** P21 specifies that there are 19 skills that constitute essential 21st century competencies. As mentioned previously, the development and use of several of these skills was evident as students participated in the REACH project. However, there was no evidence that the following skills were used by students during REACH: productivity, accountability, and leadership. During classroom observations,
these skills were not once coded in the observation protocol as having been displayed by students, nor were they directly or indirectly discussed by interview participants. Additionally, there was not an opportunity to discern these skills at work during analysis of student documents. It can be argued that the skills of productivity, accountability, and leadership are all needed for students to complete any portion of the REACH project; however, there is no data to explicitly support that assertion. This may be a function of the research study design, or it may be that these skills are not addressed through the REACH program.

**Summary of research question 1.** The data revealed three themes concerning the first research question: development of communication, critical thinking, and collaboration competencies; digital literacy development; and a lack of evidence of certain 21st century skills. The participating teacher asserted that developing his students’ communication, critical thinking, and collaboration skills was a goal of his teaching practices and that he detected evidence that the REACH program fostered the use of these 21st century skills. Paul noticed improvement in the analytic ability of his REACH students to critically analyze written works as students progressed through the three REACH assignments. This improvement was aided by the use of effective collaboration and communication among students in both the Edmodo digital environment and in the face to face classroom setting. The participating teacher’s assessment was supported with analysis of student work and classroom observations. Students who seldom verbally participated in class were able to collaborate and communicate on academic matters much more extensively in Edmodo. Additionally, focus group students expressed interest in being able to carry on academically focused discussions via Edmodo. Furthermore, on several occasions, REACH-related work spurred in-class discussions that were held between and among students or were
initiated by the classroom teacher. These discussions illustrated that students were using elements of communication, critical thinking, and collaboration.

The second theme dealt with technology skills, information literacy, media literacy, and ICT literacy. Students involved in REACH developed these digital literacy skills to varying degrees depending on the process they undertook to complete the REACH assignments. Analysis of the focus group interview revealed that students who used news specific search engines to choose an article for the third REACH assignment had a greater opportunity to develop varied technology skills and build information, media, and ICT literacy. Students who went directly to a news site for the third assignment article limited their opportunity to develop and use these skills.

The final theme of research question one dealt with a lack of evidence of the development of productivity, accountability, and leadership skills. All of the other 21st century skills were detected as being addressed to varying degrees by the REACH program. However, student development or the potential development of productivity, accountability, and leadership was not evident during classroom observations, interviews, or in student produced documents.

Research Question 2

What impact did student participation in the digital REACH project have in the enhancement of content knowledge and understanding, including the ability to critically analyze connections between past historical events and present world conditions?

Theme 1: Direct/indirect influence of REACH on content knowledge. One of the themes that emerged from the three interviews with Paul was his perception that the REACH program enhanced his students’ content knowledge in both a direct and indirect manner. Paul chose the article “Why Reconstruction Matters” as the analysis piece for the first and second REACH assignments. Throughout the interviews, he stressed that there were several deciding
factors in choosing this article, but a major consideration was the extensive content material presented in *The New York Times* item. According to Paul,

> When I was picking an article for REACH, I wanted to choose one that would force them [the REACH class] to read through at least the basic steps of Reconstruction, and “Why Reconstruction Matters” did that; the article actually had a lot of content in it.

An analysis of the article reveals that the factual information presented by the author outlined much of the content that Paul covered in class and which eventually appeared on the Reconstruction unit test. Paul asserted that the direct engagement REACH students experienced with the content of the article improved their overall understanding and retention of material,

> Over the course of the two assignments, when we worked with “Why Reconstruction Matters,” the students really had to read and re-read the article to even attempt the assignments, and it was an active kind of reading that they had to do where they had to really think about what the author was saying. This way of dealing with the content of the article, which covered a lot of what we talked about in class, helped to cement some of the facts and big picture ideas of Reconstruction for the REACH students.

Not only did Paul observe a direct influence of REACH involvement on content understanding, he also indicated that REACH participation indirectly improved content knowledge by engaging students to consider the long-term effects of Reconstruction.

> During the second interview, which took place after students had worked in Edmodo analyzing and critiquing the article “Why Reconstruction Matter,” Paul noted,

> I feel like students in my REACH class are developing a deeper understanding of the unit rather than just rote memorization because they are making a connection to what is happening in the U.S. today.

In the final interview, which was conducted after completion of the REACH project, Paul expanded on this sentiment. Paul stated,

> I feel like the kids who are doing REACH are just more interested in the topics we’re talking about in class, and that makes it a lot easier for them to really get the importance of Reconstruction to U.S. history. It also seems to make it easier for them to remember factual information, like what’s in the 13th, 14th, and 15th Amendments, and this is factual
stuff the kids have to be familiar with if they are going to actually understand how Reconstruction worked.

Due to this greater understanding of content material, Paul believed that his REACH students were better prepared for the unit test.

This perception of the classroom teacher is supported by test score analysis of the two participating classes. At the completion of the Reconstruction unit, the REACH participating class and the non-REACH participating class were given identical unit tests as a final formal assessment. The test was comprised of 20 multiple choice questions, 10 matching questions, and two extended response questions in which students were encouraged to answer in paragraph form. Paul noted that the multiple choice and matching questions were taken from a test bank designed to accompany the textbook used in his class; however, he formulated the extended response items in order to tailor these questions to what had been discussed in class. The mean test score of the class that completed REACH (mean score= 74.26) was higher than the non-REACH class (mean score= 71.38). An independent samples t-test was conducted to determine if this difference was statistically significant, and an analysis of the t-test results revealed that there was a significant difference in the mean unit test score of the two classes ($p= .43$). Additionally, students in the REACH class performed better on the extended response items than those who had not completed REACH.

**Theme 2: Student progression in content analysis sophistication.** A second theme dealing with content knowledge and understanding was the progression students made over the course of the REACH program in the development of sophisticated connections between past historical events and present world conditions. As was discussed earlier, for the first REACH assignment, students were required to analyze a teacher-selected article using an article analysis tool (see Appendix H). Paul scored student responses using a pre-established article analysis
assessment rubric. The article analysis tool attempted to focus students on critically analyzing the selected work while also guiding them to make a connection between historical content information and present day issues.

However, student performance on the first assignment was mediocre as evaluated by Paul using the assessment rubric. In his assessment of the first REACH assignment, no student scored in the “highly developed” category of responses, and the majority of students were categorized as giving either “intermediate” or “basic” level answers. According to Paul, “The analysis that a lot of students did on the article was pretty low level and basic. I honestly don’t think any of the kids gave answers that met the description for ‘highly developed.’” Table 4 details Paul’s assessment of the first REACH assignment using the analysis assessment rubric.

Table 4

<table>
<thead>
<tr>
<th>Response Category</th>
<th>Criteria</th>
<th>Percentage of Students who Scored in Specified Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Developed</td>
<td>Addresses the assignment/questions knowledgeably, articulately, and thoughtfully; specific information from the article is cited; response clearly proves that the material was comprehended and analyzed; response clearly demonstrates that the student understands how the material relates to the unit of study</td>
<td>0%</td>
</tr>
<tr>
<td>Advanced</td>
<td>Addresses the assignment/questions knowledgeably; specific information from the article is cited; response clearly proves that the material was comprehended</td>
<td>26.31%</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Addresses the assignment/questions knowledgeably with some content knowledge; very little specific information from the article is cited; response does not fully demonstrate that the article was read and/or comprehended</td>
<td>31.57%</td>
</tr>
<tr>
<td>Basic</td>
<td>Response does not adequately demonstrate that the article was read and/or comprehended; shows very little understanding of the material and/or topic</td>
<td>31.57%</td>
</tr>
<tr>
<td>No response</td>
<td>No response given by student</td>
<td>10.52%</td>
</tr>
</tbody>
</table>
Analysis of the documents for the first REACH assignment supports Paul’s conclusions and assessment.

Several knowledge/application questions on the article analysis sheet ask students to provide basic information about the article such as the title and topic of the article and where and when the article takes place (Tarman & Kuran, 2015). All students who returned an analysis sheet answered these questions correctly. However, when students were asked to address evaluation, synthesis, and analysis type questions concerning the content of the article and how it relates to the unit of study, the responses were weak (Tarman & Kuran, 2015). One of these questions required students to determine the type of reasoning used in the article (deductive, causal, inductive, or analogical), explain why that type of reasoning was used, and cite an example of how it was presented in the text. Of the students who returned the article analysis assignment, five students did not attempt to answer the question; six students simply listed a type of reasoning with no explanation for why they had made that decision, and no student cited an example of the reasoning type from the text.

Another higher order evaluation type item asked students to “find examples of misleading ideas/information and list and explain them.” The intention of the question was to force an analysis of any potential bias that the article’s author may have intentionally or unintentionally included in the work (Norris, Rolain-Jacobs, & Kirkham, 2008). Once again, five students did not attempt to answer the question, and the remaining students clearly misinterpreted the item. Several participants seemed to believe that the question was asking them to identify factually incorrect information from the article; however, this was not possible because there were no glaring factual inaccuracies in the article. This group of students gave responses such as, “The author says that the 14th and 15th Amendments remained a part of the United States
Constitution,” or “The 14th Amendment deals in part with citizenship.” Neither of these statements appropriately addresses the question or are factually incorrect. Another group of students assumed that the item was asking them to critique the structure of the article in order to determine its flow and readability. One of these students responded, “The article is scattered; it goes from the Civil War to South Africa and Australia.” Another answered,

I found the article pretty easy to read. It went through the history of the end of the Civil War and through Reconstruction and explained everything with a lot of detail. So for me it wasn’t misleading at all because I didn’t get confused by it.

