

**COMPREHENDING HISTORICAL NARRATIVES: EXPLORING THE
RELATIONSHIP BETWEEN CAUSAL LANGUAGE AND STUDENTS' MENTAL
REPRESENTATIONS OF HISTORY**

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For over a century, history teachers throughout the United States have selected textbooks as the primary instructional material for their classrooms, while textbook authors and publishers have continuously produced a unified nation-state narrative that presents United States history as a series of objective historical facts for student memorization. Some researchers have suggested that teachers abandon the textbook in favor of primary sources. Yet, due in part to institutional, societal, and political pressures, classroom teachers continue to use these traditional texts. This study, a qualitative investigation of the causal and coherence structures in a sample textbook, a teacher's instructional explanation, and students' related summaries, seeks to determine the influence of a textbook passage and teacher's instructional explanation on students' mental representations of history: What causal and coherence structures are present in a sample US History textbook? To what extent do the causal and coherence structures of the textbook passage influence a teacher's mental representation of a historical event? To what extent do the causal and coherence structures of the textbook passage and the instructional explanation influence students' mental representations of a historical event? Using Kintsch's Construction-Integration Model and Halliday's Systemic Functional Linguistics, data from participants in a diverse setting east of Pittsburgh was analyzed, comparing the network chains and transitivity structures of the passage, the instructional explanation, and participants' summaries. Among this study's findings,

students include information common to both the textbook passage and the teacher's instructional explanation in their summaries. Furthermore, the causal constructions identified in students' summaries are similar to those found in either the textbook or the instructional explanation, not often both. These findings have implications for teaching with textbooks, disciplinary literacy instruction, and the implementation of critical, historical thinking in K-12 history classrooms.

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PREFACE

One of the many joys of completing any piece of scholarship is the opportunity to reflect upon the work and its relationship to other aspects of one's life. I have found that writing a dissertation is much like training for and running a marathon. At first, when you tell people that you are going to engage in either of these tasks, most people look at you like you're crazy. Along the way, you learn to seek-out people who will support and encourage your journey and learn to hold onto people who believed you could do it all along. Some of these people cheer you on; some push you when you want to stop. The most important people, however, are those that can do both. The latter are the special ones and the ones to whom I would like to offer my most sincere thanks.

I wish to thank David M. Berman for his mentorship not only throughout this dissertation process but also throughout my doctoral program. For his willingness to accept me into the program and advise me, to be open to my exploration of topics on the periphery of social studies education, and to encourage me to find my own voice as a scholar, he has my deepest respect. I hope to always remain "a teacher," like he continues to be. I also wish to thank Richard Donato for his undying curiosity and interest in guiding a history teacher through the delicacy of functional linguistics. To Linda Kucan, I would like to extend my sincere appreciation for having the most open of open-door policies; the time, resources, and encouragement that she provided

guided this study in innumerable ways. I also thank Marcus Rediker for his keen perception and penetrating questions, both of which added incredible value to this work.

I am also indebted to the Woodland Hills School District, “Ms. Forest,” and all of the student participants in this study. It was a pleasure working with such a fine group of people. Ms. Forest provided tremendous insight into the state of history education and urban education. She is certainly a thoughtful, student-focused teacher. The students involved in this study were bright, motivated, and very generous with their time. I hope that they will continue their studies and become life-long learners. Each one has the potential to change the world.

For all of those who directly molded this study, there were those people whose friendship and love put a mark on this work in more ways than they will ever know. Thank you to Christina Bratt Paulston for her unwavering persistence and support. She is a teacher among teachers. Thank you to Karen M. Wieland for guiding me through my first steps as a doctoral student. Thank you to my other friends and colleagues who have been instrumental in constructing this dissertation as well: Virginia Hall, Kristin Davin, Rebecca Renshaw, Susanna Benko, April Mattix, Michelle Anderson, Natthapong Chanyoo, Jose David Herazo, Frank Troyen, Tamika Barrett, and Kathy Ramos. You all have inspired me and pushed me to make this study what it is today.

Thank you also to my family who has supported me throughout. To my mom who encouraged me to “Take that hill!” and provided me with many other words of encouragement, and to my sister and brother who were always ready to provide whatever support I needed, thank you! Finally, thank you to my wife for her love, strength, and consistently sound advice. Thank you for learning about these students with me and for sharing in this experience. An undertaking

such as this requires endurance not only from the individual who accepts the challenge but from those he loves as well. Thank you!

1.0 INTRODUCTION

History is a process of constructing, reconstructing, and interpreting past events, ideas, and institutions from surviving or inferential evidence in order to understand and make meaningful who and what we are today. The process involves dialogues with alternative voices from the past itself, with recorders of the past, and with present interpreters. The process also involves constructing coherent, powerful narratives that describe and interpret the events, as well as skillful analyses of quantitative and qualitative information, from a theoretical perspective.

(Leinhardt, Stainton, & Virji, 1994, p.86)

For the past two decades, many educational researchers have focused their studies on the process of historical thinking. As the quote above illustrates, these studies have identified an incredibly complex, iterative process that requires historians to make multiple connections to events across space and time, sometimes on scant evidence. These studies have also provided rich detail about how students can learn to think historically through research about how historians “do history” (e.g., Leinhardt, et al., 1994; Leinhardt & Young, 1996; Wineburg, 1998), how teachers teach these processes (e.g., Dutt-Doner, Cook-Cottone, & Allen, 2007; Fox, 2009; Vansledright, 1996; Wilson, 1988), and how students can enact them (e.g., Harouni, 2009; Kohlmeier, 2005; Maggioni, VanSledright, & Alexander, 2009; VanSledright, 2002). Concurrently, history teachers nation-wide have been encouraged by education researchers to limit their use of history textbooks during instruction in favor of primary sources, teaching students how to read and integrate information from various historical documents (e.g., Brophy & VanSledright, 1997;

Levstik & Barton, 2001; Loewen, 1995/2007). Using historical literacy skills such as “sourcing”, “close reading”, “contextualization”, and “corroboration” (Leinhardt, et al., 1994; Wineburg, 1998), students as young as 4th and 5th grade have demonstrated their abilities to engage in these historical thinking processes (VanSledright, 2002).

Despite successful demonstrations of students’ abilities to use historical thinking skills at the K-12 level, however, few teachers seem to have exclusively selected primary sources and historical thinking literacies for use in their history curricula (VanSledright, 1998). Rather, most teachers continue to use the history textbook during instruction, even though it has been criticized by educational theorists (e.g., Apple, 1986; Luke, 1988), reading researchers (e.g., Beck, McKeown, & Gromoll, 1989), educational linguists (e.g., Coffin, 2006b), and social studies researchers (e.g., Lowenthal, 1998; VanSledright, 2002) as “neo-conservative, incoherent, linguistically complex heritage.” The textbook remains one of the most influential instructional materials in the history classroom (Nokes, 2010), second only to teacher instruction (Wineburg, 2001).

Unfortunately, the last two decades have not produced much scholarship explaining how students comprehend textbook information. Following the impact of the cognitive revolution on education research in the late 1970s and early 1980s, many researchers disregarded the premises of Piagetian developmental theory and began studying how students could be taught to think critically within the disciplines that comprise the social studies, namely history (Wineburg, 2001). As a result, there is little research in the field of social studies education about the literacies that K-12 history students need in order to access the textbook from which much of their instruction comes. This study attempts to address this topic by examining the influences of

a history textbook and a teacher's instructional explanation on the content students learn and how they learn to express it.

In order to adequately address this topic, the pervasive and recurrent selection of textbooks by K-12 history teachers is contextualized within the history of history education. As illustrated by the studies cited above, selecting the textbook as a primary instructional material is not supported by much of the current educational research on K-12 history instruction. This separation between research and practice is a reflection of the historical purpose textbooks fulfill in the K-12 history curriculum, the development of patriotic citizens.

1.1 UNUM DESPITE PLURIBUS

History textbooks are so historically connected to K-12 history instruction that they are often described in the singular: the textbook. Indeed, the similarities between individual adults' memories of "their" history textbooks suggest that one textbook is very similar to another. Although adults might not be able to recall all of the information presented within these texts, they often remember the distinctive weight, pictures, and activities that have been a hallmark of history textbook instruction for over a century. Even the cadence and language used by textbook authors is distinctive, "textbook language" (Schleppegrell, 2004). Textbooks often guide and inform K-12 history curricula as the authoritative source of our national history, a view many students, parents, and school personnel accept (Epstein, 1994; FitzGerald, 1979). These memories of learning "the" history of the United States belie the historical conflict involved in textbook production. The information presented in history textbooks is far from univocal, even though the language of these texts suggests otherwise.

Conflicts over textbooks are quite often public, adding to the nostalgia for the textbooks of “simpler times”. For example, on May 21, 2010, the Texas State Board of Education (TSBoE) voted to pass proposed changes to the Texas social studies curriculum. Changes to the state’s history standards included, but were not limited to, removing Thomas Jefferson from a world history standard about the Enlightenment and deleting Archbishop Oscar Romero from discussions on equal rights (Zamora, et al., 2010). According to Don McLeroy, former head of the TSBoE, the changes to the state history standards balanced a curriculum originally informed by a “liberal” academia; “History has already been skewed,” he claimed, adding, “Academia is skewed too far to the left” (McKinley, 2010). Historians (e.g., Zamora, et al., 2010), educators (e.g., Merryfield, 2010), and media commentators (e.g., Brayton, 2010) decried these changes, charging that the changes produced an inaccurate historical narrative.

Beyond the specifics of this very public debate is a commentary on the history of the United States that has been shaped by the textbook narrative. Mr. McLeroy’s remarks suggest that, at one time, history was not skewed. Rather than “revising” history, he and the Board members were simply setting history right again; what was once destabilized would be stable once more.

Like McLeroy, commentators of other history standards debates have suggested that there was once a “standard narrative” (e.g., Hirsch, 1988; Ravitch & Finn, 1987; Schlesinger, 1991). Their claims mirror assumptions made by Francis FitzGerald (1979) in her bestselling description of the textbook publishing industry, *America Revised*. She explained how the social upheaval of the 1960s forced textbook publishers to react to the increasing demands of “revisionist historians.” In interviews, publishers reminisced about “the good ol’ days”: students reading their history textbook cover to cover, learning the lessons that helped them understand

why they should be proud to be an American, or so the story goes (Moreau, 2004). The commentators accepted these assumptions, and later added to this sense of nostalgia, finding that students no longer seemed to know much about history at all. If the results from the National Assessment of Educational Progress (NAEP), a nationally recognized test that includes an assessment of students' history knowledge, are any indication, this situation has not improved much since then (National Assessment Governing Board, 2006). Although nostalgic, their critiques were not baseless.

Worse than poor performance, historian Arthur Schlesinger, Jr. (1991) observed, the various historical narratives that emerged from the Culture Wars de-stabilized the national narrative. He argued that without a stabilized, consensual national narrative, the nation would break into factions, where disunity could create a national security and economic crisis. Such concerns turned into vicious arguments in the early 1990s, when historians Gary Nash and Charlotte Crabtree unveiled the National History Standards (Nash, Crabtree, & National Standards for History Taskforce, 1996) they had been hired to develop, in consultation with the public. In attempting to make the historical facts contained in the textbook more relevant for student learning, these standards focused on what students should be able to do with the knowledge they gained in history class (Nash, Crabtree, & Dunn, 1997; Nash, et al., 1996). The National History Standards was a document of process supported by content.

At first, it seemed that the new National History Standards would bring K-12 history instruction more inline with modern historical inquiry methods. Not since the first decades of the twentieth century had historians widely considered history to be an objective science. Historical objectivity, the “founding myth” of the historical profession (Novick, 1988, p. 133), had proven untenable following historical disputes during and after World War I. In these disputes,

historians realized that history is a reasoned interpretation of the facts; objectivity in history is a standard to which historians should strive but never expect to attain. By focusing on the historical process, then, Nash and his colleagues hoped to undercut the “objective,” unified textbook narrative in favor of a more disciplinary approach to teaching and doing history at the K-12 level.

Ignoring its emphasis on process, however, conservative critics of the National History Standards argued that the Standards were supported by the “wrong” content, repositioning their argument towards the importance of the traditional, unified narrative. A focus on “historical facts” kept these critics from having to engage in a more substantive discussion about historical epistemology. While railing against the National History Standards, Republican Senator Slade Gorton of Washington asked, what “is a more important part of our Nation’s history for our children to study – George Washington or Bart Simpson? Is it more important that they learn about Roseanne Arnold or how America defeated communism as the leader of the free world?” (Nash, et al., 1997, p.232). Even though the television characters of “Bart Simpson” and “Roseanne” were only identified in a suggested teaching activities section, not in the actual Standards, the “standards debate” raged around the inclusion and exclusion of “facts¹.” “Facts” that did not support an optimistic patriotism were summarily targeted. Although the standards would eventually be adopted by most states, the teaching activities were excised in concession;

¹ It is interesting that Gorton did not mention the shows to which *The Simpsons* and *Rosanne* were supposed to be compared in the teaching activities section. One can only assume that Gorton deemed it appropriate for students to learn about Archie Bunker (the bigoted lead character in *All in the Family*). This omission aptly punctuates the ideological slugfest of the history wars of the 1990s since Bunker was listed as a comparative character in the same suggested activity.

the simpler, pre-1960s narrative that FitzGerald (1979) contrasted to the “revisionist histories” dominated over a more critical approach to US History (Moreau, 2004).