These responses indicate that students who attempted the question did not understand what was being asked of them.

Paul gave several reasons why he believed students did not give more sophisticated analyses of the article; these included: his initial explanation of the assignment, student unfamiliarity with the analytic components of the assignment, and student absenteeism due to school activities. Paul introduced the REACH project on the first day that his class began studying the topic of Reconstruction. He first gave his class an overview of the program and its goals, and he then went through each of the REACH assignments and showed students the Edmodo learning platform using a data projector. During the approximately 15 minute REACH introduction, several students asked questions about how to use Edmodo, when the assignments were due, and what type of articles could be used for the third REACH assignment. However, no student asked a question about the first assignment which was to be completed in written “paper/pencil” form. At the end of the period, students were given approximately five minutes to begin reading “Why Reconstruction Matter” and begin completing the analysis sheet. Paul circulated around the room, but once again, no student asked a question related to the first assignment’s article analysis elements. Students were required to complete the remainder of the
analysis tool outside of class as a homework assignment. Paul hypothesized that during the REACH introduction,

The kids were only focused on using Edmodo and that part of REACH. The next time I do REACH, I’m going to go through each question on the sheet [used for the first REACH assignment] with the class as a whole. My students had never really done an assignment just like that before, and I probably needed to give them more direction about how to approach the analysis questions.

Student participants during the focus group interview supported Paul’s assessment. When asked what aspects of REACH they found most challenging, or of the least value, one student named the first assignment. Ella said, “The first thing [REACH assignment 1] we did with the questions was really hard. I didn’t really know how to answer some of them, like the part about who the article was written for and the false information stuff.” James agreed with this conclusion, “Yeah, I just didn’t understand some of the questions.”

In addition to a perceived lack of explanation concerning the first assignment Paul questioned his choice of the article that was used for analysis. He was satisfied with the quantity and quality of factual information the article presented; however, he was concerned that it was so fact laden that it left students with little analysis to conduct. Paul stated, “The article had a lot of good information, but it was tough to answer questions about misleading ideas or the types of reasoning used.” Finally, Paul was frustrated with the number of students absent on the day in which REACH was introduced. The Valley High School theater department held an in-school performance for which students were allowed to purchase tickets; five of the participating students in the REACH class were absent during the introduction of the project due to play attendance. When the students returned the next day Paul gave them an abbreviated overview of REACH at the beginning of the class period; however, he expressed that he felt this was an inadequate explanation of the program particularly for the first assignment. In spite of weak
student performance on the first assignment, there was marked improvement in student ability to make connections between past and present and general analysis skill on the second and third REACH assignments.

Students worked with the same article for the first and second parts of REACH, and Paul chose to use the article analysis assessment rubric to assign grades for assignment 2. The second REACH assignment essentially required students to expand on their analysis of “Why Reconstruction Matters” and post this in-depth critique to Edmodo in order to allow for discussion among students. According to Paul’s assessment using the REACH rubric, no student gave a response that was considered “highly developed” for the first part of REACH; however, six of nineteen students (31.5%) were assessed to have given “highly developed” responses for assignment two. Additionally, the majority of students gave responses that were either “advanced” or “highly developed” for the second REACH assignment. Table 5 details Paul’s assessment of the second REACH assignment using the analysis assessment rubric.
Paul attributed several factors to the improved content analysis students provided on the second assignment. After student work had been scored from the first REACH assignment, and before assignment two was due, Paul returned analysis sheets to students and discussed in class what was required to have received a “highly developed” score on the assignment. In particular, Paul focused on questions seven, eight, and ten from the article analysis sheet (see Appendix H). He felt that this review of the first assignment was important to students’ understanding of the REACH project in general, “Once I went through the analysis sheet with the class, they seemed to have a lot better idea of what to do with the articles and what they should get out of REACH.”
Additionally, Paul felt that students developed a better understanding of the article simply because they were exposed to a greater depth of content as the unit progressed. According to Paul,

The article goes into some details about Reconstruction that we didn’t cover in class until after the kids did the first assignment. I think it was easier for them to understand the article later in the unit because by then we had talked about details like the plans for Reconstruction and black codes and the Reconstruction Amendments.

Examination of student work from assignment two further indicates the progression students made to a more sophisticated article analysis including the ability of students to make connections between content information and present world conditions. Student responses to the second REACH assignment focused on a variety of issues that fit within several broad categories; these categories included physical rebuilding process of the Reconstruction era, factual retelling of the Reconstruction process, and treatment of African Americans during Reconstruction including the legacy of that era to civil rights issues. Several students were able to draw from Why Reconstruction Matters the logistical and economic difficulties of rebuilding the South in the aftermath of the Civil War. These students then made connections between the reconstruction process of the 1860s and 1870s and the need for similar rebuilding efforts in a more modern era. One student wrote,

The article really shows how complicated it was to put the South back together after the Civil War, this made me think about where reconstruction has to take place today. In some places in the Middle East those countries have to rebuild after wars and violence, and different ideas about politics and religion make it complicated to do that. One big example in America would be the world trade center.

While some students focused on the physical rebuilding process, others drew from the article information concerning the political battles involved with the Reconstruction process.
Students who chose this theme for their article analysis presented a great deal of factual information in their Edmodo postings. One student’s post singled out Lincoln’s role in Reconstruction,

The Reconstruction period was important to President Lincoln and those who thought that slavery was wrong. President Lincoln felt that the 13th Amendment would be justice for those people who were slaves, but it only made it harder for him to convince politicians of his plan for what to do after the Civil War. President Lincoln knew the U.S. had to be pieced back together so he came up with his plan for Reconstruction, but he was shot before the plan could be put into effect. Andrew Johnson was appointed President after Lincoln passed and his Reconstruction plan allowed black codes in the South. What do you think would have happened with Reconstruction if Lincoln wasn’t killed?

While Paul judged that these types of “summary style” answers were weak in making a connection between the causes and consequences of Reconstruction era policies, he did believe that these students’ content knowledge was improved because of their analysis approach. “Some of the students just kind of summarized the article; this wasn’t a great critique, but it built up their knowledge base of what we are studying in the unit.” The last broad category students focused upon dealt with civil rights issues in the aftermath of the Civil War.

One of the subjects discussed in Why Reconstruction Matters were the consequences of the perceived failure of American Reconstruction on civil rights issues in the U.S. and throughout the world. This theme dominated discussion posts for the second REACH assignment. One student wrote in Edmodo, “Reconstruction failing didn’t just affect the US, other places like South Africa used this as a reason to keep ‘nonwhite’ people from being involved in the government.” Another participant posted,

What really stuck out to me about Why Reconstruction Matters is how this part of American history was used in other countries. Eric Foner [the author of the article] talks about how reconstruction really wasn’t a failure in the United States, but some people in the public thought it was. Because reconstruction gave some rights to blacks in the United States other places like South Africa and Australia used the problems of reconstruction here to say that only whites could be in control of laws and in power.
Additionally, this topic was raised during an in class lecture. Paul was explaining the official end of American Reconstruction, and a student asked specifically about the discussion in Why Reconstruction Matters concerning the impact of this period on South African politics. Paul took the opportunity to discuss basic issues of racial segregation and apartheid in answering the student’s question. In general, Paul was pleased that students focused on civil rights issues for the second assignment,

One of the reasons that I picked Why Reconstruction Matters, besides that it was a good content article, was that it focused on the influence of Reconstruction in the long term, especially outside of the U.S. Really, I had never even considered that Reconstruction was important outside of American politics. And I guess that idea could be debatable, but to me that is kind of the point of this project.

Improved sophistication in article analysis was carried through to the final REACH assignment.

For the third part of REACH, students chose their own article to analyze. Five days before the assignment’s due date, Paul explained to the class what was expected from student responses. He stressed that students could use news pieces from any legitimate source and gave examples of major newspaper sites such as The New York Times and The Washington Post and also the online news source of Politico. Paul further explained that all responses for the assignment must be posted in Edmodo and that article analyses must make an explicit connection between what was being studied in class and the article that was chosen. Paul suggested that if students had trouble getting started on the assignment they use the article analysis tool from the first assignment to guide their work. Several students had logistical type questions concerning the required length of each post, due date, and writing format, such as posting bullet points as opposed to crafting paragraphs. The third REACH assignment was completed during the last part of the Reconstruction unit, and the presentation of new in-class content was completed during this period. The national context surrounding this time was that rioting broke out in Baltimore,
Maryland; as a result, this event was prevalent in news coverage, and many of the articles students chose for the third assignment revolved around issues related to the riots.