While the History Wars were significant in the history of K-12 history education, they were not unique. The criticisms against the National History Standards are echoes of past criticisms against history curricula, codified in history textbooks (Moreau, 2004; Zimmerman, 2002). Indeed, an examination of past “history wars” illustrates why critical approaches to K-12 history instruction rarely gain wide, public support; history and K-12 history are not isomorphic. Whereas historians examine evidence to form interpretive arguments (Carr, 1961; VanSledright, 1998; Wineburg, 2001), textbook writers have but one argument to make – all citizens should value the nation-state (Apple, 2000; Lowenthal, 1998; Moreau, 2004; VanSledright, 1998).

Through its historical use in history classrooms, the textbook’s nation-state narrative became one way that citizens (and aspiring citizens) began to define themselves, although it was not an organic unity. Social, political, and economic divisions had to become subordinate to this grand narrative before it could become “national.” Such social engineering came from elites who foresaw the political and economic benefits of a unified people (O’Leary, 1999). A unified people can look beyond injustice and disparity to see the “common good.” The people, unified as a nation, are more willing to accept their role in society than they are to revolt against injustice. The stable US History narrative, created by a myth of consensus and unity (Apple, 2000), is one tool with which to bind Americans into a cohesive group.

“Emile Durkheim spoke of ‘the indispensable integrative and stabilizing functions of myth for any social organization: to insure solidarity, to guard against lawlessness and chaos’” (Novick, 1988, p.4). Even in a pluralistic society, some common sense of “we” legitimates the government and society-at-large. How a people defines itself has a direct impact on the features

of citizenship presented in their history curriculum, as well as what it means to be “patriotic” (FitzGerald, 1979; Nash, et al., 1997). For example, the Texas School Board’s decision to describe the United States as a Judeo-Christian constitutional-republic (Stutz, 2010) had implications for who might qualify as a “citizen” and what political stances individuals can morally support. What students are taught to believe about patriotism and citizenship, then, reflects the “national” conscience.

1.1.1 National Conscience

History textbooks are the codified versions of the national conscience, “We.” As a form of socialization, schools inculcate students with the values of the political, economic, and social systems supported in the narrative. Some of the earliest textbook writers were aware of the power of schooling on the national conscience. For example, Benjamin Rush, a signer of the Declaration of Independence, wrote, “Our schools of learning, by producing one general and uniform system of education, will render the mass of people more homogeneous and thereby fit them more easily for uniform and peaceable government” (Rudolph, 1965, p.11). Noah Webster agreed with Rush, finding no better unifying instruction than history (Moreau, 2004). Even from its beginnings, the history supported by Rush and Webster was political history; citizens were to be tied to their government. *Unum* was meant to supersede any notions of *pluribus* that might foment revolution. Consensus on the “facts” of (political) history was meant to facilitate the social control of citizens, even if true consensus on that history was a fiction.

The appearance of objective, fact-based history masks the ideological realities of the textbook and history education in general (Berman, 1993). By not conceding to alternate interpretations of “the facts” and restraining the scope of the narrative to the formation of the

government, textbooks avoid addressing historical debates that might cast a less optimistic tone to the narrative. Ginn and Company, the publisher of Harold Rugg's textbooks in the late 1930s, learned this lesson through critiques so vehement that they crippled an entire line of textbooks.

As a critic of the free market capitalism that, he suggested, brought about the Great Depression, Rugg wrote for social and economic change (Evans, 2004; Moreau, 2004). In addition to including this theme of "change" in his textbooks, he also wrote for teachers, arguing that they must "design a new system of education appropriate to a new social order; to do that they must also understand the major outlines of the problems involved in designing the new economic-social system itself" (Rugg, 1936, p. 225). Although his books met with great success just after the Great Depression, within a decade they became pariahs (Evans, 2004). The interpretation that the American nation might not have it "right" did not sit well with conservatives and industrialists, who labeled Rugg a communist and campaigned against his books (Hunt, 1941). By the mid-1940s, Rugg's books were no longer used in many of the largest school districts in the country (Moreau, 2004). The "fact" that the nation is great was non-negotiable. Later textbook publishers did not make such mistakes.

The draw of this narrative to control and stabilize the nation is so great that it has even largely determined the structure of the social studies as a school subject. When Progressive educators in the 1920s saw the need to educate the large immigrant population towards citizenship, the result was the development of "social studies." Drawing from and supported by the increasingly professionalized social science fields, social studies was intended to develop students' civic awareness through a study of society (Evans, 2004) rather than focus students' attention on observation and argument, the stated purpose for teaching history to that point (National Education Association, 1894). Yet, the result of the new social studies curriculum

produced more of the same history-based curriculum, as was illustrated in a study funded by the National Council for the Social Studies in 1924 (Evans, 2004); history education reigned as the foundation of social studies, leaving the other disciplines to fight for space as “elective classes” in the later years of the high school curriculum (Fallace, 2008; Nelson, 1980). The 1924 report on the state of social studies concluded that most teachers remained loyal to history textbooks, despite the development of the social studies as a field of study (Evans, 2004). Neither the social science groups nor the historians won victories for their respective disciplines with the advent of social studies. While social sciences such as psychology, sociology, and anthropology were marginalized (Berman, 1993), historians’ earlier suggestions to include multiple texts and primary sources (Committee of Seven, 1899) were largely dismissed in classroom practice (Evans, 2004). This trend continues today, especially in high school curricula. Social science classes within the social studies fight a zero-sum game, where US History and civics are required. Other “elective” social studies courses are left to fight for space on students’ course schedules as electives.

To be sure, there are a number of reasons why the national textbook narrative has been consistently taught in schools, despite calls by educators and disciplinary specialists for a more critical perspectives approach (VanSledright, 2002; Wineburg, 2001). First, teacher training has not consistently supported teachers’ knowledge of such a critical approach (Fenton, 1991). In addition, the structure of the education system limits teachers’ abilities to direct their time and attention to critical investigations (Cuban, 1993); curricula are packed with information students need to learn in order to meet national and state standards and teachers are required to address the standards in their lesson plans. Educators in the early and mid-twentieth century also adhered to Piaget’s theories, suggesting that children’s minds needed to be conditioned before they could

learn to think abstractly (Wadsworth, 1978). Under these circumstances, time spent on critical analysis was viewed as inefficient and unproductive.

While these obstacles to critical inquiry were, and continue to be, very real in classrooms across the country, time and change toward the end of the twentieth century illustrated that they were simply contextual variables to a root cause. Educational studies have demonstrated that students of all ages can think abstractly about history (e.g., VanSledright, 2002; Wineburg, 2001) and school administrators have taken an active role in increasing collaborative teacher planning time (DuFour, DuFour, & Eaker, 2008). Yet, teachers continue to teach the nation-state narrative (Nokes, 2010), indicating that it must be useful even to the non-dominant groups who are kept in the narrative's periphery.

1.1.2 Tokenism, Patriotism, and Incoherence

Indeed, non-dominant groups have fought over history textbooks well before, during, and after the “critical decade” of the 1960s (Moreau, 2004). Racial, religious, ethnic, and gender minorities all petitioned textbook companies to include representatives of their heritage into the national history. When these petitions did not work, some groups even published their own histories, most notably, African-Americans and Catholics (Moreau, 2004; Zimmerman, 2002). More frequently, however, textbook publishers appeased non-dominant groups by softening language against them and inserting vignettes that included members of their group into the narrative.

The included members of non-dominant groups became tokens of these groups' patriotic heritage. These tokens legitimized their status in society as citizens, even when the benefits of that citizenship were out of reach. For example, while Irish, German, and Polish immigrants

continued to be excluded from political power at the turn of the twentieth century, they still fought for the inclusion of their “heroes” into the story of the American Revolution (Moreau, 2004). Representation from such American Revolutionary heroes such as John Barry, Friedrich von Steuben, and Thaddeus Kosciusko provided these respective groups with enough recognition that they could support the generally pro-white, Anglo-Saxon Protestant textbooks. Groups such as these did not question the overall nation-state narrative because it still held the prospect of a better life for its members.

The acceptance of tokenism has produced a disjointed national narrative. The particularist histories of under-represented groups refuse to fit neatly into the national history, in part, because the nation has historically excluded their participation. As a result, these groups seem to “pop-up” rather than connect to the historical meta-narrative. Without a connection to the narrative’s larger themes, these tokens temporarily redirect the narrative, creating an incoherent text (Beck, et al., 1989) while members of non-dominant groups continue to lack agency within the narrative (Achugar & Schleppegrell, 2005). While the narrative plays on traditionalist models of political history, non-dominant groups are often portrayed as being “acted upon” rather than being actors. For these groups to become causal agents in the narrative, they need more than a simple, decontextualized reference in the text.

For example, some textbooks (Appleby, Brinkley, Broussard, McPherson, & Ritchie, 2008; Davidson & Castillo, 2000; Garcia, Ogle, Risinger, & Stevos, 2005) never mention why the above-named Barry, von Steuben, and Kosciusko came to America. The inclusion of their names supports the narrative in a patriotic sense, but not in developing a cohesive narrative. Similarly, the scope of the nation-state narrative truncates larger historical themes, such as the continued legacy of the Atlantic slave trade, by focusing primarily on events that occurred within

the borders of the United States. As historian Sidney W. Mintz noted, “A view that excludes the linkage between metropolis and colony by choosing one perspective and ignoring the other is necessarily incomplete” (1985, p. xvi). By not discussing the role of the colonies and, later, the United States in the larger Atlantic web and by keeping the narrative confined to the political borders and chronology of the United States, it is difficult for readers to follow larger historical trends.

Tokenism allows textbook authors and publishers to maintain the objective, patriotic narrative, while deferring to various political and social action groups. Such additional information produces a systemic incoherence when textbook authors are also limited by the developmental reading criteria determined by publishers (Armbruster & Anderson, 1988). Authors who must add new information about historical figures while not adding any new sentences or length to the text are forced to write in less than clear ways, fitting bits of information together to meet publishing constraints. Indeed, these constraints are so strict that copy-editors sometimes rewrite entire sections of text without the input of disciplinary specialists (Norton, 2005). Thus, not only does tokenism create incoherence within the narrative but it also creates incoherence at the level of text-structure. The cost of maintaining the patriotic narrative, then, is incoherence.

Such incoherence, along with critiques of the “historical” nature of the nation-state narrative (i.e., Loewen, 1995/2007; VanSledright, 1998), have emboldened social studies teachers and researchers to again attempt to shift the dialogue about K-12 history education from a focus on textbooks to a focus on teaching historical methods of inquiry. This new focus is known among educators as “historical thinking” (Wineburg, 2001). Based on the recent work of Peter Seixas (1996), history educators (e.g., Levesque, 2008; VanSledright, 2002) and cognitive

scientists (e.g., Wineburg, 2001) have theorized about and studied the educational implications of a pedagogy that focuses on the process of constructing history rather than the memorization of “the national story.” Such studies have largely ignored the pervasive use of textbooks throughout the country, thus neglecting research on how their use impacts student understanding and achievement.

1.2 STATEMENT OF THE PROBLEM

Despite efforts to integrate a historical thinking model of history education into traditional, textbook-driven history curriculum (VanSledright, 1998; Voss, 1998), many history teachers continue to teach the nation-state narrative (Nokes, 2010). Goals other than historical thinking, such as teaching district-regimented curricula that continue to focus on the stabilized nation-state narrative, guide many teachers’ curricular decisions and limit the time and energy teachers have to engage in such instruction (cf. Evans, 2004). Since history textbooks are frequently used in the K-12 history classroom (Nokes, 2010), exploring the ways in which students and teachers construct meaning from them may be a productive way to foster the initial use of historical thinking skills.

Such an exploration necessitates understanding how the language found in history textbooks influences the mental representations that students create through reading and instruction. Since textbooks are written in narrative form (Coffin, 2006a), the role of causality (what causes events to happen) is a key element to both the text (Coffin, 2004) and students’ mental representations [understanding(s)] of the text (Perfetti, Britt, & Georgi, 1995; Trabasso & Sperry, 1985). Likewise, since teachers’ instructional explanations of historical events described

in the text often take narrative form (Leinhardt, 1997), causality is an important aspect of such reformulations of the text. Causation is a common factor in how history is expressed (Carr, 1961), learned, and remembered (Perfetti, et al., 1995). Understanding the potential influence of the causal language found in textbooks on students' mental representations allows teachers the opportunity to question the language and strategically plan their instruction toward broader instructional goals, such as critical inquiry.

1.3 RESEARCH QUESTIONS

The present study was designed to investigate the potential influence of history textbooks on:

(a) a history teacher's mental representation of a historical event, as revealed in her summary of a textbook passage,

(b) students' mental representation of a historical event, as revealed in their summaries of a textbook passage, and

(c) students' mental representations of a historical event after exposure to both the textbook passage and their teacher's instructional explanation, as revealed in their summaries.

Using qualitative methodologies, this study describes the causal and coherence structures used in a history textbook passage and in the enactment of a teacher's instructional explanation. It also describes the mental representations that these two narrative sources may enable students to produce. In doing so, this study examines the influence of the causal and coherence structures found in a history textbook and an instructional explanation on students' mental representations of a historical event.