After assessing student responses on the final part of REACH, Paul was satisfied with the depth of analysis students provided. He determined that his students showed significant improvement in the ability to synthesize information from a given article with historical content in order to gain a deeper understanding of the material. As with the first two assignments, Paul used the article analysis assessment rubric when grading the third assignment, and in scoring student responses, Paul stressed that he was looking for students to prove that they had a grasp of the content material covered in class. “On the last part of REACH, we were getting close to the end of the unit, and I really wanted the kids to be able show me that they knew the details of Reconstruction.” Given this focus in the assessment process, the number of students who received a “highly developed” score remained unchanged from assignment two with six students scoring in this category; however, the number of students receiving “advanced” scores increased while only one student was assessed to have given a “basic” answer. Table 6 presents Paul’s assessment of the third REACH assignment, and Table 7 details a comparison of the assessment results from all three assignments.
### Table 6

**Article Analysis Assessment Rubric Results: REACH Assignment #3**

<table>
<thead>
<tr>
<th>Response Category</th>
<th>Criteria</th>
<th>Percentage of Students who Scored in Specified Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Developed</td>
<td>Addresses the assignment/questions knowledgeably, articulately, and thoughtfully; specific information from the article is cited; response clearly proves that the material was comprehended and analyzed; response clearly demonstrates that the student understands how the material relates to the unit of study</td>
<td>31.57%</td>
</tr>
<tr>
<td>Advanced</td>
<td>Addresses the assignment/questions knowledgeably; specific information from the article is cited; response clearly proves that the material was comprehended</td>
<td>31.57%</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Addresses the assignment/questions knowledgeably with some content knowledge; very little specific information from the article is cited; response does not fully demonstrate that the article was read and/or comprehended</td>
<td>26.31%</td>
</tr>
<tr>
<td>Basic</td>
<td>Response does not adequately demonstrate that the article was read and/or comprehended; shows very little understanding of the material and/or topic</td>
<td>5.26%</td>
</tr>
<tr>
<td>No response</td>
<td>No response given by student</td>
<td>5.26%</td>
</tr>
</tbody>
</table>

### Table 7

**Article Analysis Assessment Rubric Comparison Results**

<table>
<thead>
<tr>
<th>Response Category</th>
<th>Percentage of Students who Scored in Specified Category: Assignment 1</th>
<th>Percentage of Students who Scored in Specified Category: Assignment 2</th>
<th>Percentage of Students who Scored in Specified Category: Assignment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Developed</td>
<td>0%</td>
<td>31.57%</td>
<td>31.57%</td>
</tr>
<tr>
<td>Advanced</td>
<td>26.31%</td>
<td>26.31%</td>
<td>31.57%</td>
</tr>
<tr>
<td>Intermediate</td>
<td>31.57%</td>
<td>26.31%</td>
<td>26.31%</td>
</tr>
<tr>
<td>Basic</td>
<td>31.57%</td>
<td>15.78%</td>
<td>5.26%</td>
</tr>
<tr>
<td>No response</td>
<td>10.52%</td>
<td>0%</td>
<td>5.26%</td>
</tr>
</tbody>
</table>
Several factors contributed to improved student performance on the third REACH assignment. Focus group students indicated that the third assignment was the most valuable aspect of REACH because they found this part of the program gave them freedom to find articles that interested them as individuals. Ella, who was classified as a low performing REACH student, due to the quality of responses she produced on all three assignments, stated,

The best part of REACH was the last thing we did with finding our own article. I didn’t really understand that first one we read, so it was easier for me to find my own article and write about it.

Other focus group participants agreed with this assessment while Paul added that familiarity with REACH and working in Edmodo contributed to the solid analytical responses on assignment three.

By the time we got to the last part of REACH, I felt like the kids were comfortable working with Edmodo, and they knew how I wanted the article analysis to be done, but also, like I said with the second REACH [assignment], we had covered a lot of content by the third assignment, so the kids had a lot of information to draw from in relating the article they picked to the unit.

Responses from the focus group students support his assertion. When asked if they found it difficult to relate the content of the article they chose to the Reconstruction material discussed in class, the focus group indicated that they did not have difficulty. According to Abigail, a high performing REACH student,

It wasn’t hard to write about how Reconstruction stuff related to my article. My article was about the violence in Maryland which was really about racism, and we talked in class a lot about black codes and the 15th Amendment and stuff.

Another student agreed, “Yeah, my article was about wars in the Middle East, and it’s easy to relate that to having to rebuild America after the Civil War.” Therefore, the sources of data indicate that by completion of the third REACH assignment students reached a comfort level in integrating knowledge of historical study with present world conditions.
Theme 3: Adaptability and flexibility of REACH. Over the course of the REACH program, Paul found the project to be adaptable to the needs of his specific students. When describing the process he underwent to choose the REACH article for assignments one and two, this adaptability was evident:

This particular group of students in [the REACH participating class] has struggled all year to get the basics of the content down for each unit. So, when I was picking an article for REACH, I wanted to choose one that would force them to read through at least the basic steps of Reconstruction, and Why Reconstruction Matters did that. If it was one of my advanced classes doing REACH, I probably would have picked a different article.

When asked in the final interview if he would use REACH in the future, Paul again addressed the issue of adaptability, pointing out that the ability to choose material that could be tailored specifically to the content needs of a particular class was a benefit of the program,

I definitely plan on using REACH again next year. I really think the overall project made the kids more connected to the content in the unit, and the discussions we had in class that were started by postings in Edmodo were really valuable. Also, what really worked for me was the fact that I could go in a lot of different directions as far as the first two parts of the project depending on what the unit topic was and the skill level of the class. Before I started teaching, I always heard from teachers that each class is different, and you kind of have to plan on a class-by-class basis. This year, I have really found that to be true, and the REACH program allows for that difference.

While Paul found the adaptability of REACH valuable to him as a teacher, he also reported that the program offered a level of flexibility to students. He maintained that the third assignment of REACH allowed students the autonomy to find articles that fit their needs and interest level,

In my regular classes, there was a wide range of reading ability and just interest level in the course material. Some kids should probably be in advanced classes because they have the skill sets to be able to do that level of work; they can read and comprehend at a really high level. Others have a lot of trouble with basic reading comprehension. Some really like history and the content we talk about in class while others don’t care at all. So, with the REACH project, it was important that the kids got to choose what articles they would use [for the third assignment] and what topic the article would be about. They could pick complicated or easier to comprehend material depending on what they were comfortable
working with, and they got to choose an article that had the potential to be interesting to them.

This point about student article choice was supported by the varied topics students chose for the third REACH assignment. As mentioned previously, the majority of articles dealt with Baltimore, but six different issues were the topic of articles chosen for the final REACH assignment; these topics included: racial tension in America, voting rights, Middle Eastern conflict, immigration, party politics in the United States, and public education.

**Theme 4: Time issues regarding REACH.** When the initial REACH program was discontinued, time was one of the factors involved in its abandonment. The project absorbed class time during every unit of study and was time consuming to assess. However, the issue of using class time for the revised REACH program was not problematic during the study.

According to Paul,

> I feel like, over the course of the three weeks the kids were working on REACH, we didn’t spend that much time on the project in class. I had to take some time to introduce the project, and we went through the analysis sheet and had some discussions around what the kids were working on with REACH. But, all of those tasks directly involved the content we were studying in class, and I think it improved the kids’ understanding of the material, so I was completely comfortable with the amount of in-class time spent on the total project.

This assessment was supported by the classroom observations. During the 15 observations that took place, REACH related work, discussions, or explanations never exceeded more than half of the total class period. Additionally, the data revealed that students did not spend an excessive amount of time completing REACH assignments.

When focus group students were asked to estimate how much total time they spent on REACH, the consensus was that they expended approximately an hour of time total on the three assignments over the course of a three-week period. Paul considered this to be reasonable,
I learned early on this year that asking the kids to do too much outside of class doesn’t work, especially with the regular classes. If I give too much homework they just stop doing any of it, and it defeats the purpose. I understand where the kids are coming from, they have eight periods a day, and the workload can really start to add up. With REACH, the work was spread out over several weeks, and it didn’t really require that much time for them to get through it and still do solid work.

In fact, only one member of the focus group reported that any work on REACH was done outside of school. The other students completed the assignments in a variety of ways. According to Elizabeth, “I went to the library during PE on some days when we weren’t dressing out and did the REACH.” James and Matthew also reported completing REACH assignments in the library during their scheduled library assistant periods. The remaining focus group students, Lucas and Ella, worked on REACH using their smart phones. According to Lucas, “I did all of the parts of REACH on my phone during classes when I was finished with work or we had a sub.” If the consideration of class time for REACH was not a problem for study participants, assessment and preparation remained an issue for Paul.

The teacher-related time that was involved in locating articles and assessing student responses was a concern for Paul. When asked about any drawbacks that Paul experienced in using REACH he replied,

Probably the biggest drawback for me with REACH is the grading of the three assignments. This time with REACH, I only had 22 kids complete the assignments, so the amount of time it took to grade everything was really reasonable. But, this year I taught something like 131 students; to have to grade the three parts of REACH for all of those students would get to be a lot.

Additionally, Paul felt that the online nature of the Edmodo posts made it important to view student work in a timely manner,

With the kids posting in Edmodo where everyone else in the class can see what they’ve written, I thought it was really a necessity to look at the postings every afternoon just to make sure nothing inappropriate was posted. Nothing like that happened with the class this year; everyone was really respectful of each other, but I could see someone putting something that was inappropriate as a joke.
Paul was able to accomplish reading through the Edmodo posts on a daily basis by using his smartphone during the non-teaching portions of his day including during coaching activities, “I looked over the Edmodo posts on my phone during afternoon duty and also when the guys were shooting around before basketball workouts began.” In spite of these timing issues, Paul still asserted that he would use REACH in the future because of the value he saw to its content

development,

My REACH class understood more about Reconstruction than they otherwise would have because of using REACH, so that to me makes it worth using it on a regular basis even though the grading might be a lot. Next year I probably won’t use it on every unit especially when I have a project that already reinforces the content and takes a lot of time to grade. But, on units that students struggled to understand this year, I will most likely use REACH.