1.4 SIGNIFICANCE OF THE STUDY

Since history textbooks are important to instruction in many history classrooms, it is not surprising that a number of researchers have examined them. Researchers have explained their history (e.g., FitzGerald, 1979; Moreau, 2004; Zimmerman, 2002), their social impact (e.g., Apple, 1986; Luke, 1988), and the relationship that teachers (e.g., Nokes, 2010) and students (e.g., Epstein, 1994) have with them. The content of the textbooks has also been critiqued. Beck, McKeown and Gromoll (1989) described how history textbooks are incoherent while Loewen (1995/2007) demonstrated that some of the content is inaccurate. Even linguists have examined history textbooks, describing the complex, and at times, abstract language history students must master in order to be successful readers and writers of K-12 history (Coffin, 2006b; Schleppegrell & Achugar, 2003). A few studies have investigated the influence of the textbook on students' comprehension (e.g., Crawford & Carnine, 2001; Nokes, Dole, & Hacker, 2007) but not without significant changes in the typical classroom instruction. No studies to my knowledge have traced the content and language found in textbooks and instruction to students' mental representations of that history.

This study is needed because language is the cornerstone of the historical discipline and history instruction. Language informs history, expresses history, and is the means by which individuals judge history. Studying the influence of these modes of instruction on students' "historical language" helps to explain why students understand history as they do and how teachers may support student understanding that aligns with the broader goals of social studies education.

2.0 REVIEW OF RESEARCH

The purpose of this review of research is to place the object of this study, students' comprehension of history through exposure to a history textbook passage and an instructional explanation, within the related literature from which it has been drawn. Unfortunately, few researchers have studied this topic specifically; thus, this review focuses on literature regarding the language of history textbooks, text processing, and instructional explanations, which have cumulatively contributed an important body of work to understanding how students comprehend the nation-state narrative in an authentic instructional setting. The following review is divided into three main sections: (1) the instantiation of the nation-state narrative through language, (2) the processing of narrative texts, and (3) the instructional explanations teachers provide.

In contrast to Chapter One's "top-down" discussion about society's influence on the nation-state narrative, Section One of this review takes a "bottom-up" approach by examining the language used to construct history textbooks. Authors purposefully use language to convey specific meanings, particularly about the supremacy of the nation-state. An examination of the ways they use this language provides insight into how textbook narratives are constructed and the meanings readers are intended to comprehend.

"Language," as a research variable, is a broad topic. Indeed, social studies educators (e.g., VanSledright, 2002), reading educators (e.g., Beck, et al., 1989), critical theorists (e.g., Apple, 2000) and linguists (e.g., Schleppegrell, Achugar, & Oteiza, 2004) have all contributed to this

literature in various ways and from various perspectives. This study, however, depends on an analysis of language that is systemic. That is, in order for the conclusions of this review to be applicable to the text(s) examined in this study, the cited research needs to be grounded in a theory of language. Furthermore, such a theory needs to be able to explain the meanings authors intend to make, rather than explaining the syntax (form) of the language only. Thus, Section One will explore studies about history textbook language using a Systemic Functional Linguistics (SFL) framework (Halliday & Matthiessen, 2004). The section will begin with a brief explanation of the theory and explore how language is used to instantiate the nation-state narrative.

Section Two discusses studies about reader's comprehension of narratives. This section begins with a description of Kintsch's (1998) Construction-Integration Model because it is a widely used theory of comprehension supported by relevant research on textbook processing (e.g., Graesser, McNamara, & Louwerse, 2003; Perfetti, et al., 1995; Trabasso & Broek, 1985; Trabasso, Secco, & Broek, 1984; Trabasso & Wiley, 2005). Such relevant research is also explored, describing studies of how readers comprehend single and multiple narratives. These studies are drawn from reading education and social studies education, owing to the studies' psychological groundings.

As noted in Chapter One, history textbooks usually narrate a unified national history. Thus, comprehension studies that examine individual readers' recall of information from single narratives will be the primary focus of this section. However, students must also integrate information from other instructional sources, such as the teacher, necessitating an understanding of how students integrate multiple narrative texts into their mental representations of a historical

event. Thus, studies that include reader comprehension over more than one informational source will also be included in this section as well.

Section Three discusses research on instructional explanations related to textbook instruction. Although textbooks are the primary instructional resource chosen by many history teachers, they are rarely used without instructional support (Leinhardt, 1997). This section will examine studies of teachers' instructional explanations of narratives, the kind that teachers often provide to clarify, restate, support, or add to the textbook narrative.

Specifically, Section Three will compare and contrast teachers' instructional explanations with three other types of explanations: (1) common explanations, (2) disciplinary explanations, and (3) self- explanations. In doing so, the features of instructional explanations are made clear, illustrating the significance of instructional explanations during classroom instruction and their role within classroom discourse. In particular, the purpose of instructional explanations for demonstrating what content and disciplinary language should be used to narrate history is explored.

2.1 THE INSTANTINATION OF THE NATION-STATE NARRATIVE THROUGH LANGUAGE

When people use language, they make choices about what and how they are going to say things in order to convey their meaning. The choices an author makes in one instance of a text influences future choices within that text; these choices are systemic. The system of language brings order to the meanings that an author can convey and, thus, allows readers to follow the author's meaning throughout the text.

The deliberate choices that authors make align with the purpose(s) to which they are writing (e.g., the nation-state narrative). This functional use of language allows readers to determine the meaning(s) that authors make by limiting the infinite number of a text's possible meanings to an intended meaning. How language functions within a text influences how readers comprehend the text and whether the author's intended message is conveyed.

The systemic and functional attributes of language have enabled linguists to analyze history texts (specifically textbooks) in delicate detail and compare them across various contexts. By focusing on the meaning structures conveyed in and between clause structures, various texts can be compared. Developed by Halliday (2004), Systemic Functional Linguistics (SFL) is the theory on which these linguists have drawn.

2.1.1 SFL Investigations of Textbooks

In Chapter One, United States history textbooks were discussed as monolithic texts written for the singular purpose of instilling patriotism within their readers. Indeed, as a grand narrative, this generalization is true (Apple, 2000; Loewen, 1995/2007; Lowenthal, 1998; VanSledright, 1998). Analysis from an SFL perspective, however, finds that the language used to convey this nation-state narrative becomes increasingly more abstract and complex as the books' intended audiences get older (Coffin, 2004; Veel & Coffin, 1996), even if the purpose of the narrative does not change. Beyond instilling patriotic values, textbooks also educate students in the disciplinary discourses of K-12 history education (Schleppegrell, 2004), scaffolding students' language competency through increased interaction with complex linguistic forms, structures, and meanings (Veel & Coffin, 1996). Increased linguistic complexity makes the language of history increasingly abstract, allowing groups, institutions, and concepts to act as agents of social

experience (Martin, 1989). Students must develop their language skills to meet such conceptual complexity.

Supporting this developmental perspective on textbook language, Coffin (2006b) illustrated how history genres construe the past from concrete actors to abstract relationships. She argued that properly aligned history curricula teach students to function at this abstract level by the final years of their public education. In such curricula, students should be expected to read and write historical recounts and accounts by their middle school years, about the time that students begin their formal, direct history instruction (Beck, et al., 1989). Textbooks for middle and high school students in the United States seldom advance beyond historical recount and account, however (Fitzgerald, in revision; Schleppegrell, et al., 2004), making these two genres particularly relevant to this review.

Historical recounts tell the sequence of past events (Coffin, 2006b). In this genre, people, places, and events are linked temporally, often by conjunctions, adverbs and prepositional phrases. What separates this genre from literary narratives is the employment of generic and nonhuman actors. These nominalized participants are groups of individual actors, which allow authors to increase the size of their unit of analysis (Unsworth, 1999). For example, rather than discussing individual, free black persons such as Frederick Douglass, authors can nominalize these individuals and refer to them collectively as “freedmen.” Nominalization enables historical events to be compared across time and space (Schleppegrell, 2004).

Historical accounts build upon the nominalized complexity of historical recounts by adding causation to the discourse. Rather than recounting the past, historical accounts explain why events occurred. Thus, the nominalized, abstract groups discussed in the recount become agents of social experience (Martin, 1989). Temporal markers remain important in the transition

from recount to account, however (Coffin, 2006b), since historical accounts explain why events occur within the narrative.

To say that textbooks lead students developmentally through even these two genres is a little misleading, however. The shifts between authors' uses of recount and account are not neat or absolute. Indeed, there are some middle schools history textbooks that express causation more often than their high school counterparts (Fitzgerald, in revision; Schleppegrell, et al., 2004). It is well understood, though, that temporal links and causal markers are important features in history textbooks (Coffin, 2004; Eggins, Wignell, & Martin, 1993; Schleppegrell & Achugar, 2003; Schleppegrell, et al., 2004; Veel & Coffin, 1996) and that causation in particular is important to historical understanding (Carr, 1961; Coffin, 2004; Leinhardt, et al., 1994; Perfetti, et al., 1995). It is in comprehending causation in historical accounts that readers developmentally learn to read and write more complex narratives involving multiple causal factors and more abstract language with which such causation is related.

2.1.2 SFL Investigations of Causation

Not all history texts, textbooks included, use and/or express causation in the same way. Coffin (2006b), in her analysis of history textbook genres, posited that causation usually takes a linear form that is closely related to temporal markers when it is expressed in historical accounts. In other words, connectors such as *because*, *so*, and *thus* link events, people, and places in a single-cause sequence. In contrast, causation is not restricted to the linear form in more analytical history texts, such as the explaining genres. Such texts often discuss abstract concepts in multi-causal situations where one event does not always lead directly to one outcome. Such causal constructions, also referred to as *factorial constructions* (Noordman & Blijzer, 2000), are not

often expressed in narratives (Coffin, 2006b). Since the causes for the situations described in these texts are often myriad, linear causal expression is not always appropriate or possible.

Not only does the way that causation is expressed change with the form of writing, but so too does the type of causation. In her data, Coffin (2006b) found that the more a text uses causal conjunctions (*because, so, etc.*), the more *determining* the causal connection is. *Determining causation* becomes less apparent as the writing becomes more analytical in forms of the explaining and arguing genres. In other words, direct, linear causation is expressed more often in narrative-type forms of writing. As the writing becomes more sophisticated, causation becomes less direct². This indirectness may create problems for student comprehension of the text as less direct causal constructions could obfuscate contextual meaning. This issue has already received considerable attention in Beck, McKeown, and Gromoll's (1989) discussion of coherence and considerateness. Further studies with students are needed to confirm this assumption, however.

Williams et al. (2007) also addressed issues teachers face while teaching cause-effect relations. Their work, however, focused solely on elementary school students, rather than the secondary students addressed in much of the previous literature. Their findings are congruent with those reported by Noordman and Blijzer (2000). While the Williams et al. study did not go so far as to suggest that students learn the cause-effect conceptual order more readily than the effect-cause conceptual order, it is not hard to imagine this hypothesis being confirmed through a more extensive research study.

² Coffin uses the terms *enabling and determining* similarly to Mackie's (1965) and Hume and Lewis's (1973) use of *necessary and sufficient* conditions for cause-effect (Meyer, 2000, p. 13). In either case, the causation being explained is linear. When only one antecedent causes one consequence, the historical narrative is "determined" rather than interpreted.

2.1.3 Ways of Expressing Causation

As has been illustrated by the relationship between genre and pedagogy, the system of language textbook authors employ is meant to facilitate reader comprehension. Thus, explanatory elements such as *causation* are symptoms of the language system employed. As for causation, there is a relationship between concept density and the ways authors express causation. As Martin (2002) illustrated, highly abstract genres (e.g., historical arguments) contain more causal expressions within clausal structures; conversely, less abstract genres (e.g., historical biographies) contain causal markers that separate ideas at the sentence level.

2.1.3.1 Cohesion and causal expression

At the intra-sentence level, prepositions, prepositional phrases, and conjunctions can be used to explicitly express cohesion. Lexical markers such as *so*, *as a result*, and *because* cue the reader to a semantic (meaning) relationship between two sentences by using the lexicon. While all three of these examples can also be found at the inter-sentence level, English lexico-grammar allows authors a choice in parsing their arguments. Using them at the intra-sentence level allows the author to forefront the antecedent or consequent causal statement, making it more explicit for the reader by shifting the information to the theme position (Halliday & Hasan, 1976).

For example, one textbook reads, “In the fall of 1768, 1,000 British soldiers (known as redcoats for their bright red jackets) arrived in Boston under the command of General Thomas Gage. With their arrival, tension filled the streets of Boston” (Garcia, et al., 2005: 149). The propositional phrase “With their arrival” signals to the reader that the second sentence is tied to the first; it is cohesive. Semantically, the temporal relationship between the arrival of British troops and tensions in Boston indicates that the former enabled the latter. The authors could have

written the passage as “In the fall of 1768, 1,000 British soldiers... arrived in Boston... filling the streets of Boston with tension.” This construction, however, would suggest that the British troops actually *did* something to create the tension more than just arrive. It also would have put a lot of information into one sentence. By writing the text the way they did, the authors make it possible for the reader recognizes the circumstance of tension in Boston at the time (Eggins, 2004) – a theme that is important to the rest of the passage.

Authors may also choose not to use any of these explicit markers. Indeed, textbook authors often choose to employ asyndetic constructions as a means of expressing implicit causal connections. As Fitzgerald (in revision) noted, asyndetic constructions imply causation between two sentences, situated next to each other in the text, without the use of lexical markers. For example, in Appendix A, the authors wrote, “Instead, he retreated to Yorktown peninsula, a strip of land jutting into Chesapeake Bay. He felt confident that British ships could supply his army from the sea.” It is evident that there is an implied causal relationship; inserting *because* would make the causal relationship explicit. Interestingly, replacing the period with a semi-colon would make this causal relationship more explicit as well, although not as explicit as the use of *because*. Yet, the authors chose not to structure the text in either way, leaving an implied causal relationship³, referred to as an asyndetic construction.