Additionally, Paul anticipated that over time the grading process would become less time consuming,

I found, that as I used the rubric for REACH and became familiar with how to implement the different scores consistently, I was able to grade students much more quickly. By the time I got to the third assignment, I was moving a lot more quickly than during assignment one. I think over the course of the school year using the rubric over and over again; it will get a lot faster to grade every student.

**Summary of research question 2.** The data revealed four themes concerning the second research question: direct and indirect influence of REACH on content knowledge, student progression in content analysis sophistication, adaptability and flexibility of REACH, and time issues regarding REACH. The REACH program had a direct and indirect influence on student enhancement of content knowledge and understanding. On the unit test given at the completion of the Reconstruction unit, the mean score of the REACH class was higher than that of the class that did not complete the REACH project, and an independent samples t-test revealed that the difference was statistically significant. Interview and document analysis data revealed that student engagement with the article “Why Reconstruction Matters” improved students’ overall
comprehension and retention of the subject matter material. In addition to this direct influence over content understanding, student participation in REACH fostered a greater interest in the topics covered in class, which indirectly influenced content knowledge enhancement.

The second theme dealt with student progression in content analysis sophistication. With each REACH assignment, students were better able to connect news articles to content material and offer well developed analyses and critiques of those articles. Scores from the article analysis assessment rubric progressively increased on the three REACH assignments with a higher percentage of students providing “highly developed” and “advanced” work on the last assignment than on the first or second assignments. Several factors contributed to this progression: familiarity with the analysis tool, teacher instruction, depth of in class content coverage, and increased student interest level with the third assignment.

The third theme of research question two was the adaptability and flexibility of REACH. The participating teacher found it valuable that REACH could be tailored to the content needs of specific classes. Paul chose an article that was heavy in content information for his REACH class because the students had struggled with retention of this type of material during the school year. Therefore, the REACH article was used as reinforcement for subject matter material. Additionally, it was constructive that students had the freedom in the third REACH assignment to choose an article that matched their specific interests and reading comprehension skill level. These factors of adaptability and flexibility led the participating teacher to assert that he would use REACH in the future.

The final theme of research question two dealt with time issues for the REACH project. Excessive student work time or in-class time was not devoted to the program; however, Paul expressed concern that the preparation and assessment involved with the REACH project would
be considerable if used with all of his classes. However, he determined that this would not be a
deterrent to using REACH in the future because he found the project to be a valuable content
development tool for students. Furthermore, Paul believed that the assessment process would be
accomplished more quickly in the future as he became familiar with the assessment rubric.
CHAPTER V:
DISCUSSION

Introduction

This case study examined the effects of the REACH program on 21st century competency acquisition and content knowledge development in one high school social studies class. Chapter V presents a general discussion of this case study and its findings. The chapter begins with a discussion of research questions one and two and focuses upon researcher observations and findings and challenges of the study. Discussion then shifts to the implications of this research which include the feasibility of integrating content instruction with skills based education, and the need for flexible and adaptable instructional programs at the high school level. The chapter concludes with the following recommendations for future research: expanded study of the REACH program using a larger sample of participants who work with REACH for a prolonged period of time, and the development of viable assessment plans for assessing 21st century skills acquisition.

Discussion of Research Question 1

Research Question 1

What can be learned from the digital REACH project concerning student acquisition of 21st century competencies?

The first research question dealt with student acquisition of 21st century competencies as a result of participation in the REACH program. As presented and summarized in Chapter IV, the findings of the study were that the development of communication, critical thinking,
collaboration, technology skills, information literacy, media literacy, and ICT literacy resulted from participation in the REACH program. However, the findings also revealed that there was a lack of evidence that the 21st century competencies of productivity, accountability, and leadership were directly addressed through REACH. While the data support these findings concerning the REACH program, more broadly, the study validates previous research concerning the difficulty of accurately assessing 21st century competencies in an educational setting (Soland, Hamilton, & Stecher, 2013; Stecher & Hamilton, 2014; Voogt et al., 2013). As was touched on in the literature review, a major source of this difficulty resulted from the ambiguity surrounding the conception of 21st century skills.

There is a significant base of research and literature that suggests the necessity of 21st century skill development as part of education in our modern world. However, researchers and practitioners have not yet reached a consensus on exactly what “21st century learning” means. According to Soland et al. (2013), “The term ‘21st century competencies’ means different things to different people, and descriptions of these competencies rarely match one another exactly” (p. 3). Furthermore, when specific competencies are included in disparate definitions of 21st century learning, a definition of the particular skills is not consistently agreed upon in the professional literature. For example, within this study, the development of critical thinking and collaboration as 21st century competencies emerged as a theme of REACH participation. However, there is not a consensus within the academic literature on the definition of these specific 21st skills. Often times, collaborative learning and cooperative learning are used interchangeably while other researchers define these terms as separate concepts (Resta & Laferrière, 2007). Collaboration has been defined in various ways depending on the researcher and the focus of the research. This concept has been called a “philosophy of interaction” (Resta & Laferrière, 2007, p. 66), a
“process of learning generated by small, interdependent groups of students” (Witney & Smallbone, 2011), and a demonstration of the ability to effectively work with others (P21a, 2011). If it cannot be determined if collaboration is a philosophy, process, or demonstration of a skill, it is difficult to assess student mastery of this competency.

Critical thinking also has multiple understandings within professional literature (Shaw, 2014; Weissberg, 2013). Some researchers define it as simply using reason to make decisions while others focus on the processes of evaluating, analyzing, and creating as the crucial elements of critical thinking (Howard, Tang, & Austin, 2015; Weissberg, 2013). Still, other researchers such as Paul and Elder (2014) argue that a concept such as critical thinking is so open-ended that “there is no way to [explain] it completely and inexhaustibly. There is no way to encompass it in a [simplified] definition” (p. 353). Given this ambiguity, it was necessary to settle on a specific organization’s list of 21st century skills, and for the purposes of this research, P21s compilation of 21st century competencies and their provided definitions was used in assessing the impact of REACH participation on the development of those skills (P21, 2011a). However, even after an understanding of what constituted 21st century skills was established, assessing student acquisition of those skills was challenging.

Stecher and Hamilton (2014) have asserted that accurately assessing student acquisition of 21st century competencies is much more difficult than assessing typical academic achievement in a subject matter area. Soland et al. (2013) argued that the outcomes associated with 21st century skills “are not widely measured and are not always amenable to the traditional assessment formats used for academic achievement tests” (p. 3). This assertion was reinforced when addressing the first research question. While a “paper and pencil” test with items such as multiple-choice questions could reasonably measure the influence of REACH on content
knowledge, it was not possible to determine the impact of REACH on 21st century skills using this traditional type of assessment. The entire experience of the student had to be taken into account in order to assess which 21st century competencies were being addressed and to what extent. Student responses to REACH assignments had to be analyzed in conjunction with their performance in class. Multiple forms of formal and informal assessment results had to be considered to gain a reliable understanding of REACH’s impact on 21st century competency development. After this process had taken place, it was determined that the 21st century skills of productivity, accountability, and leadership were not perceptibly addressed through REACH participation. However, it cannot necessarily be considered a shortcoming of the REACH project that these specific skills were not developed through student contact with the program.

The uncertain nature of what constitutes 21st century learning and 21st competencies points to the broadness of this concept in general; therefore, it may be unrealistic to attempt to address the whole spectrum of 21st century learning with any one program or set of activities (Soulé & Warrick, 2015; Stecher & Hamilton, 2014). Soulé and Warrick (2015) argued that individual classroom practices and instructional programs must be part of a schooling environment that promotes the broad concept of 21st century learning which in turn leads to effective acquisition of 21st century competencies. Furthermore, when Soulé and Warrick (2015) discussed these “learning environments that truly promote the kind of education in which 21st century students will thrive” (p. 183), the role of the classroom teacher is critical. This assertion concerning the importance of the classroom teacher was found to be true in this research study.

In analyzing the effects of REACH on the acquisition of 21st century competencies, it became evident that the role of the participating teacher was as important as the structure and design of the REACH program itself. During the time at which the research for this study was
conducted, Paul was coming to the end of his first year of teaching at Valley High School, and his second year as a high school teacher. As Paul’s colleague, I anecdotally recognized that throughout the school year he was interested in collaborating on instructional ideas and gaining new knowledge to improve his effectiveness in the classroom. During the 2014-2015 school year, he completed a master’s degree in secondary education, and he regularly sought out opportunities to work with colleagues in the development of new lessons and strategies. This general attitude of innovation translated to his participation in the REACH program. When he was approached with the possibility of using REACH with his students, he readily agreed, and throughout the three weeks during which assignments were completed, Paul adjusted his instruction to meet the needs of the students.

When Paul recognized that his students had done poorly on the first analysis assignment, he reviewed and deconstructed the analysis tool during class. When a student identified a discrepancy between the textbook interpretation of Reconstruction and the REACH article interpretation of Reconstruction, Paul readily addressed the issue and fostered a class discussion. During the conversation, he not only addressed content issues but also took the opportunity to discuss interpretations of what are considered to be historical facts and the importance of consuming information with a critical eye. Additionally, when Paul recognized that there was a need to discuss in class a topic that was addressed in student Edmodo posts, he incorporated that discussion into classroom activity. In general, Paul took the learning opportunities created by REACH to address a variety of 21st century skills that may not have been reinforced without his attention. The discussions he initiated and facilitated allowed students an organic opportunity to use critical thinking, creativity, communication, collaboration, and social and cross-cultural skills in the classroom. Therefore, his role was critical to the outcome and findings of the study; a
different teacher with a different philosophy of education may have partially altered the outcome of this case study. This conclusion is further supported when the participating teacher’s role in the development of digital literacy skills is examined.