In his study of four US History textbooks, Fitzgerald (in revision) found that asyndetic constructions express causation just as frequently as other lexical forms of causation used in intra- and inter-sentence constructions. He also argued that these constructions are used when

³ It should be noted that asyndetic constructions do not illustrate cause-effect. Since there is an implied relationship, it cannot be said that event ‘e’ caused result ‘r.’ Rather, a causal relationship is recognized between the two sentence with the knowledge that what is implicitly understood from the discourse is not necessarily the whole of the story and, thus, not *a* cause or *the* cause of the event.

authors narrate the internal processes of historical actors, marking these sentences by their lack of explicit causation. Like the example above, asyndetic constructions can be signaled by the selection of a mental process (e.g., “felt confident”) but also by modality⁴, verbal processes, or relational processes.

2.1.3.2 Inter-sentence Causation

Much of the SFL work on causation in history textbooks has focused on causal verbs, however (Achugar & Schleppegrell, 2005). Verbs are semantically complex and create action in the text (Pinker, 1994) and are, therefore, useful tools for authors to express causation between people and events. Indeed, causal verbs have been a productive area of research for Achugar and Schleppegrell (2005; 2003; 2004).

Causal verbs are, by nature, transitive; however, not all transitive verbs are causal. By taking a direct object, one noun can be said to have an effect on another. For example, in the “Boston” example above, *filled* is a transitive verb. It would have made no sense to write, “With their arrival, tension filled;” a direct object needs to be mentioned. *Filled*, however, is not a causal verb. As explained above, the prepositional phrase “With their arrival” indicates causation; however, the authors could have used verbs such as “forced,” “created,” “led to,” and “resulted in” to express causation. As Martin (2002) notes, doing so would increase the level of abstraction within the text, approximating historical arguments rather than recounts and accounts most relevant to this study.

⁴ Here, *modality* is identified as part of the experiential metafunction of language, rather than the interpersonal metafunction. Although modality certainly expresses an author’s interpretive tenor, in asyndetic constructions, modality also allows authors to reference historical actors’ mental processes, causally relating events in the text as well as in interpersonal relationships.

2.1.4 Summary

Examining the language used in history textbooks both systemically and functionally illustrates some of the various linguistic means authors use to convey history. Authors can choose to simplify language, making actors and processes explicit, or add complexity to their work by using complex nominal groups and implicit causation. Using Systemic Functional Linguistics (Halliday & Matthiessen, 2004) as a paradigm for analysis, researchers have demonstrated that K-12 history textbooks are typically written as historical recount and historical account and use various linguistic structures to express causation.

2.2 READERS' COMPREHENSION OF NARRATIVES

An author's intended use of language is only as important as a reader's comprehension of the text. Just as authors use language to convey meaning, so too do readers use language to comprehend meaning; the latter is a matter of text processing. Text processing occurs during and after reading, although a reader can activate prior knowledge about a text's topic if it is known before reading. Studies that examine readers' during and after reading processes illustrate the means by which readers comprehend texts as well as the products that they create after comprehension occurs.

Text processing investigations in history education seem to have followed the reverse sequence of the development of general text processing theory. With the cognitive revolution in the mid-twentieth century, text processing theory began through explorations of the products of reading (Kucan & Beck, 1997). Gradually, researchers focused on more on-line, during-reading

forms of processing. These studies provided researchers with data on reading strategies and attentions.

Due to the research questions history educators were asking in the 1990s, however, on-line processing experiments were used to identify how historians read differently from others – specifically, students. These studies, (e.g., P. Lee, Dickinson, & Ashby, 1997; Wineburg, 1998) confirmed a number of distinct disciplinary strategies that historians share. While reading, historians are self-conscious of document sourcing, contextualization, and corroboration. Although on-line processing experiments contributed enormously to the field of social studies education in support of historical thinking, these experiments are limited to the time of reading. History educators are also interested in how readers learn from text, explaining the rise of off-line processing experiments (e.g., Perfetti, et al., 1995; Wineburg, 2001). Since this study will investigate students’ mental representations of history (an outcome of learning history), off-line processing will be given deference in this review.

Although bifurcating text processing into on-line and off-line processes is important for controlled experiments, in fact, readers move from one to the other quite seamlessly. Thus, before discussing the research conducted on off-line processing for learning from history texts, a discussion of text processing theory is needed. In order to situate the theory within the process of historical thinking, the concept of “close reading” will be used. “Close reading” involves all of the on-line processes and strategies readers use to make sense of the text and learn from the text.

2.2.1 Comprehending Text Through Close Reading

Before historians can move between documents to clarify meanings and develop hypotheses into the nature of historical topics (Leinhardt & Young, 1996; Wineburg, 2001), they must first

understand the author's meaning in one text. First, the historian must understand the words on the page and the general meaning of those words. Leinhardt and Young (1996) refer to this as the "textual read." Second, the historian must interpret those words in order to make a judgment on their historical meaning; this is the "historical read" (Leinhardt & Young, 1996). Most often, trained historians are able to enact these two processes simultaneously (Kintsch, 1998; Leinhardt & Young, 1996). For purposes of this discussion, it is appropriate to artificially segment these two processes in order to better understand the elements involved in their enactment.

2.2.1.1 The Textual Read

"Textual read" refers to readers' abilities to understand the literal meaning of the passage. As Leinhardt and Young (1996) explain, the process of the textual read is the same for both historians and non-historians alike. Before any disciplinary specific interpretation or analysis of the text can occur, the text has to be understood for what the author literally means. To understand how readers comprehend even the literal meaning of the text, a theory of text processing is needed.

Text processing theories begin, almost out of necessity, with "the words on the page." How readers identify and comprehend those words is difficult to determine empirically – thus, the need for theory. For example, as has already been discussed above, even general types of texts such as narratives vary in content and structure. In order to theorize about text processing, the "atom" that unites all texts must be identified – something so small that all texts are comprised of it and serves as a common link between all texts. *Propositions* provide this link (e.g., Britton & Gulgoz, 1991; Kintsch, 1998; Trabasso, et al., 1984).

Propositions are a text's predicates and their associated arguments. Individually, each proposition is one unit of 'meaning' in the text, independent of the linguistic constructions that

produced it. Thus, propositions provide the psychological reality of the text. During reading, individuals link these propositions into a textbase – the literal, logical reality of the text.

For example, as previously discussed in “Section 2.1.3.1 Cohesion and causal expression,” a textbook passage about the Boston Massacre begins, “In the fall of 1768, 1,000 British soldiers (known as redcoats for their bright red jackets) arrived in Boston under the command of General Thomas Gage. With their arrival, tension filled the streets of Boston” (Garcia, et al., 2005:149)⁵. In order to form a textbase, the reader must first recognize the text’s propositions. While these sample sentences create complex propositions that may take longer to process than simple sentences, the reader may immediately recognize simpler, “atomic” propositions such as ARRIVE [SOLDIERS, BOSTON] and FILL [TENSION, [BOSTON]STREETS]. The development of propositions is not concerned with traditional grammatical structures such as part of speech and tense. Rather, connecting a predicate with its associated arguments creates a psychological meaning that will later be integrated into a reader’s situation model, as described below.

In coherent texts, the author has written each sentence so that the adjoining propositions follow one to another, creating an ordered, logical sequence of meaning. There are times, however, when this does not occur. In such situations, readers are forced to make inferences about the connection between propositions if they are to obtain a complete textbase.

This is not to say that a reader always needs a complete textbase. Deriving meaning from text is often a very idiosyncratic process. A reader’s textbase is only as complete as the propositions he/she identifies (cf Sternberg, 1987), finds useful, and keeps in active, working

⁵ While a reader of this text would create propositions and a textbase for this whole passage, only the first paragraph of this passage will be used for the purposes of explanation.

memory. Individual readers' prior knowledge and repertoire of reading strategies are two factors that influence textbase construction. For example, readers of the Boston Massacre passage who do not have a clear idea of, or care for, where the British landed may misrepresent or disregard this piece of information in their textbase. Compared to a more careful reader or one with a different purpose for reading, such a textbase would be incomplete. Varying textbases result in varying connections between the text, readers' prior knowledge and their purposes for reading, as will be discussed in the next section.

Formation of a textbase allows the reader to construct the literal meaning of a passage (Leinhardt & Young, 1996). Without a usable textbase, more advanced skills of historical thinking, such as contextualization and corroboration of texts, would not be possible. It is from the textbase that readers can conduct the "historical read" (p. 448).

2.2.1.2 The Historical Read

Once a passage's textbase is set in a reader's mind, it combines with information from the reader's long-term memory to form a *situation model* (Beck & McKeown, 1991; Kintsch, 1998). The latter information is represented in propositional form as well but, again, is idiosyncratic to individual readers. Having more knowledge about a specific topic may incline some readers to create situation models that combine these two types of information more fully than readers who do not have a lot of prior knowledge about the topic. Readers integrate propositions from their textbase with propositions from their long-term memory to develop an individualized mental representation.

For instance, a knowledgeable student of US History may integrate her textbase of the Boston Massacre with other events that occurred in "1768", such as the distribution of Samuel Adam's *Circular Letter* opposing taxation without representation. "Boston" may be yet another

connection for the reader, since many notable events in US History began there. These links between the textbase and the reader's prior knowledge represent the integration of the textbase into the reader's situation model. Not all readers will make these same connections. A less-knowledgeable US History student may make the latter connection but not the former. Since these two hypothetical students integrate the Boston Massacre textbase into their situation models in different ways, they create different situation models. In the event that a reader was unable to connect a particular proposition to any other knowledge, he/she would begin to make inferences that would form a link.

The propositions present in a reader's long-term memory are not only of other texts that have been processed earlier, but also of interpretive factors such as historically contextual motivations, source reliability, and reader bias. Factors such as these are the hallmark of the "historical read" (Leinhardt & Young, 1996) because thinking historically about a text requires the reader to exploit historical thinking skills that contextualize the text beyond the immediately evident discourse (Fitzgerald, 2009). In addition to the general text processing situation model, historical reading involves the interpretation and evaluation of sources mapped with and against disciplinary knowledge.

Following the situation model example above, the reader who integrated the reading with knowledge of Adams' *Circular Letter* might have also accessed knowledge of the reliability and validity of polemic letters and knowledge of Adams' involvement in the American Revolution. Such knowledge would be used to qualify the specific situation model he/she developed. Thus, mapping a textbase to a situation model is not only a matter of isomorphic content mapping but also of interpretive judgment.

Again, not all readers integrate the same amount of information from a textbase. Readers with higher levels of interest in a particular subject have been found to have higher levels of textbase integration (Fox, 2009; Fox, Maggioni, & Riconscente, 2005). In their study, readers with low levels of interest read more casually and, as was illustrated in the above textbase example, did not create as complete a textbase as the more interested reader. Interest level did not inhibit any reader's ability to evaluate the text, however.

The process of integrating a textbase into a reader's situation model has been theorized by Kintsch's (1988, 1998; 1983) Construction-Integration Model and has served as the underlying theoretical framework for many studies on general reading comprehension (e.g., Britton & Gulgoz, 1991; McNamara, Kintsch, Songer, & Kintsch, 1996; Trabasso & Broek, 1985; Trabasso, et al., 1984) and, specifically, historical reading comprehension (e.g., Leinhardt, et al., 1994; Leinhardt & Young, 1996; Perfetti, et al., 1995) . The Model accounts for non-linear modes of processing while positing the production of a unified mental representation. These mental representations are produced using a constraint-satisfaction process⁶, which employs associative networks to help readers process the textbase proposition by proposition. These accumulated propositions form a network that represents the meaning of the text. This network, combined with the reader's prior knowledge of the context in which the text was composed as

⁶ Before readers can begin to integrate multiple texts (a process that historians rely upon to do their work), they must comprehend *a* text. "Comprehension," for Kintsch (1998), "occurs when and if the elements that enter into the process achieve a stable state in which the majority of elements are meaningfully related to one another and other elements that do not fit the pattern of the majority are suppressed" (p. 4). Comprehension, then, is the product of this construction-integration process and the means by which historians can begin to integrate other sources into their analyses. This is a mental (psychological) process that cannot be determined through text analysis.

well as “world knowledge,”⁷ enables the integration of the text’s meaning into the reader’s situation model.

What further distinguishes this model from other models of text processing is its use of associative knowledge nets (Kintsch, 1998). The knowledge net is able to account for differences in the perceptions and experiences of readers. It is unusual for a mental representation to consist entirely of propositions from the textbase. Readers’ interpretations of texts vary with regards to their knowledge, experience of a topic, and perspective on the materials read (Leinhardt & Young, 1996), making the textbase an important part of the integrated material but not the whole of it. Factors such as memories, content knowledge, beliefs, and goals all play a part in interacting with the textbase, using associative knowledge nets, to form the situation model.

2.2.2 Relating Kintsch’s (1998) Model to Historical Reading Comprehension

In order to study this phenomenon of integrating a textbase into a reader’s situation model, organizing structures must be identified that order a text’s propositions. For narratives, causal and temporal relations have been identified as two important predictors of the mental representations readers will construct (Trabasso & Broek, 1985; Trabasso & Sperry, 1985). In these experiments on general reading comprehension, Trabasso and his associates used short narratives to examine the effects of causal relations on recall and summarization. They arranged the texts’ propositions in causal chains using Mackie’s (1980) description of causal relations to

⁷ By “world knowledge,” I refer to that knowledge which a reader might have about how humans and objects interact within and amongst the world and communities. For example, my “world knowledge” about soldiering tells me that soldiers sometimes panic and use their guns even when they are not ordered to do so and are not in any actual danger. Such knowledge might help to explain why the soldiers fired during the Boston Massacre.

describe the type of causation between propositions. They then compared these results with the results from Omanson (1982) and Stein and Glenn's (1979) story analysis. They concluded that the more causal links a clause had connecting it to other events, the better it was recalled and summarized and the more frequently it was judged to be important. Thus, propositions can be used to predict reader recall, summarization and judgment – three critical aspects for historical close reading.

The organization and coherence of these propositions is also important to comprehending historical narratives, illustrating the importance of Kintsch's integrative theory. For example, in a study of middle school students, McNamara, Kintsch, Songer, and Kintsch (1996) found that high-level readers' narrative comprehension rose when they read texts which forced them to infer. Conversely, low-level readers recalled texts better when connections between propositions were made explicit.

Issues of the language and structure of the causal chain yielded different results, however. In a qualitative study of twelve excellent middle school readers, Fitzgerald (2010) found that even high-level readers sometimes struggled to explain inferences. When a narrative's causal chain was linear (there are few "side notes," as Beck, McKeown and Gromoll (1989) referred to them), excellent readers were able to easily explain why they made the inferences they did. When the narrative's causal chain was factorial (a number of factors influenced one outcome), even excellent readers had trouble determining how they arrived at their conclusions.

Propositions, then, are important to developing narratives' causal chain. Those causal chains, in turn, affect readers' comprehension. Perfetti, Britt and Georgi's (1995) research went even further, studying the influence of a number of texts (and their causal chains) on readers' mental representations of a historical event. Like Trabasso and his colleagues (1984, 1985),

Perfetti et al. investigated the relationship between textual causal networks and readers' mental representations of the texts. Due to a common interest in investigating this correlation, many of the procedures for studying this process using historical texts remained the same as the generic narrative experiments. Perfetti and his associates found that some design modifications were needed, though, due to the nature of historical investigation. Specifically, they modified (1) the passage length, (2) the grain-size of analysis, and (3) the procedure for creating a prototypical causal chain.

Perfetti, Britt and Georgi (1995) argued that the length of the passages that participants read needed to be longer in order to simulate historians' reading processes. Although they did not provide any specific evidence for this argument, it seems reasonable that historians tend to read works longer than the approximately 100 word passages used in Trabasso & van den Broek's (1985) experiment. Perfetti et al. proposed an investigation of passages containing 1,500 words or more⁸, claiming that this is a more realistic reading load for college students.

Due to the increase in passage length, Perfetti et al. (1995) argued that the grain-size of the analysis needed to be increased as well. With more than 1,500 words, the number of clauses that the researchers would have to code and account for would be too many. Rather, they proposed to increase the grain-size to the level of "events and states" by which they were able to

⁸ Although it makes sense that Perfetti et al. critique this portion of Trabasso's work since their methods are so similar, it is important to note that Trabasso and his team are not the only ones working on this issue. Irwin and Pulver (1984) also explore the effects of causal relationships on comprehension, use Kintsch as a theoretical base and use passages of 1,500 words in length. It would be interesting to follow Trabasso & van den Broek's (1985) procedures using Irwin & Pulver's passages and compare the results, especially since Perfetti et al. question the predictive ability of Trabasso's model at such text lengths.

group more than one clause related to the same action⁹. The larger grain-size enabled Perfetti et al. to limit the number of details readers accounted for in the longer, multiple context experimental design.

Since participants in their study read four texts instead of one, Perfetti and his colleagues (1995) extended the Trabasso (1984,1985) model to include a “common template” instead of an exemplar causal network. They created their common template by combining the “events and states” they had identified across all four texts and only included ones that were found in all texts. This template acted as their prototypical causal network for comparison with participant responses. Bovair and Keiras’ (1985) proposition guide was then used to identify propositions related to the template.

In addition to causal propositions, Perfetti’s (1995) team included temporal and authorial interpretation propositions into their causal network – propositions that were not causal but explained when events occurred and the conclusions authors made from the narrative. While this was yet another deviation from Trabasso and van den Broek’s (1985) work, they argued that any investigation involving historical narratives must involve these components, due to the nature of historical argument. Trabasso and his team did not account for these variables because fictional narratives do not usually hinge on such issues. A final addition to Perfetti et al.’s study was the incorporation of learning and reasoning questions that help track student understanding after reading each passage.

Using a sample of six undergraduate psychology students from the University of Pittsburgh, Perfetti et al.’s (1995) study did not examine single-instance comprehension but

⁹ Returning again to the Boston Massacre passage as an example, instead of identifying separate propositions, Perfetti’s team may broadly construe the propositions as “British land in Boston with General Gage”.

learning from and reasoning about multiple historical texts over time. In a two-part study, participants met with researchers a total of eight times and were asked to learn about the controversy behind building the Panama Canal. During Part I of the study, participants were asked to discuss a new, pre-assigned reading about the creation of the Panama Canal for each of four meetings. At each meeting, they were asked to summarize the reading, to answer comprehension and reasoning questions about the reading, and then to “think up a level” by condensing their summary to no more than eight lines; participants were given five minutes to condense their summary. During the second half of the study, participants were asked to read three more texts related to more recent events concerning the Panama Canal – what Perfetti et al. refer to as the “Return Controversy”. The procedures for this part of the study were similar to Part I.

Perfetti et al.’s (1995) study concluded three important findings related to Kintsch’s (1998) model:

1. Learning the core structure of the “common template” causal chain occurred quickly and fairly completely. The authors report that by the second session, the participants had a good grasp of the important events on the template chain.
2. Learning supporting details is a slower process than learning the basic structural information. In an effort to approximate a “real” learning scenario, conflicting historical narratives were presented which may have affected this outcome.
3. Participants were able to use what they learned from the passages to reason about value judgments and counterfactual questions. The participants’ reasoning was related to their causal chain mental representation.

Perfetti, Britt and Georgi's (1995) work pioneered questions about student learning in historical thinking contexts. Their methodology, however, accounted for how readers might be taught at the university level. Evidence of this type of in-depth, primary source instruction in the K-12 classroom was not found in the literature. Conducting a similar study with textbook passages may be of more use to history teachers.

For the field of history education, Perfetti and his team (1995) provided further support for the importance of causal and temporal propositions in the creation of readers' situation models. However, just because the causal and temporal propositions are made available to readers does not mean that they are presented in a way that makes them readily available to the readers' long-term memory. History textbooks, in particular, have been found to be incoherent, relying on readers to supplement the text with their own prior knowledge to make sense of its literal meaning (Beck, et al., 1989). These findings have been supported by Voss and Silfies' (1996) study of forty college-aged readers. By providing their participants with more and less coherent texts, the authors found that low cohesion texts require readers to use more prior knowledge than high cohesion texts. The required use of prior knowledge in order to build a textbase may create more variability in reader's comprehension of the literal meaning of the text. In turn, this variability may impact readers' overall comprehension of the historical event.

2.2.3 Summary

Textbase and situation model formation are idiosyncratic processes. While readers comprehend texts in similar ways, what they comprehend varies depending on how complete their textbase is and what knowledge is stored and activated in their associative nets. That information which is

not transferred from a reader's textbase to his/her situation model cannot be incorporated in the historical thinking process.

The issue of text cohesion bridges the gap between the propositions available in the text and the linguistic features that make them available. An examination of the way language is used to influence proposition formation and the mental representation of a text is an important topic, especially when the amount of reading K-12 history students do is so much less than those of college students.

2.3 INSTRUCTIONAL EXPLANATIONS RELATED TO TEXTBOOK INSTRUCTION

While textbooks are important instructional materials, teachers play an important role in representing content in support of student learning as well. Often, teacher's representations are presented in the form of instructional explanations, regardless of the instructional method(s) selected. Instructional explanations are useful not only for conveying content but also for demonstrating disciplinary reasoning and epistemology (Leinhardt, 1997; Leinhardt, et al., 1994).

Leinhardt's seminal research (e.g., Leinhardt, 1997, 2001; Leinhardt & Steele, 2005; Leinhardt & Young, 1996) on instructional explanations illustrates that their usefulness lies in their relationship with other types of explanations pertinent to learning. Instructional explanations are specifically designed to instruct, connecting the instructor's knowledge to students' prior knowledge. Other types of explanations may facilitate instruction, but their primary purpose is not to teach.

Throughout her years of research on explanations, Leinhardt (2001) has identified four families of explanations: common explanations, disciplinary explanations, self-explanations, and instructional explanations. Each can be observed before, during, or after instruction and are important to the learning process. Yet, for their common use in varied instructional settings, the context and content of instruction alters these explanations towards specific purposes, defined jointly by teachers and students.

2.3.1 Types of Explanations

Of the four, common explanations have the most direct connection between two or more interlocutors. Since they are “responses to direct and usually simple (if sometimes profound) questions” (Leinhardt, 2001, p.338), the questioner assumes that the person being questioned knows something about the answer. Common explanations, then, are significant in the classroom because classrooms are social arenas where, to varying extents, the teacher and the students share a knowledge relationship. These explanations can be skillfully used to make connections between the classroom and students’ out-of-school experiences, providing support for learning.

Common explanations differ from instructional explanations, however, in that they do not model “educational forms of explanatory discourse” (Leinhardt, 2001, p.339). Questions such as “Why do I have to learn this stuff?” do not often solicit answers in an academic register. Indeed, if a teacher did answer this question in a scholarly way, it may further turn the student questioner off from the subject altogether. While there is certain value in such questions, the lack of academic language used in response separates common explanations from instructional explanations.

In contrast, disciplinary explanations arise from questions asked within the boundaries of an academic discipline. Furthermore, disciplinary explanations occur across time and space, as disciplinary specialists react to others' ideas whether they are from another country or another century. For example, historians' arguments about the past support and refute other interpretations and reflect the conventions of academic history. These arguments are not in the register of personal communication; rather, they are spoken or written as a self-contained explanation to which other historians respond.

Disciplinary explanations differ from instructional explanations because of their freedom from time and space (Leinhardt, 2001). During instruction, explanations are provided to students promptly; minutes may pass but not years. Both types of explanations adhere to standard explanatory conventions of a discipline, although the language may not be identical on account of the developmental needs of student populations. As teachers interact with students in scholarly ways, disciplinary and instructional explanations find common ground.

Still different are self-explanations that are intra-personal, designed "to establish meaning, to extend or revise understanding, or strategically and intentionally to improve memory" (Leinhardt, 2001, p.339-340). Individuals use these explanations to personally organize and retain information. They often connect heavily with an individual's idiosyncratic prior knowledge and do not necessarily conform to standard disciplinary or interpersonal conventions of communication. They are meant to self-instruct and only need to be understood by the individual learner.

Instructional explanations, on the other hand, are meant to instruct others, although "the others" may co-construct parts of the explanation. The instruction provided by these explanations is both content- and language-based; students learn information as well as how to present it

within the discipline. The relationships unique to common explanations, the disciplinary norms encompassed in disciplinary explanations, and the link to prior knowledge specific to self-explanations all coalesce in instructional explanations.

What sets these explanations apart from the other three types is their explicit pedagogic nature. Instructional explanations are created within the classroom setting to help students “learn, understand, and use information, concepts and procedures in flexible and creative ways” (Leinhardt, 2001, p.340). They represent and explain common, disciplinary experiences so that all students can access the information. Of the four, instructional explanations are the only ones directly concerned with student learning.

2.3.2 Instructional Explanations in K-12 History

Instructional explanations occupy an important space during instruction, a space where underlying disciplinary questions are answered within the classroom as discourse community. There are four occasions in which the boundaries of such a space sufficiently enable an instructional explanation: events, structures, themes, and metasystems of the discipline (Leinhardt, 2001). These occasions do not arise with similar frequency in all history classes, however. For example, discussions about social and political structures often occur in expository writing – the kind found in more abstract history genres. Similarly, historical themes require authors to discuss events and organizations across time and space. Such themes require a break from chronological narration such as found in most K-12 history classrooms. Furthermore, explanations of the “metasystems of the discipline” (known in social studies as “historical thinking” skills) have limited uses in classrooms reliant on textbooks. Thus, explanations about events are very common in K-12 history classrooms (Leinhardt, 2001).

Explanations take a narrative form when teachers intend students to understand events (Leinhardt, et al., 1994). Since they contain the same elements of written narratives (i.e., agents, cause, time, etc.), instructional explanations act as a supplement to the historical narratives found in history textbooks (Keil, 2006; Leinhardt, 1997; Leinhardt & Steele, 2005). It is also significant that length of time it takes to explain a historical event is relatively short compared to the other occasions (Leinhardt, 2001). Thus, representing a historical event helps teachers to meet content objectives, aid student learning, and create lessons that fit neatly into class period time constraints.