According to Smith (2014), “Digital literacy combines critical thinking, cultural understanding, and creative production. The digitally literate individual is able to read and write in the digital realm; thus, full digital literacy includes critical consumption and production of digital material” (p. 191). The findings presented in Chapter IV revealed that the development of digital literacy was encouraged by participation in the REACH program particularly in students who used a news search engine type process to locate articles for the final REACH assignment. This type of online tool helped students develop aspects of digital literacy that deal with critically evaluating the credibility of information.

Research has suggested that when using digital literacy to evaluate the credibility of online material the work must contain certain elements which signal that it is valid as a legitimate news piece. These elements include the following: the information is published on a news/journalistic site as opposed to personal web pages, special interest sites, professional sites, or commercial sites; the author of the work is listed; a date of publication is included with the piece; and the information on the site is up to date (Metzger, 2007; Montecino, 1996). However, research by Metzger (2007) has shown that adult Internet users in the general population and even those enrolled in colleges and universities do not generally practice digitally literate habits by using these criteria to evaluate the information they consume. Fang-Ying, Yu-Hsin, and Meng-Jung (2013) supported Metzger’s research and have argued that their own “findings imply a lack of understanding of the information credibility [of online information] of adult learners”
In spite of this research, students who participated in the REACH assignments displayed high levels of digital literacy in the articles chosen for the final part of REACH.

Eighteen students completed the final REACH project while one student did not post an article or provide a response to the third assignment. Seventeen of those participating students chose articles from sites that could be classified as a news or journalistic site while one student picked her article from what is reasonably classified as a special interest site. Every participating student provided an author for the article they chose, and when each article was accessed by the researcher, the site contained specific publication dates and up to date information. All of this information is needed for an individual to verify the credibility of digital sources so that he or she can then analyze the work in a more sophisticated manner such as searching for bias, coverage, and accuracy (Metzger, 2007). Student ability to utilize digital literacy skills to locate credible online sources was aided by the structure of the third REACH assignment and by the participating teacher’s requirements for that assignment.

The guidelines given to students to complete the final REACH assignment created parameters that encouraged students to choose articles from legitimate and credible sources. Students were instructed in the REACH assignment directions to provide the title and author of their chosen article (see Appendix B). Additionally, they were given the address to the Google News search engine in order to search for possible sources. Given these instructions, students could not choose articles that were anonymously posted, and they were steered in the direction of legitimate news sources by being given access to a news search engine as opposed to a search tool that provided results from the entire Internet. However, even though the specifics of the third REACH assignment directed students to make digitally literate choices, there is not necessarily evidence that this skillset was internalized to be utilized by those students in the
Nevertheless, the project did provide Paul with a platform to instruct students in a set of competencies associated with digital literacy.

When Paul introduced the REACH project, he emphasized to the class that he would only allow them to use articles from what he called “real news sites” and cautioned students not to use articles from websites containing information that was of questionable accuracy. As mentioned in Chapter IV, Paul gave the examples of The New York Times and The Washington Post sites to illustrate what he considered legitimate sources from which to draw material. In this explanation of what was expected on the third REACH assignment, Paul never used the phrase digital literacy or any of its associated terms. However, through the process of discussing the assignment, Paul was essentially instructing his students in aspects of information literacy, media literacy, and ICT literacy.

Discussion of Research Question 2

Research Question 2

What impact did student participation in the digital REACH project have in the enhancement of content knowledge and understanding, including the ability to critically analyze connections between past historical events and present world conditions?

Before any in-depth discussion regarding the second research question takes place, the link between the two research questions should be noted. It became apparent in analyzing the data that were produced by this study that certain aspects of the first and second research questions overlapped, specifically the notion of having students make connections between the past and present. In requiring students to analyze present day news pieces and connect their relevance to historical events in order to enhance social studies content knowledge which is associated with research question two, it was necessary for students to utilize learning and
innovation skills, creativity, critical thinking, and problem solving. All of these skills P21 describes as 21st century competencies and are associated with research question one (P21, 2011a). In fact, Burkholder (2014) purposed that what has been termed “historical thinking,” in which students must use reflection and problem solving skills to make reasoned decisions about the past as it effects the present, is interwoven with the concept of critical thinking, a cornerstone skill of 21st century learning. Therefore, the use of REACH as a tool to enhance content knowledge was achieved through the utilization of certain 21st century competencies.

The second research question dealt with the impact of the REACH program on student social studies content knowledge with an emphasis on the ability of students to make connections between historical events and present world conditions. Chapter IV reported that REACH both directly and indirectly enhanced student content knowledge of the Reconstruction era. This finding was supported by test data, which compared the class that did not complete the REACH project to the REACH class. The findings also revealed that students in the REACH class made progressively more sophisticated connections between historical content and present world events as they completed the three REACH assignments. The data further showed that REACH offered adaptability and flexibility in content focus but that timing issues were a potential concern of using the REACH project.

As with the first research question, the participating teacher’s role was crucial in using REACH as a tool to enhance content knowledge. When Paul was approached about using the REACH project with his classes, he was enthusiastic about the potential that the program offered to incorporate literacy into his content instruction, but he also was hoping to choose an article that would garner discussions during class. When asked about articles he considered using for REACH but ultimately discarded, Paul reported that he considered one article that dealt with
voter identification and its possible effects on voter suppression. He envisioned that this article could be used for class discussion when he taught about the end of Reconstruction and the introduction of Jim Crow laws in the United States South. Another possibility that Paul looked into was the issue of unionization of automobile manufacturing plants in the modern day American South, which he planned on relating to the post-Civil War attempt to create a manufacturing economy in the South. However, he ultimately discarded these and several other articles that he believed would be more “interesting and engaging” for the students in favor of a piece that was content heavy. Ultimately, Paul was not entirely pleased with his choice and stated that Why Reconstruction Matters was not “the most exciting article out there.”

Nevertheless, Paul felt it necessary to privilege historical content knowledge instruction over material that was more applicable to present world conditions. While this decision speaks to the adaptability of the REACH program, it also suggests that the article choice for the first two REACH assignments may impact the influence of REACH on content knowledge acquisition. The question should be considered, if Paul had chosen an article that was devoid of information concerning Reconstruction, would students have had the opportunity to build content knowledge through their interaction with REACH? The findings in Chapter IV revealed that REACH indirectly impacted content knowledge acquisition by creating interest in the subject matter, but would this indirect influence alone have impacted assessment results on the final unit test? Further investigation of the effect of article choice on content acquisition is needed; however, a reasonable implementation suggestion regarding REACH use in the classroom is to choose a news piece for the first and second assignments that is used for content reinforcement purposes. The last assignment allows students the freedom to choose a wide variety of topics that may or may not be directly related to the historical content of the unit under study. This structuring of
the REACH program allows teachers to directly address the teaching of content, particularly with students who may struggle with content retention, while also promoting 21st century skill building.

**Implications**

The REACH program was created by two high school history teachers who saw the need for an instructional strategy that would connect the historic topics studied in class with current situations taking place in the world. The program evolved to include digital components with the expanded goals of teaching 21st century skills and reinforcing content knowledge. The findings of this study indicate that REACH has the potential to achieve those outcomes and several implications can be drawn from these findings.

A study of the professional literature pertaining to the 21st century skills movement reveals that there is a strain of research/thought that argues against classroom focus on skills acquisition at the expense of content knowledge (Burkholder, 2014; Ravitch, 2010). Burkholder (2014) contended that “there are skeptics of any approach [to teaching] that somehow appears to sideline content” (p. 554). Willingham has argued that “factual knowledge must precede skill” (as cited in Burkholder, 2014, p. 554) development in his defense of a school curriculum that places emphasis upon content knowledge. This view is contrasted by skills advocates such as the P21 organization who argue that content acquisition and skills acquisition can and should take place simultaneously in high school courses (P21, 2011a). The findings of this case study indicate that it is feasible to build 21st century competencies while students are pursuing a deeper understanding of content knowledge.

The REACH program was valuable as an instructional tool to improve social studies content knowledge while at the same time exposing students to 21st century skills. The manner in
which Paul conducted the REACH program did not privilege skill acquisition over content instruction. In fact, Paul made it clear that his primary objective with the REACH program was to improve his students’ ability to understand history. However, due to his instructional approach and the structure of the REACH program, students utilized the skills of leadership, responsibility, creativity, critical thinking, problem solving, communication, collaboration, and digital literacy while engaging with historical content. Even though the findings of this study support the existing research that suggests the viability of integrated content and skills instruction, this study also illustrated the necessity of providing teachers with instructional tools adaptable to the particulars of their student population.

One of the themes woven throughout the data sources for this study was the flexibility of the REACH program in order to meet the participating teacher’s needs. When given an instructional tool that was malleable to the needs of his class, Paul was able to use that tool in achieving the curricular goals he was tasked with meeting. According to Shulman (1987), this kind of teaching adaptability and flexibility is necessary for effective instruction; and instructional resources that allow for flexibility are valuable educational assets. Wilson (2012) argues that teachers are professionals who should be allowed to “make appropriate judgements in the changing and often unique, circumstances that occur in …different classrooms” (p. 5). When teachers are given access to appropriate resources and allowed to make professional judgements as to how those resources should be utilized, they have the greatest potential to produce positive student learning outcomes (Lin, 2014).