These instructional explanations need not be univocal, however. In fact, even more constructivist instructional methods contain threads of instructional explanation (Leinhardt & Steele, 2005; Wittwer & Renkl, 2008). More specifically, instructional dialogues have been shown to incorporate students' and teachers' thoughts in creating an instructional explanation by using routines, disciplinary meta-language¹⁰, and a co-constructive intellectual climate (Leinhardt & Steele, 2005). Within the dialogue, students pool their knowledge of a topic with the teacher's knowledge to (1) establish a specific query, (2) illustrate useful examples and non-examples, (3) interact with appropriate representations for a given topic (e.g., graphs, letters, maps, etc.), (4) build upon prior knowledge, (5) identify core principles, (6) identify boundaries of the concept being investigated, and (7) resolve errors in thinking. These elements of instructional explanations are present in more direct instruction models as well.

¹⁰ Leinhardt and Steele (2005) describe meta-language as that which fulfills one of five functions: boundary markers, activators, segment descriptors, labeling and referent preserving. In short, these forms of meta-language enable students to position their learning within the broader context of past and future content learning and within the language specific to that discipline (e.g., the meaning of *liberty*).

Instructional explanations are employed to enhance students' understandings of the instructional material, regardless of instruction method. Since history teachers often rely on textbooks as an instructional material, it can be inferred that history teachers often provide instructional explanations in order to clarify and assess students' understanding of the text. What is learned about a particular topic is a combination of the information processed from reading and from the narrative-like instructional explanation received during class. The narrative structure, though different from that found in the discipline of history, continues to be an important part of the instruction and instructional materials provided to students.

2.3.3 Summary

When teachers teach about historical events, they often do so in narrative form. These instructional explanations of the historical event mix disciplinary language with common, explanatory language in order to help students comprehend the material. Thus, instructional explanations are contextual; teachers' knowledge of their students' lives, prior knowledge, and language abilities factor into what is explained and how it is explained. Instructional explanations, then, are texts at once similar to other instructional materials (i.e., textbooks) in content but different in language.

2.4 HOW CAUSAL LANGUAGE IN HISTORICAL NARRATIVES AFFECTS MENTAL REPRESENTATIONS OF HISTORY

Within this chapter, the unified nation-state narrative described in Chapter One has been complicated. Although the meta-narrative remains, functional linguistic analyses of history textbooks illustrate that the language and meanings presented in the narrative can change depending on their pedagogic purpose (Coffin, 2006b; Veel & Coffin, 1996). Interestingly, many textbooks are written in the historical recount and account genres, even if they are meant to be read by high school students (Coffin, 2006b; Fitzgerald, in revision). Without the input of more abstract genres, students are most likely limited in their ability to engage in historical arguments after high school.

What input students do receive on the conventions of history writing centers largely on temporality (Coffin, 2006b), the basis of a heritage curriculum where events happen “naturally” (Apple, 2000). When causation is employed, sentences are often used to explicitly structure causal relationships (Martin, 2002), even though causation can also be construed within the clause as well (Schleppegrell & Achugar, 2003). Prepositional phrases, adverbs, and conjunctions often link ideas rather than the more complex verb-groups and nominalization realized in abstract genres (Martin, 1989). Just as frequently as these explicit forms of causation, however, asyndetic constructions are used (Fitzgerald, in revision), implying causation through the internal processes of historical actors.

Unfortunately, research on text processing indicates that the incoherence of such implied causation may limit some students’ abilities to map the textbase into their situation models (McNamara, et al., 1996). Indeed, even excellent middle school readers had some difficulty explaining why they made the inferences they did after reading an asyndetic construction

(Fitzgerald, 2010). If information is not mapped properly into students' situation models, misconceptions about the content will arise (Kintsch, 1998), limiting students' understanding of the content.

Such complex and, at times, incoherent input can potentially be mediated by a teacher's instructional explanation. Typically concerned with historical events (Leinhardt, 2001), instructional explanations are designed to help students access information such as that found in the textbook (Leinhardt, 2010). Although the language of instructional explanations mimics disciplinary norms, it is also adjusted to students' developmental levels, allowing teachers to connect the content to students' prior knowledge. If done well, students' questions should be answered and incoherence should be repaired.

Although there has been a significant amount of research conducted on functional linguistics, text processing, and instructional explanations in history education, a lack of research on the influence of history textbook language and a teacher's instructional explanations on students' comprehension has left a gap in the literature. Understanding how textbook passages and instructional explanations influence students' history comprehension is important to understanding the impact of each source of information on students' mental representations of history.

3.0 THE SETTING

The prior knowledge to which students map new history content and disciplinary language constructions is, in part, born of their life experiences outside of school (Barton, 1995). That is, the connections students can make to the nation-state narrative are partly a result of the common experiences they share in their daily lives with the people, places, and events presented in the textbook. For students who live a life of relative privilege, for example, the patriotic textbook narrative may only be difficult in an academic sense. Issues in reading, remembering, and constructing content information may hinder these students' mental representations of history. For less fortunate students, on the other hand, the patriotic narrative adds an extra layer of complexity, namely, "How does a life of poverty/oppression/discrimination/etc. fit into the theme of patriotism?"

Tokenism, as described in Chapter One, has been the textbook publishers' answer to this question. By adding diverse historical figures to the narrative, publishers have attempted to make the text more multi-cultural (FitzGerald, 1979), enabling students to make cultural connections to certain historical figures. However, this solution contributes to academic comprehension issues, creating incoherence within the narrative.

In Chapters One and Two, discussion of readers' comprehension of the nation-state narrative has been broad, contextualized in the history of K-12 history education and relevant education research. To say something useful about the relationship between the nation-state

narrative and specific readers, a study needs to be contextualized within those readers' lived experiences. In doing so, the experiences of and data from study participants can be connected to larger disciplinary and historical themes.

In particular, the history of Woodland Hills School District, the setting for this study, closely links study participants to the broader history of K-12 history education and related educational research. In this case, the story of the District and its stakeholders connects students' learning today to federal decisions about quality instruction made during protracted desegregation litigation. The Woodland Hills' history curriculum, as it is taught today, is tied directly to the decisions of the United States judicial system and its view of equitable educational opportunities.

3.1 A BRIEF SURVEY OF THE WOODLAND HILLS SCHOOL DISTRICT'S HISTORY

Located east of Pittsburgh, the Woodland Hills School District is currently one of the largest districts in the region as well as one of the youngest. Before the 1980s, the District did not exist; it only exists today because of the tenacity of a lady named Dorothy Hoots, a woman whose name most Woodland Hills students have probably never heard. Still, her influence continues to be felt throughout the district and it is with her that the story of the District begins.

3.1.1 Dorothy Hoots and Desegregation

Leaving her home in a dying Pittsburgh mill town, Dorothy Hoots traveled each day up over the hills surrounding the Monongahela River to her job as a housekeeper in the affluent neighborhood of Churchill (Welner, 2001). Although she was only a couple of neighborhoods away from her home, she might well have been working in another world. Single-family homes lined the streets in Churchill, where children could play on the large green lawns. Parents went to work outside of the community and returned home at night to hear of their children's school day and all that they had learned. For the most part, families in Churchill were prosperous.

At the end of her day, however, Ms. Hoots traveled back home, where the mills that provided jobs to the predominantly black population were beginning to suffer. The coke and iron ore deposits were drying up and foreign competition was putting a strain on the industry. The economic distress began to take an increasing toll on an already poor population. A declining tax-base meant that residents could not support their local government and schools with money or resources (Welner, 2001). Even though neighborhood identity was strong and neighborhoods were resistant to change, it was becoming clear to many that change needed to occur if the local districts were to survive.

The financial issues that districts in and around the mill towns faced were no secret. Without much prompting, the Commonwealth of Pennsylvania stepped in to reformulate district boundaries during a meeting in 1971. Of the four districts east of Pittsburgh and along the Monongahela River, three were merged to form the new General Braddock Area School District (GBASD): Rankin, Braddock, and Braddock Hills. The fourth, the East Pittsburgh School District, was merged with its neighboring district, Turtle Creek.

Immediately, however, it was evident that the mergers were not only about saving districts from financial distress. All three districts that comprised the GBASD had been undergoing the same financial collapse; none could buoy the others' tax-bases. Furthermore, the predominantly white populations of East Pittsburgh and Turtle Creek had been merged, whereas the GBASD remained predominantly African-American. The children of the GBASD had been gerrymandered into a segregated district instead of being merged with districts that could help financially support the schools.

Together with other parents from the GBASD, Dorothy Hoots filed a class action lawsuit against the Commonwealth of Pennsylvania, the Pennsylvania State Board of Education, the Allegheny County Board of Education, and various elected officials (Welner, 2001). Standing before the US Circuit Court, the plaintiffs argued that the creation of GBASD was intentionally discriminatory, limiting their children's equal opportunity to education. The Court agreed and asked school officials to develop a plan to immediately remedy the situation.

Almost a decade passed without a court-approved plan, however. During that time, school officials attempted to create new busing plans that would bring racially segregated communities together (Fatla, 2000), although none of the districts seemed to want to pay for the busing to occur. The GBASD did not have the resources to do so and other districts did want to be responsible for the costs. In the meantime, the districts remained segregated.

Finally, in 1981, nine districts were joined to create Woodland Hills School District (WHSD). The predominantly white districts of Churchill, Edgewood, Swissvale and Turtle Creek (including the East Pittsburgh population that was merged in 1971) were merged with the GBASD and other smaller districts. This merger drew students from twelve different communities. During the first year of desegregation (1981-1982), the secondary schools merged

– with the District high school occupying the former Churchill High School. The following school year (1982-1983), the primary grades were merged (Rossell, Armor, & Walberg, 2002; Welner, 2001). After almost a decade and a half, K-12 schools east of Pittsburgh were filled with diverse students.

3.1.2 De-tracking

Although the districts had been merged, the plaintiffs continued to argue that the schools themselves had not been desegregated. White students were being tracked into classes with other white students while African-American students were often placed in low-achieving classes. When the District was unable (or unwilling) to remedy the situation, the Court adopts “a comprehensive student assignment plan” (Fatla, 2000, p. 2) that paired or clustered students from diverse settings, integrating students from differing neighborhoods into the same classes.

In 1988, all parties except the Commonwealth signed a consent decree, requiring the district to de-track the student population (not put students in classes because of perceived ability) and create racially balanced classrooms. Even after this consent decree, however, a majority of white students continued to populate advanced placement classes because there had been such a large educational gap between the poor and wealthy students, between black and white students (Rossell, et al., 2002). The courts once again intervened on the behalf of the minority students, arguing that “vestiges of discrimination were embedded deep in all aspects of school life” (Fatla, 2000, p. 2). The only way to level the playing field was to redesign the curriculum, including remedial courses that would raise achievement of those students left behind by educational injustice.

From the beginning of the District's effort to redesign the curriculum, math and science courses were given preference. Not only were the redesign efforts of these two subjects overseen by a curriculum coordinator (Fatla, 2000) but they were also highly discussed subjects within the court proceedings (Rossell, et al., 2002). This is not to say that the other school subjects were summarily ignored; the redesign efforts for the other subjects fell to Dr. Stefan Biancaniello, who was in charge of "Language Arts and the Humanities" (Fatla, 2000). In addition to these two district-level coordinators, school-level coordinators and an Assistant Superintendent of Curriculum and Instruction also facilitated in this process.

This process, like the ones before it, was sluggish. It took seven years for every course was rewritten at least once (Fatla, 2000). However, some courses were given more consideration than others. For example, while math was a popular topic of debate, social studies courses were not mentioned during the court proceedings (Rossell, 2011), leaving changes that were made to those courses out of the public record. Indeed, at no point was the social studies curriculum a major focus of the Court's consideration. The benefits of a traditional history curriculum were not a topic of importance, even when diverse sets of students were deliberately being paired and clustered into the same classes.

It was not until 2000 that Judge Maurice Cohill ruled that WHSD had "met nearly all of the requirements imposed after black parents complained nearly 30 years" prior (Chute, 2000:1). The only area in which the district had not met the court's requirement was in the mathematics curriculum. Welner (2001) attributes this ruling to the District Superintendent's testimony that the math curriculum would not be completely de-tracked until a new software program was implemented in math classrooms, allowing students of various abilities to be taught easily in one

classroom. Once it was, the court declared the district officially desegregated in 2003 (Levine, 2004).

For more than three decades, the textbook narrative's claim of equality for all citizens was little more than something to be learned for many students in the new Woodland Hills School District. Only after the new millennium could students be confident that they were being given the same educational opportunities regardless of race or educational ability, at least according the Courts. However, the vision of a completely unified district was not one that would be fully realized. A unified school district has not meant the unification of the Woodland Hills communities at large.

3.2 THE COMMUNITIES OF THE WOODLAND HILLS SCHOOL DISTRICT TODAY

Visitors to the communities that comprise the Woodland Hills School District can still imagine the educational disparities that Dorothy Hoots and her friends noted three decades ago. While merging the districts has produced a setting in which students from racially and economically variant communities are educated in the same classroom, the communities remain economically and racially diverse, separated from each other by geological and infrastructural barriers.

For example, despite renovation attempts, it is clear that the Rankin, Braddock, and North Braddock Boroughs are not wealthy communities (Strand, 2009). A drive down Braddock Avenue through Rankin and into the borough of Braddock illustrates the poverty of these communities. Abandoned buildings, boarded-up windows, and a general lack of activity around town suggest that these communities are struggling. The only major business, it seems, is the

Mon Valley Works steelmaking plant, a subsidiary of US Steel, which lies on the outskirts of town, almost as an area unto itself. Indeed, driving southeast on Braddock Avenue, one wonders whether the road will dead-end at the plant.

A stop outside of the steel plant epitomizes life in Braddock. Looking towards the Monongahela River, one can only see railcars. Heavy iron and construction equipment litter the area, reminiscent of the days when steel was the lifeline of the region. Away from the Monongahela is a cliff of rock, hemming the town in against the river. A flag flies over the steel plant, symbolizing American pride in the industry; yet, looking around at the empty streets, it seems that the plant workers might be the only ones to see it.

Despite the appearance that Braddock may end, quite literally, at the steel mill, the road continues on. Beyond the plant, the road is well paved and small businesses appear to be thriving but the borough name has changed; beyond the plant is Turtle Creek. Roads on the left climb the cliffs that hug Braddock to the river. Up one of these roads, Churchill Road, is another flag. This flag, however, is very large and waves high upon the hill, marking the castle-like Edgewood Country Club. Here, green golf courses and well-kept single-family homes sit above the riverside boroughs. This is a residential community; work is elsewhere in this part of town.

Although it would be unfair to stereotype the lives of individuals in either Braddock or Churchill, the general differences in socio-economic status and affluence are too distinct to dismiss. Indeed, travels into any of the other ten communities from which Woodland Hills draws its students illustrates the same distinctions; some are quite affluent areas while other are certainly not. Thirty years after the federal mandate to desegregate, it does not seem that it would have been possible for the General Braddock Area School District to have survived on its own.

Table 3.1 (U.S. Census Bureau, 2000) illustrates how Woodland Hills students' lives differ from each other, even though they attend the same public school system. By comparing just some of the twelve communities from which the WHSD draws its student population, it is evident that economic disparity cuts across racial lines. For example, Churchill Borough has the highest median income of all twelve communities as well as a large white population. In contrast, Rankin Borough has the lowest median income and a significant African-American population. These have been traditional divisions since before the WHSD was formed (Rossell, et al., 2002).

Table 3.1: 2000 Census Data for WHSD Communities Including Relevant Median Data for Pennsylvania and the United States

Community	Population	White	African-American	American Indian	Asian	Pacific Islander	Some other race	Two or more races	Hispanic	High school graduate or higher	Bachelor's degree of higher	Median household income (dollars)
Braddock	2,912	30.1%	66.5%	0.1%	0.2%	0.0%	0.7%	2.3%	1.5%	77.9%	8.8%	18,473
Braddock Hills	1,998	79.4%	18.0%	0.3%	0.5%	0.0%	0.2%	1.8%	0.6%	82.5%	17.0%	30,382
Chalfant	870	93.4%	3.8%	0.2%	0.7%	0.1%	0.3%	1.4%	0.5%	86.4%	18.2%	33,125
Churchill	3,566	88.5%	8.4%	0.1%	1.9%	0.0%	0.3%	0.7%	1.1%	97.8%	55.8%	67,321
East Pittsburgh	2,017	76.1%	20.9%	0.3%	0.1%	0.0%	0.3%	2.2%	0.5%	77.1%	10.0%	21,286
Edgewood	3,311	89.1%	7.9%	0.1%	1.5%	0.1%	0.5%	0.8%	1.4%	96.0%	56.2%	52,153
Forest Hills	6,831	94.7%	3.0%	0.0%	1.3%	0.0%	0.2%	0.7%	0.7%	91.6%	46.0%	44,922
North Braddock	6,410	61.7%	35.3%	0.2%	0.3%	0.0%	0.6%	1.9%	1.2%	77.9%	8.6%	24,335
Rankin	2,315	28.0%	69.3%	0.1%	0.2%	0.0%	0.4%	2.0%	0.3%	79.7%	4.3%	13,832
Swissvale	9,653	74.5%	22.1%	0.1%	0.9%	0.1%	0.6%	1.7%	1.1%	86.3%	24.8%	31,523
Turtle Creek	6,076	92.7%	5.2%	0.1%	0.6%	0.0%	0.1%	1.3%	0.6%	81.1%	12.5%	30,057
Wilkins Township	6,917	92.8%	4.4%	0.1%	1.5%	0.1%	0.2%	1.0%	0.4%	89.2%	30.3%	37,439
Total		75.1%	22.1%	0.1%	0.8%	0.03%	0.4%	1.5%	0.8%	85.3%	24.4%	33,737
Pennsylvania		85.4%	10%	0.1%	1.8%	0.0%	1.5%	1.2%	3.2%	81.9%	22.4%	49,184
U.S.		75.1%	12.3%	0.9%	3.6%	0.1%	5.5%	2.4%	12.5%	80.4%	24.4%	41,994

Yet, there are also communities that are (slightly) more racially mixed and variant economically. For example, the racial composition of Braddock Hills Borough is very similar to that of East Pittsburgh Borough. African-Americans represent about 20% of their populations.

Yet, the percent of Braddock Hills residents with college degrees or higher is larger than that of East Pittsburgh. The income difference is noticeable too, though not surprising.

Just a brief glance at this data confirms that the students educated in the WHSD are not “from the same neighborhood.” Rather, some of these students live very different lives from their educational peers. This diversity mimics the diversity that is found throughout Pennsylvania, if not the United States, demonstrating the success of well-planned district integration models to create diverse educational systems. While the racial composition of the school district is not representative of other minority groups other than African-Americans (particularly the Hispanic population), the “cultural pockets” from which these students come is diverse and variant.

3.3 WOODLAND HILLS JUNIOR HIGH SCHOOL

Today, students from all twelve communities are picked-up from their homes to attend schools through the district, regardless of “the neighborhood” from which they are raised. Every student in grades seven and eight, for instance, attends Woodland Hills Junior High School (WHJH) in Swissvale, a borough adjacent to Churchill. However, even though WHJH draws its population from diverse communities, the population inside the school is striking homogeneous. Indeed, leaving the neighborhood surrounding the school and heading towards the WHJH campus gives the impression that the school is an area unto itself. It has an urban feel in a suburban environment.

3.3.1 Urban Feel in a Suburban Environment

Set atop a large hill at the corner of Swissvale Borough and the city of Pittsburgh, WHJH is nestled within a quiet community of single-family homes. Like most of Pittsburgh and the surrounding areas, none of these homes look extravagant. Rather, the small rancher homes are reminiscent of the quintessential Pittsburgh middle class homes visitors can explore at the local Heinz History Center. From the top of the hill, downtown Pittsburgh can be seen to the west-northwest. To the west-southwest, the Monongahela River can be seen flowing towards the confluence of the three rivers. Adding to the view, trains can be heard rolling passed the bottom of the hill, carrying coal. Standing by the school, there is no doubt that WHJH is a part of Pittsburgh.

The suburban feel from the surrounding neighborhood is in contrast to the urban feel of Woodland Hills Junior High School, however. To enter the reconstituted building (it used to be Swissvale High School prior to the district merger), security guards must open the door. They escort visitors to a registration table where bags are searched. After showing identification, visitors proceed through metal detectors, just like students are accustomed to doing every morning. If there is any doubt that security is a priority, an office manned by uniformed police officers is located twenty feet from the entrance.

In addition to the high level of security, Woodland Hills Junior High School's student population is also in contrast to the population of the surrounding community. African-American students are the majority population, outnumbering their white counterparts three to one (Pennsylvania Department of Education, 2010b). These numbers conceal a shifting population, however. A general population decline, charter school enrollments, and out-of-district students have all had an effect on WHJH's student population.

3.3.1.1 General population decline

Over the past twenty years, the WHSD has seen a steady population decline – a theme found throughout the greater Pittsburgh area since the steel mills closed. Due to this decline, the school district’s two junior high schools have consolidated into one, Woodland Hills Junior High School. Plans for this consolidation were first seriously proposed during the May 17, 2007 School Board Meeting as a way to balance the budget (Sullivan, 2007). Beginning during the 2008-2009 school year, both middle schools were housed in the former Woodland Hills Junior High –West building.

3.3.1.2 Charter schools

However, Woodland Hills Junior High School faces additional population changes due, in large part, to the charter school movement and poor state accountability test scores. For the past two years, WHJH has not met Adequate Yearly Progress (AYP) on the state accountability test, indicating that one or more subgroups’ test averages failed to meet proficiency marks. Specifically, mathematics instruction continues to be a weakness, even after the addition of mathematics education software in 2003. Students in the Black/African-American non-Hispanic, IEP – Special Education, and Economically Disadvantaged subgroups failed to meet the mathematics requirements; students in the White category passed (Pennsylvania Department of Education, 2010a).

Although students in all subgroups passed the reading test, reading is not a strong suit either. The same subgroups that did not meet proficiency requirements on the mathematics test only met the reading requirements per the confidence interval. Each subgroup in a school is held to two standards of proficiency. The first is the proficiency score, an exact number that individual students need to score on a particular test to be considered proficient. This proficiency

score is normed across all students in the state. However, a confidence interval exists for subgroups, allowing them to collectively score lower than the proficiency score and still meet the requirements. The confidence interval is calculated recognizing that the students at Woodland Hills Junior High School, for example, are not representative of the whole population of students across Pennsylvania. Thus, a little variance in each subgroup's scores is considered acceptable. While white students at WHJH met the proficiency requirements on the reading test, the other subgroups only passed by staying within the confidence interval; true proficiency was not met (Pennsylvania Department of Education, 2010a).

Since WHJH has not met AYP for the past two years, parents have been granted "school choice" by the state, allowing students to move to schools with higher test scores and, supposedly, better instruction. A number of white students, in particular, have left the school either per school choice or to attend a local charter or private school, leaving students of lower socio-economic status and less access to local government education programs to attend WHJH (Informant 1, 2011). Students that leave take with them some of the state tax money that would normally go to financing the District's education system. Not only does the District lose economic and racial diversity but it also loses money.

Yet some parents from Districts struggling more than Woodland Hills view WHJH as a better school than the ones to which their children are assigned to go. Thus, some students move into the homes of family and friends so that they can attend Woodland Hills' classes. While the district allows this practice because it increases enrollment, accepting students whose parents do not pay district property taxes adds to the money woes of the district. The number of students increases but the money to fund their education does not (Informant 1, 2011).

Thus, for all of the diversity of the surrounding communities, Woodland Hills Junior High School faces problems similar to urban schools (cf Kozol, 1991). Low reading and math scores, a transient population, and a large minority contingent suggest that WHJH faces issues disproportionately similar to the poorest of the District's communities, something the federal mandate had worked to avoid. Thus, the WHJH context is less diverse than indicated by broader demographic data.

3.3.2 Social Studies at Woodland Hills Junior High School

After safety, the number one priority for most schools around the country is improving reading and math test scores due to No Child Left Behind (Public Law 107-110, 2002), leaving social studies largely ignored by curriculum developers (Pace, 2010). Woodland Hills Junior High School is not different in this respect; their social studies curriculum has not been updated since 1999 (Informant 1, 2011), prior to the signing of the No Child Left Behind legislation and the District's release from federal mandate.

This is not to imply that teachers have not made changes to the social studies curriculum on their own. Rather, there is no prescriptive curriculum to which WHJH social studies teacher must adhere. According to the teacher participant in this study, Ms. Forest¹¹, only two explicit guidelines have been given by school administration: (1) eighth-grade students need to learn about US History through the Civil War and (2) videos should not be used as instructional materials (2010). The first directive is curricular; students are supposed to build on the knowledge they gaining in eighth-grade US History when they are taught modern US History in

¹¹ "Ms. Forest" is a pseudonym for the teacher participant. All other names of individuals included in this study are pseudonyms as well.

eleventh grade, three years later. The second directive relates to instructional materials; the underlying message is that videos serve no educational function in the history classroom (Ms. Forest, 2010).

The pedagogic directives given to social studies teachers have focused not on social studies content or practice but on improving reading and math test scores. Along with the social studies standards issued by the Pennsylvania Department of Education (2002), to which teachers must connect their lessons, they must also connect their lessons to “reading and math anchors” (Ms. Forest, 2010). In an effort to improve reading and math scores, each teacher must meet one “anchor” during every lesson. For example, Ms. Forest’s unit on “The Revolutionary Era” covered a total of thirteen assessment anchors, eleven reading anchors and two math anchors. These included students’ ability to “understand nonfiction text appropriate to grade level,” “identify the meaning of vocabulary from various subject areas,” and “apply word recognition skills” (See Appendix B). Instructional practice involving these anchors is meant to support students’ reading and math proficiency on the state assessment.

3.3.3 Reading in Ms. Forest’s US History Class

For her part, Ms. Forest finds the “nonfictional text” anchor the easiest in which to connect her lessons. When she discussed the concept of anchors and how they are realized in her class, she said, “I hit my reading anchors all the time because we need to improve on non-fictional texts, like having students be able to read non-fictional texts. So, my anchors always hit non-fictional texts because history books are non-fictional texts” (Ms. Forest, 2010). Indeed, during her lessons about the American Revolution, the textbook is used almost every day. Students use the textbook to complete worksheets for every section of a chapter. Generally, these worksheets ask

students to identify and describe specific people, groups, documents, and battles. Then students are asked to answer a number of factual questions concerning what events took place, when, where, and who was involved. Occasionally, students are asked why an event happened. These worksheets become the students' study guides for tests and quizzes taken from the textbook.

Students understand this mode of teaching to be one of coverage. When asked how this US History class is different from the US History they were exposed to in fifth-grade, one student offered, "Well, it's more advanced. We're getting into more stuff. The textbooks cover more than they did" (Student Participants, 2010a). They also know their role in this process – to "memorize the information", as another student participant summarized (Student Participants, 2010b). Whether this relationship between teaching method, instructional material, and student work was implicitly or explicitly conveyed, or whether it was a relationship produced only in Ms. Forest's class or in other classes as well, the students seemed clear about what their learning should look like in history class.