**Recommendations for Future Research**

There are several recommendations for further research which may address in greater depth the findings and limitations of this study. One of these recommendations includes an
expanded research study of the REACH program in which a larger sample of participants is included. Additionally, the REACH program needs to be studied for a longer duration of time to assess its long-term impact on student development of 21\textsuperscript{st} century competencies and content knowledge understanding. Lastly, the study revealed the difficulty in accurately assessing 21\textsuperscript{st} century skills; a comprehensive plan to assess the student mastery of these competencies is an area of much needed research.

One of the limitations of this study was its small-scale size and scope. The limited number of participants and specificity of the research site restricts its generalizability to other school contexts. Future researchers may study the use of the REACH program on a wider sample of students in school settings that differ from that of Valley High School. Additionally, due to the fact that research for this study was only conducted over a three-week period of time, there was no opportunity to assess any lasting impact of REACH participation on 21\textsuperscript{st} century competency development. Further research may utilize longitudinal studies in order to evaluate the long-term impact of REACH.

Another potential area for future research deals with defining and assessing 21\textsuperscript{st} century competencies. As was discussed earlier in this chapter, the challenges of assessing the abstract concepts associated with 21\textsuperscript{st} century competencies was made apparent during the data collection and analysis phases of this study. A body of research exists, and is still growing, which suggests that high school students must acquire 21\textsuperscript{st} century skills to be personally, socially, and economically comfortable in their post-secondary endeavors. However, there is little consensus on how to feasibly judge if students are acquiring and mastering these skills while in the high school setting. Research is needed to develop viable assessment plans for assessing 21\textsuperscript{st} century skills acquisition.
Conclusion

This case study sought to determine what could be learned from the teacher-created program REACH concerning student acquisition of 21st century competencies and content knowledge enhancement. The study found that the REACH program offers students the opportunity to build certain 21st century skills such as digital literacy (technology skills, information literacy, media literacy, and ICT literacy), communication, critical thinking, and collaborative skills. However, there was no evidence that the REACH program caused students to utilize or develop the 21st century competencies of productivity, accountability, and leadership. Additionally, the research findings revealed that REACH participation enhanced student content knowledge as compared to a similar class who did not complete REACH assignments. This enhancement took place in both direct and indirect ways, and the adaptability and flexibility of REACH allowed the participating teacher to use the program in the manner he judged most academically productive for his students.
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APPENDICES
Appendix A

Original REACH Project Instructions
REACH

Reading Educational Articles for the Comprehension of History

✓ For each unit of study, you will be required to read and analyze one article. The entire class will be reading and analyzing the same article.

✓ As you read the article, you must complete an “Article Analysis” sheet. (see handout)

✓ On the due date, students will be randomly chosen to orally answer questions from the sheet. Every student will have the opportunity to orally answer at least one question during the grading period.

✓ Student responses will be graded using a rubric with scores ranging from zero to four. (see rubric)

✓ On the due date, articles will also be turned in and graded for written responses.

✓ Any question from any article may also appear on the six weeks/final exam.
Appendix B

Revised REACH Project Instructions
Reading Educational Articles for the Comprehension of History

For the REACH project, you will use Edmodo to read, analyze, and discuss current articles that relate to the history you are studying in class.

First, Log-in to Edmodo (see handout for detailed instructions):
• Go to edmodo.com
• Select the “Student” tab once you get to the Edmodo homepage.
• Type the group code you will be given in the “Enter Student Code or Parent Code” space.
• Enter your first and last name, username (make your username: FirstnameLastnameREACH), and pick a password you will remember.
• Students DO NOT need to enter an email address.
• After you have filled out all of the boxes (except “Email”) click “Sign Up for Free.”
• Assignments 2 and 3 for this project are found under the REACH group on your Edmodo page. (The REACH group link is on the left hand side of the page.)

➢ Assignment 1- You will use an article analysis sheet to analyze a pre-selected current events article that deals with a topic you are studying in class. The entire class will be reading and analyzing the same article for this assignment. The analysis sheet will be turned in during class.

Edmodo Assignments
➢ Assignment 2-
• Part 1- Your second assignment is to reflect on the article you were given to read and write a post which your classmates (and your teacher) will read in Edmodo. You may simply give your opinion of the article, discuss a topic in the article that you find interesting, or relate the article to the
material you have discussed in class. YOUR POST MUST BE AT LEAST 100 WORDS LONG. TO COMPLETE THIS PART OF THE ASSIGNMENT, CREATE AN ORIGINAL POST IN EDMODO BY CHOOSING THE "REPLY" LINK. THE TOP LINE OF YOUR POST MUST READ: "ASSIGNMENT 2 POST"

- Part 2- After you have posted your own 100 word response, you must REPLY TO A CLASSMATE'S POST. YOUR RESPONSE MUST BE AT LEAST 100 WORDS LONG.

Assignment 3- For this assignment you must:

- Find a current events article that relates to our unit of study by searching Google News (https://news.google.com).
- Create an original post in Edmodo by choosing the "post" link. In the post, give the title and author of your chosen article; give the web address of the article; WRITE A SUMMARY OF THE ARTICLE (AT LEAST 100 WORDS); AND FINISH THE POST BY ASKING A THOUGHT PROVOKING QUESTION ABOUT THE SUMMARY/ARTICLE. THE TOP LINE OF YOUR POST MUST READ: "ASSIGNMENT 3 POST."
- You must also respond to one classmate's question using at least 100 words.

****IMPORTANT****
NO STUDENT MAY USE THE SAME ARTICLE FOR ASSIGNMENT 3, SO BEFORE YOU CHOOSE AN ARTICLE CHECK THE POSTINGS OF CLASSMATES TO MAKE SURE IT HAS NOT ALREADY BEEN USED. THE FIRST STUDENT TO POST USING THE ARTICLE WILL GET CREDIT FOR THE ARTICLE.
Edmodo Login Instructions

**Step 1:** Go to the Edmodo site at [https://www.edmodo.com](https://www.edmodo.com)

**Step 2:** Log-in to Edmodo in the “Enter Student or Parent Code” space. Use the code ______ in the “Enter Student or Parent Code” space.

**Step 3:** After entering the REACH code you will see a screen that asks you to create an Edmodo account. Fill in every box on the screen except for the email section (first name, last name, username: should be your firstnamelastnameREACH, password, confirm password). Then click “Enter Classroom.”

- For the user name use your first name and last name and then add REACH to the end of it. Your user name should look like this: JohnSmithREACH.
- **DO NOT ENTER AN EMAIL ADDRESS.**
- **DO NOT FORGET YOUR PASSWORD OR USER NAME! YOU WILL NEED THEM THROUGHOUT THE PROJECT.**

**Step 4:** You should now see a screen that looks like the one to the right; click on the “REACH” link under “Groups” on the left hand side of the screen to find assignments for the REACH project.
Appendix C

Observation Protocol
Observation Protocol

<table>
<thead>
<tr>
<th>Date:</th>
<th>Descriptive Notes</th>
<th>Reflective Notes</th>
<th>Specific Instances of 21st Century Skills Displayed</th>
<th>After Observation Reflective Notes</th>
</tr>
</thead>
</table>

Observation protocol adapted from:
Appendix D

Teacher Interview Protocols and Questions
Interview Protocol: Teacher Interviews 1 + 2 (During REACH)

Interviewer:

Interviewee:

Time of Interview:

Date:

Location:

**Guiding Questions**

1. What is your overall impression of the REACH project thus far?

2. How are the students responding to the project? (Prompt: Do they seem engaged/not engaged in the article analysis activities and postings?) (Lane, 2014; Racatham & Chen, 2013)

3. Have there been any technical, behavioral, or access issues with student use of Edmodo? (Krutka, Bergman, Flores, Mason, & Jack, 2014; Racatham & Chen, 2013)

4. What is your professional assessment of the quality of responses students have provided on the REACH assignments? (Note: Assignment 1, Assignment 2, and Assignment 3 are different.) (Lane, 2014)

5. What is your professional impression of the REACH project thus far as a tool to build content knowledge and understanding? (Sheldrake & Watkin, 2013)

6. Have you perceived any differences in classroom discussion between the class who is completing the REACH project and the class who is not participating in REACH? (Gaughan, 2014)

7. Have you discerned the use of 21st century skills through student participation in the project? (Note: Explain in detail what 21st century skills encompass. Skills include: flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, leadership and responsibility, creativity and innovation, critical thinking and problem solving, communication and collaboration, information, media and technology skills information literacy, media literacy, ICT literacy.) (P21, 2011; Trilling & Fadel, 2009)
8. Have you noticed a change in student engagement regarding content material as a result of participation in the REACH project? Do they ask questions in class that relate REACH article readings to content material? (Gaughan, 2014; Krutka et al., 2014; Racatham & Chen, 2013)

Interview Protocol: Final Teacher Interview (Post REACH)

Interviewer:

Interviewee:

Time of Interview:

Date:

Location:

Guiding Questions
1. Are you aware of the term 21st century skills? As an educator what is your perception of this concept? (Donovan, Green, & Mason, 2014)

2. Beyond social studies content knowledge, what skills, if any, do you believe are necessary for your students to succeed in higher education or the work place? (Donovan et al., 2014; Kereluik, Mishra, Fahnoe, & Terry, 2013; Hodge & Lear, 2011; Trilling & Fadel, 2009)

3. What types of assignments, activities, and lessons do you employ to promote these specific skills? (Donovan et al., 2014; Kereluik et al., 2013)

4. Before using the REACH program, did you use student centered technology in teaching United States History I: Beginnings to the Industrial Revolution? Please describe any instructional practices in which you utilized technology. (Kotrlik & Redmann, 2009; Shiveley & VanFossen, 2009)

5. Did your students conduct any online research before they participated in the REACH project? (McDuffie & Slavit, 2002; Wills, 2004)

6. What is your overall impression of the completed REACH project?

7. How did the students respond to the complete project? (Prompt: Do they seem engaged/not engaged in the article analysis activities and postings?) (Lane, 2014; Ractham & Chen, 2013)

8. Were there any technical, behavioral, or access issues with student use of Edmodo? (Krutka, Bergman, Flores, Mason, & Jack, 2014; Ractham & Chen, 2013)
9. What is your professional assessment of the quality of responses students have provided on the REACH assignments? (Note: Assignment 1, Assignment 2, and Assignment 3 are different.) (Lane, 2014)

10. What is your professional impression of the REACH project as a tool to build content knowledge and understanding? (Sheldrake & Watkin, 2013)

11. Did you perceive any differences in classroom discussion between the class who completed the REACH project and the class who did not participate in REACH? (Gaughan, 2014)

12. Did you discern the use of 21st century skills through student participation in the project? (P21, 2011; Trilling & Fadel, 2009)

13. Did you notice a change in student engagement regarding content material as a result of participation in the REACH project? Did they ask questions in class that relate REACH article readings to content material? (Gaughan, 2014; Krutka et al., 2014; Racatham & Chen, 2013)

14. Will you use the REACH project again? Why or why not?

Appendix E

Focus Group Interview Protocol and Questions
Interview Protocol: Student Focus Group Interview (Post REACH)

Interviewer:

Interviewees:

Time of Interview:

Date:

Location:

Guiding Questions
1. What types of technology have you used in your history class or other classes before participating in REACH? (Kotrlik & Redmann, 2009; Shiveley & VanFossen, 2009)

2. How confident were you using Edmodo to complete the REACH assignments? Did you have any technical problems or problems navigating the Edmodo system? (Yau & Cheng, 2012)

3. To what extent did the assignments help you better understand what you were studying in class? (Kvavik, Caruso, & Morgan, 2004)

4. To what extent did the project help you communicate and collaborate with your classmates? (Kvavik, Caruso, & Morgan, 2004)

5. Describe your research process for finding an article to use for the third REACH assignment. (Coiro & Dobler, 2007)

6. What, if any, aspects of the REACH project did you find valuable?

7. What, if any, aspects of the REACH project did you find of little or no value?

8. How would you describe your overall experience with the REACH project? (Kvavik, Caruso, & Morgan, 2004)

Appendix F

Consent and Assent to Participate Forms
Dear Student:

I am from the University of Alabama. I am also a history teacher at [blank]. I am doing a study of how a project called Reading Educational Articles for the Comprehension of History (REACH) helps students to understand the link between history and what is happening in the world today. I am also studying how the project helps you develop skills like critical thinking, creativity, and communication. This study may help me to improve REACH, and I am asking you to participate.

Everybody in your class will complete the REACH assignments. If you decide to be in the study, I will look at the work you turn in for the project. Also, I will visit your class during the REACH project to observe and take notes on how you use the information during your history class. Lastly, you may be asked to do a short interview about your experience with the REACH project.

I will not tell anyone outside the study what you or any other particular person said in the classes or in the interview. I will not show anyone outside the study the work you completed on the REACH project. My involvement will not affect your grade on the project. At the end of the project, I will write a report on the study but no one will be able to recognize that you participated.

You are a volunteer and you may choose not to participate if you do want to. I do not think there are any risks or harm to you in this study, but if you start the study and decide you don’t want to continue, just let me know.

If you have questions, you can talk to me in room [blank] or email me at [blank]. If you have questions or concerns about your rights in a research study, please contact Ms. Tanta Myles. She is the University of Alabama Research Compliance Officer. Her number is (205) 348-8461.

If you agree to be in this study, please sign your name on this letter below. You can have a copy of the letter to keep.

Thank you,

Ms. Peirano
Investigator

___________________________________________________  _______
Your Name                          Date

___________________________________________________  _______
Person Obtaining Assent            Date

Please check YES or NO in the provided box to indicate if you agree (“yes” box) or do not agree (“no” box) to allow observations to be audio recorded. Audio recordings are optional and are not required for participation.

YES                          NO
[ ]                          [ ]

Please check YES or NO in the provided box to indicate if you agree (“yes” box) or do not agree (“no” box) to allow interviews to be audio recorded. Audio recordings are optional and are not required for participation.

YES                          NO
[ ]                          [ ]
The University of Alabama
Consent to Participate in Research
Parent/Guardian Consent Form

You are asked to allow your child to take part in a research study by Ann-Marie Peirano. Ms. Peirano is a doctoral candidate at the University of Alabama. She is also a teacher at [ ].

Purpose of the Study
As part of your child’s history class he/she will work on a project called Reading Educational Articles for the Comprehension of History (REACH). The purpose of the project is to help students make connections between what is happening in today’s world and the history that is being studied in class.

All students will complete the REACH project. This form simply gives the researcher permission to analyze your child’s work in the project. The form also gives the researcher permission to analyze your child’s test grade upon completion of the unit. Lastly, the form allows the researcher to observe and record how your child uses information and skills gained from the REACH project during his or her history class. Your child will not be personally identified when the study is written.

Procedures
If you allow your child to participate in this study, the following will take place:
- The researcher will collect and analyze your child’s work on the REACH project.
- The researcher will analyze your child’s unit test score.
- The researcher will observe your child’s history class for the duration of the REACH project. Notes will be taken during the observation.

Participation and Withdrawal
Your child’s participation in this research study is VOLUNTARY. You are free to remove them from the study at any time.

If you do not want your child to participate in the study he/she will still complete the REACH assignments. REACH completion is part of the grade for his/her history class. However, the researcher will not use or access any information from your child’s assignments or collect any observational data on your child.

Benefits
Your child may complete REACH again in another history class. The information gained from the study will be used to improve the REACH project in the future.

Risks and Discomforts
There are no risks related to this study. Your child’s grade on the project or in the course will not be affected by agreeing to participate in the study.
Compensation
No compensation will be provided.

Privacy and Confidentiality
All written data will be kept in a secured location. All digital information will be stored on password protected devices/services. Your child will not be personally identified in the study.

Contact Information for the Research
If you have any questions about the research, please contact:

Ann-Marie Peirano
e-mail:
phone:

Dr. Margaret Rice
e-mail:

If you have questions about your child’s rights as a person in a research study, call Ms. Tanta Myles. She is the Research Compliance Officer of the University of Alabama. Her number is 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website. The website is found at http://osp.ua.edu/site/PRCO_Welcome.html. The address for the Research Compliance office is participantoutreach@bama.ua.edu.
Signature of Research Participant and Guardian
I have read this form, and I understand the information provided above. I have been given an opportunity to ask questions. All of my questions have been answered to my satisfaction.

Parent/Guardian Signature
By signing this form, I AGREE or DO NOT AGREE (please circle your choice) to allow my child to participate in this research study.

Please check YES or NO in the provided box to indicate if you agree (“yes” box) or do not agree (“no” box) to allow observations to be audio recorded. Audio recordings are optional and are not required for participation.

YES  NO

___________________________________________
Child’s Name

___________________________________________  _________________________
Parent/Guardian 1 Signature  Date

___________________________________________  _________________________
Parent/Guardian 2 Signature  Date

Researcher Signature
Via this consent form, I have explained the research to the participants and participant guardians. I have answered all of his or her questions. I believe that he or she understands the information described in this document. I believe that he or she freely consents to allow participation.

___________________________________________  _________________________
Researcher Signature  Date
You are asked to allow your child to take part in a research study by Ann-Marie Peirano. Ms. Peirano is a doctoral candidate at the University of Alabama. She is also a teacher at [Missing information].

**Purpose of the Study**
As part of your child’s history class he/she will work on a project called Reading Educational Articles for the Comprehension of History (REACH). The purpose of the project is to help students make connections between what is happening in today’s world and the history that is being studied in class.

All students will complete the REACH project. This form simply gives the researcher permission to interview your child at the completion of the project. The purpose of the interview is to get your child’s feedback on his/her experience with REACH. Your child will not be personally identified when the study is written.

**Procedures**
If you consent to allow your child to participate in this study, the following information is relevant:
- After your child completes the REACH project, the researcher will interview your child as part of a small group. The interview will only concern his/her participation in the class REACH assignment.
- The researcher will NOT individually interview your child.
- Your child will be interviewed at [Missing information].
- Your child will NOT be personally identified in the research or case study reporting.
- Your child’s responses during the interview will not impact his or her grade on the REACH project or in his or her social studies class.

**Participation and Withdrawal**
Your child’s participation in this research study is VOLUNTARY. You are free to remove them from the study at any time.

If you do not want your child to participate in the interview portion of the study, he/she will still complete the REACH assignments. REACH completion is part of the grade for his/her history class. However, the researcher will not interview your child.

**Benefits**
Your child may complete REACH again in another history class. The information gained from the study will be used to improve the REACH project in the future.
**Risks and Discomforts**
There are no risks related to this study. Your child’s grade on the project or in the course will not be affected by agreeing to participate in the study.

**Compensation**
No compensation will be provided.

**Privacy and Confidentiality**
All written data will be kept in a secured location. All digital information will be stored on password protected devices/services. Your child will not be personally identified in the study.

**Contact Information for the Research**
If you have any questions about the research, please contact:

Ann-Marie Peirano  
email:  
phone:

Dr. Margaret Rice  
email:

If you have questions about your child’s rights as a person in a research study, call Ms. Tanta Myles. She is the Research Compliance Officer of the University of Alabama. Her number is 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website. The website is found at http://osp.ua.edu/site/PRCO_Welcome.html. The address for the Research Compliance office is participantoutreach@bama.ua.edu.
Signature of Research Participant and Guardian
I have read this form, and I understand the information provided above. I have been given an opportunity to ask questions. All of my questions have been answered to my satisfaction.

Parent/Guardian Signature
By signing this form, I AGREE or DO NOT AGREE (please circle your choice) to allow my child to participate in this research study.

Please check YES or NO in the provided box to indicate if you agree (“yes” box) or do not agree (“no” box) to allow the interview to be audio recorded. Audio recordings are optional and are not required for participation.

YES  NO

___________________________________________
Child’s Name

___________________________________________
Parent/Guardian 1 Signature                      Date

___________________________________________
Parent/Guardian 2 Signature                      Date

Researcher Signature
Via this consent form, I have explained the research to the participants and participant guardians. I have answered all of his or her questions. I believe that he or she understands the information described in this document. I believe that he or she freely consents to allow participation.

___________________________________________
Researcher Signature                      Date
You are asked to participate in a research study by Ann-Marie Peirano. Ms. Peirano is a doctoral candidate at the University of Alabama. She is also a teacher at . Your participation in this study is entirely voluntary. Please read the information below. Ask questions about anything you do not understand before deciding whether or not to participate.

Purpose of the Study
The researcher has designed an educational program called Reading Educational Articles for the Comprehension of History (REACH). The purpose of the project is to help students make connections between what is happening in our present world and the history that is being studied in class. Additionally, the REACH program is designed to improve research, critical thinking, and communication skills. The purpose of the study is to investigate how effective REACH is in accomplishing these purposes.

Procedures
If you consent to participate in this study, the following will take place:
- You will incorporate the REACH program in one of your United States History I: Beginnings to the Industrial Revolution classes.
- The researcher will collect and analyze students’ work that deals with the REACH project.
- The researcher will analyze student test scores from one unit of study to determine the impact of the REACH project on those scores. The researcher will also conduct statistical analysis of the test scores of a class that completed the REACH project compared to the test scores of a class that did not complete the REACH project.
- The researcher will observe your social studies class during the time in which the REACH project is taking place. Approximately 10-15 observations will take place for 45 minutes each observation.
- The researcher will interview you three times regarding the REACH project. The first interview will take place after the students have completed the first assignment of REACH. The second interview will take place after completion of the second assignment. The final interview will be more extensive and will be conducted after the completion of the REACH project. The first two interviews will take approximately 30 minutes. The last interview will be approximately 45 minutes to 1 hour long.

Participation and Withdrawal
Your participation in this research study is entirely VOLUNTARY. You are free to stop participation at any time.

Benefits
The potential benefits of this research study involve gaining an understanding of the effectiveness of the REACH program.
Risks and Discomforts
There are no risks associated with this study.

Compensation
No compensation will be provided.

Privacy and Confidentiality
All written data will be kept in a secured location. All digital information will be stored on password protected devices/services. You will not be personally identified in the study.

Contact Information for the Research
If you have any questions about the research, please contact:

Ann-Marie Peirano
email:
phone:

Dr. Margaret Rice
email:

If you have questions about your rights as a person in a research study, call Ms. Tanta Myles. She is the Research Compliance Officer of the University of Alabama. Her number is 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website. The website is found at http://osp.ua.edu/site/PRCO_Welcome.html. The address for the Research Compliance office is participantoutreach@bama.ua.edu.

(Next page for signatures)
Signature of Research Participant
I have read this form. I understand the information provided above. I have been given an opportunity to ask questions. All of my questions have been answered to my satisfaction.

By signing this form, I AGREE or DO NOT AGREE (please circle your choice) to participate in this research study.

Please check YES or NO in the provided box to indicate if you agree (“yes” box) or do not agree (“no” box) to allow the interviews to be audio recorded. Audio recordings are optional and are not required for participation.

YES   NO

Please check YES or NO in the provided box to indicate if you agree (“yes” box) or do not agree (“no” box) to allow the observations to be audio recorded. Audio recordings are optional and are not required for participation.

YES   NO

___________________________________________
Participant’s Name

___________________________________________
Participant’s Signature       Date

Researcher Signature
Via this consent form, I have explained the research to the participant. I have answered all of his questions. I believe that he understands the information described in this document. I believe that he freely consents to allow participation.

___________________________________________
Researcher Signature       Date
Appendix G

Institutional Review Board Approval
April 8, 2015

Ann-Marie Peirano
ELPTS
College of Education
Box 870302

Re: IRB # 15-OR-105, “A Case Study of 21st Century Skill Acquisition Through the use of the REACH Project”

Dear Ms. Peirano:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your application will expire on April 6, 2016. If your research will continue beyond this date, please complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, please complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent and assent forms.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,

Carpentato T. Myles, MSM, CIMP
Director & Research Compliance Officer
Office for Research Compliance
The University of Alabama
Appendix H

Article Analysis Tool
REACH ARTICLE ANALYSIS

1. Title of the article:______________________________________________________________

2. Who or what is the article regarding?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

3. Where does the article take place?
___________________________________________________________________________
___________________________________________________________________________

4. When does the article take place?
___________________________________________________________________________

5. Why was the article written? What was the purpose of the article?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

6. What evidence in the document helps you know why it was written? Give quotes from the document.
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
7. Does the author rely primarily on:
   - deductive reasoning (from general principle to specific conclusion-major premise, minor premise, conclusion)
   - causal reasoning (if, then)
   - inductive reasoning (from examples to a general conclusion)
   - analogical reasoning (reasoning by comparison)

   Explain your choice and cite an example of the inductive, analogical, deductive and/or causal reasoning you found in the article.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

8. Find examples of misleading ideas/information and list and explain them.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

9. Write a question to the author that is left unanswered by the document.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

10. How does the article relate to the unit of study?

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
Appendix I

“Why Reconstruction Matters” Article
(Used for 1st and 2nd REACH Assignments)
Why Reconstruction Matters
(edited/excerpts)
by Eric Foner; March 28, 2015; The New York Times

THE surrender of Confederate Gen. Robert E. Lee at Appomattox Court House, 150 years ago next month, effectively ended the Civil War. Americans will probably devote little attention to remembering Reconstruction, the time period that followed the Civil War. This is unfortunate, for if any historical period deserves the label “relevant,” it is Reconstruction.

Issues that affect American politics today — access to citizenship and voting rights, the powers of the national and state governments, the relationship between political and economic democracy, the proper response to terrorism — all of these are Reconstruction questions.

Reconstruction began in December 1863, when Abraham Lincoln announced a plan to establish governments in the South loyal to the Union. Lincoln granted forgiveness to most Confederates so long as they accepted the abolition of slavery, but said nothing about rights for freed blacks. Lincoln did not live to preside over Reconstruction. Instead, President Johnson set up new Southern governments controlled by ex-Confederates. They quickly enacted the Black Codes, laws that severely limited the freed people’s rights and sought, through vagrancy regulations, to force them back to work on the plantations. But these measures caused protests among blacks, and convinced Northerners that the white South was trying to restore slavery in all but name.

There followed a political battle, the struggle between Johnson and the Republican majority in Congress. Over Johnson’s veto, Congress enacted one of the most important laws in American history, the Civil Rights Act of 1866. It declared the citizenship of everyone born in the United States, regardless of race (except Indians, still considered members of tribal sovereignties). This principle, birthright citizenship, is increasingly rare in today’s world and deeply contested in our own contemporary politics, because it applies to the American-born children of undocumented immigrants.

Soon after, Congress incorporated birthright citizenship and legal equality into the Constitution via the 14th Amendment. In recent decades, the courts have used this amendment to expand the legal rights of numerous groups — most recently, gay men and women. As the Republican editor George William Curtis wrote, the 14th Amendment changed a Constitution “for white men” to one “for mankind.”

In 1867 Congress passed the Reconstruction Acts. These empowered Southern black men to vote and temporarily prevented several thousand leading Confederates from voting or running for office. Soon after, the 15th Amendment extended black male suffrage [voting rights] to the entire nation. But the failure to respond to the former slaves’ desire for land left most former slaves with no choice but to work for their former owners. It was not economic dependency, however, but widespread violence that made Reconstruction a partial failure. The Ku Klux Klan and other groups began a campaign of murder, assault and arson that can only be described as terrorism. Meanwhile, as the Northern Republican Party became more conservative, Reconstruction came to be seen as a misguided attempt to uplift the lower classes of society.

One by one, the Reconstruction governments fell. By the turn of the century [from the 1800s to the 1900s] a system of racial, political and economic inequality came into being across the South. At the same time, the supposed horrors of Reconstruction were invoked as far away as South Africa and Australia to show the need to exclude nonwhite people from political rights. This is why W.E.B. Du Bois, in his great 1935 work “Black Reconstruction in America,” saw the end of Reconstruction as a tragedy for democracy, not just in the United States but around the globe.

However, the 14th and 15th Amendments remain on the books. Decades later they would provide the legal basis for the civil rights revolution, sometimes called the Second Reconstruction. Citizenship, rights, democracy — as long as these remain contested, so will the necessity of an accurate understanding of Reconstruction. More than most historical subjects, how we think about this era truly matters, for it forces us to think about what kind of society we wish America to be.