Although students have more reading to do in eighth-grade than in fifth-grade, some students thought that their comprehension of the reading was better than before. Three students agreed that the textbook readings were "easy," explaining that it was "because we have grown-up... it's like our brains adjusted to more advanced things than before" (Student Participants, 2010a). If these students' experiences are generalizable to the other students, they were not explicitly taught how to be better readers of the history textbook. Rather, the textbook reading became easier as they were more frequently exposed to it.

3.3.4 Reading to Learn

Interestingly, the way that these students have been taught (or have taught themselves) to read the history textbook aligns with how they view the purpose of history and how historical narratives are created. As these students have been reading to learn facts for inclusion on worksheets, they have also been learning a historical epistemology connected to the nation-state narrative. For example, when asked why history is important, four student participants responded:

“To know the history of your past and your heritage”

“To understand the world around you”

“We learn what people did so we can have freedom”

“So we can understand why everything is the way it is today”

(Student Participants, 2010b)

The verbs used by these four students are telling. “To know,” “to understand,” and “to learn” all have the connotation that history is given rather than created. These students, especially the first, understand history’s importance through a singular lens, the unified nation-state narrative. Indeed, the first student quote even offered the word “heritage” as a synonym for “history” [See Lowenthal (1998) for a discussion on the difference between the two and implications on history education]. None of the students seemed to question the historical narrative they were learning or how that narrative was created.

This interpretation is supported by responses to a related question during the same interview, “What is history?” Two students responded to this question, saying that it is “the study of things in the past” and “the story of our past...” (Student Participants, 2010b). Together, these students’ conception of history matches the themes of the loudest critiques of history textbooks, historical “facts” (i.e., “things in the past”) and a unified narrative (i.e., “the story”). Indeed,

these responses illustrate the importance of the historical narrative (either spoken or written) not just in Ms. Forest's class but also to history in general; the story told about things in the past is our history.

3.4 SUMMARY

Out of a unique fight for equal opportunity and educational equality, the history of the education curriculum that Woodland Hills students receive is remarkably traditional. Although the Courts and the school district had the opportunity to alter the curriculum and encourage students to think critically about their collective role in society, both deflected, focusing primarily on math and science. In granting WHSD unitary status, the Courts asserted de facto support for the patriotic, K-12 history curriculum, approving it as an equal opportunity curriculum for all students.

Yet, even when the District does not prescribe the history curriculum for teachers, the traditional curriculum persists. Although the population of students in Ms. Forest's class is predominantly African-American and increasingly transient, lessons about the political history of the United States constitute "what happened" in the past. Instead of questioning the textbook, students in Ms. Forest's class look to it as the authoritative source of history. The students' agency in history is that of a receptacle (Freire, 1970/2000); rather than investigating, interpreting, and challenging the narrative, they memorized its facts.

These students were never taught the discourse of history; as they "grew up," they got better at recognizing the facts. How those facts were expressed and how to reformulate them into an individualized historical discourse appears to have never been taught. Thus, this classroom setting, of which the federal courts deemed equal opportunity instruction occurs, is an ideal

setting from which to study how the textbook and a teacher's instructional explanation influence students' mental representations of history.

4.0 METHODS

This study was conducted within the Woodland Hills Junior High School setting. As the primary instructional material of Ms. Forest's class, the textbook, *The American Nation* (Davidson & Castillo, 2000), offered students an opportunity to interact with a written history. Through worksheets and instructional explanations, Ms. Forest often reformulated this information and clarified important facts and meanings. Exposure to both the textbook and Ms. Forest's instructional explanations provided students not only with the historical content they needed to learn but also with information about the structures of historical discourse (Coffin, 2006b; Leinhardt, et al., 1994), specifically, *causal* and *coherence* structures.

To examine the influence of the causal and coherence structures found in a textbook passage and an instructional explanation on students' mental representations of a historical event, a mixed-methods design was employed. Descriptive statistics quantified aspects of both sources, making them comparable to each other and to students' summaries of the information. Concurrently, qualitative methods described variations between participants' results that are not captured by statistical measures. Using the design and methods described in this chapter, this study addressed three questions:

(1) What causal and coherence structures are present in a sample US History textbook passage?,

(2) To what extent do the causal and coherence structures of the textbook passage influence a teacher's mental representation of a historical event, as indicated by her summary, and her instructional explanation, as indicated by the lesson transcript?, and

(3) To what extent do the causal and coherence structures of the textbook passage and the instructional explanation influence students' mental representations of a historical event, as indicated by their summaries?

To address these questions, this study was designed in three phases: (1) a pre-screening phase, (2) a text-treatment phase, and (3) an instructional explanation-treatment phase.

The purpose of the pre-screening phase was to select excellent readers from among Ms. Forest's students. In consultation with Ms. Forest, one of her five classes was chosen based on three criteria. First, the selected class contained a majority of bright students from which pre-screening measures could identify a sufficient number of excellent readers. Second, the students in the selected class were responsible, potentially assuring a good return-rate for the informed consent forms provided the students and their parents. Finally, the students in the selected class were well behaved, limiting the amount of time off task during the instructional explanation-treatment phase of the study.

Once the class was selected, the students who returned the signed informed consent form were asked to take the GMRT-4 test of reading comprehension and a ten-question multiple choice quiz on the American Revolution. The results of the GMRT-4 ensured that selected student participants were excellent readers; the multiple choice quiz ensured that later data collected from the student participants would not be influenced by large amounts of prior knowledge of the historical event. Only students who returned a signed informed consent form, provided their assent, scored above grade-level on the GMRT-4, and scored 50% or lower on the

multiple choice quiz were asked to continue in the study. A copy of the approval received from the University of Pittsburgh's Human Subjects Review Committee is Appendix C.

The text-treatment phase consisted of four activities. First, both Ms. Forest and the identified student participants were asked to read the textbook passage. Then, they participated in an interview, followed by a third activity, providing a written summary of what they remembered from the textbook passage. Finally, participants were asked to respond in writing to four follow-up questions.

The final phase, the instructional explanation-treatment phase, was structured similarly to the text-treatment phase. After listening to Ms. Forest's instructional explanation, students met with the researcher during their lunch periods to again provide written summaries of the event and answer the same follow-up questions provided them in the text-treatment phase. This final meeting occurred in a room above the cafeteria, due to room availability issues, and only involved the student participants. Since Ms. Forest provided students with an instructional explanation of the event, a second summary was not solicited from her.

4.1 DEFINITION OF VARIABLES

Within the above research questions, there are three variables, drawn from the literature, which this study examined: *causal language*, *instructional explanation*, and *mental representation*.

These variables are operationalized below.

4.1.1 Causal Language

Causal language refers to the lexico-grammatical (often explicit) and semantic (often implicit) expressions of causation in language. More specifically, this study primarily identified causal expressions as they are illustrated in causal verbs, conjunctions, and asyndetic constructions. Examples of each will be provided below.

4.1.2 Instructional Explanation

As described in Chapter Two, *instructional explanations* (1) establish a specific query, (2) illustrate useful examples and non-examples, (3) interact with appropriate representations for a given topic (e.g., graphs, letters, maps, etc.), (4) build upon prior knowledge, (5) identify core principles, (6) identify boundaries of the concept being investigated and (7) resolve errors in thinking. In this study, *instructional explanation* entailed Ms. Forest's description/retelling of "The Victory at Yorktown" (Davidson & Castillo, 2000, p. 180), excluding procedural and classroom management conversation. A full transcript of Ms. Forest's instructional explanation, divided by sentences, is provided in Appendix D.

4.1.3 Mental Representation

A mental representation is an individual's unified understanding of a thing – in the case of this study, "The Victory at Yorktown" – that is altered as new information is integrated into an individual's situation model. In the case of abstract representations (Kintsch, 1998), as will be examined in this study, mental representations are the "pictures" or "movies" that individual's

see when they think about an event. Summaries of the historical event were used in this study as approximations of participants' *mental representations*.

4.2 DEFINITION OF TERMS

In order to clearly present this study's methods and data collection procedures, a common understanding of important terminology should be considered. Since the terms below are used throughout the remainder of this study, brief definitions of each term facilitate better communication of both procedures and outcomes. These specific terms have been selected for definition because they are either (1) specific to a particular discipline (i.e., Systemic Functional Linguistics or Kintsch's (1998) Construction-Integration Model) or (2) carry a meaning that is particular to this study. The terms below appear in roughly the same sequence as they appear elsewhere in this chapter, providing the orderly scaffolding of related concepts.

4.2.1 Excellent Reader

Throughout this study, *excellent readers* are defined as those students who scored above grade-level expectations on the Gates-MacGinitie Reading Test (GMRT), 4th Edition (Level 7/9, Form S, reading comprehension section). Since this study did not involve an examination of students' proficiency with vocabulary, only the reading comprehension portion of the GMRT was administered.

4.2.2 Text

The term *text* follows the linguistic use of the term as described by Halliday and Hasan (1976). *Text* describes any passage, spoken or written, that creates a unified meaning. More specifically to this study, the textbook passage “The Victory at Yorktown” (Davidson & Castillo, 2000, p. 180) and Ms. Forest’s instructional explanation are both considered texts. Even though they are smaller than their original wholes (the full textbook and the full class period, respectively), these texts both continued to their “natural divide,” per authorial subtitles and lesson plan duration, again, respectively.

4.2.3 Propositions

Propositions provide the psychological reality of the text (Kintsch, 1998). Readers identify propositions during reading by extracting the predicates and their associated arguments from the text. The most basic propositions are called “atomic propositions.” Atomic propositions contain a single predicate with their associated arguments. “Complex propositions” may also be identified when more than one argument or proposition relates to a given event.

For ease of analysis, propositions were operationalized as clauses in the text. Since this study examined both the psychological reality (i.e., content) as well as the means by which that content was expressed (i.e., linguistic structures), *proposition* was enveloped in the more authentic category *clause* to reduce the number of data points requiring analysis. Merging these two terms also allowed for analysis that examined *content* and *expression* concurrently, adding depth and authenticity to the analysis. What was lost in the potential to analyze singular, isolated

atomic propositions was gained in an analysis that did not artificially separate content and language.

4.2.4 Textbase and Network Chain

A *textbase* is developed when propositions are linked together during reading. This linking forms the literal, logical reality of the text (Kintsch, 1998). Given the idiosyncratic nature of readers' attention to a text's details, individual readers' textbases may differ. That is, the specific content one reader encodes in his/her long-term memory may differ from another reader.

When "the textbase" is referenced in this study, it refers to the representation of a text's clauses, including their associated causal, temporal, and related/explanatory connections. Those clauses that form the "backbone" of the textbase are referred to as the *network chain* (Trabasso & Broek, 1985; Trabasso, et al., 1984; Trabasso & Sperry, 1985). Of all of the possibly events which reader may recall, those located on the network chain are often recalled the most frequently. Since there are two input sources used in this study (the textbook passage and the instructional explanation), the textbase representation and network chain of each were determined. Participant's textbase representations and network chains were compared to those of the input sources.

4.2.5 Situation Model

A *situation model* is the psychological integration of a reader's textbase with the prior knowledge he/she activated during reading (Kintsch, 1998). Similarly to a reader's textbase, his/her situation model is idiosyncratic; each individual has a different source of prior knowledge

and may activate different prior knowledge during reading. Unlike a reader's textbase, there will be no exemplar situation model referred to in this study. Since readers' knowledge varies from other readers' knowledge, it would be impossible for any researcher to create situation models for the numerous life experiences readers may have. However, when participants expressed information or ideas that were beyond the textbase representations of either the textbook passage or the instructional explanation, it was assumed that the participant was activating prior knowledge, developing his/her specific situation model of the event.

4.2.6 Mental Representation

The information that is mapped from a reader's situation model into his/her long-term memory is known as his/her *mental representation* (Kintsch, 1998). While researchers cannot directly access reader's psychological mental representations, they can examine approximations of what readers' recall of a particular event, text, or experience. As an instance of recall, participants' summaries of the event "The Victory at Yorktown" (Davidson & Castillo, 2000) were accepted as approximations of this mapping process, after participants had engaged in activities between the time of source exposure and their recall.

4.2.7 Lexical Marker

Lexical markers are words or groups of words that denote the conceptual relation between words (Marshman & L'Homme, 2006). For example, in the sentence "Germany caused World War II," *caused* is the lexical marker that signifies that Germany produced the necessary and sufficient conditions for World War II to occur. Lexical markers specific to causation can occur frequently

as verbs (e.g., *caused, sparked, created*) and conjunctions (e.g., *because, so*). Lexical markers enable readers to draw explicit causal relationships between subjects. Causation expressed by lexical markers is in contrast to implicit modes of causal expression, such as asyndetic constructions and causal cohesion.

4.2.8 Asyndetic Construction

Authors use *asyndetic constructions* to implicitly express causation. Asyndetic constructions occur when two sentences, situated next to each other in the text, connote a causal relationship without the use of lexical markers (Fitzgerald, in revision). For example, an author might include the following two sentences in his/her passage: “Jane didn’t like Sally’s new boyfriend. A fight between the two began.” As described above, there are no lexical markers to indicate that the fight began *because* Jane did not like Sally’s boyfriend. Yet, there is an implied causal relationship between these two sentences.

The above example of an asyndetic construction represents one subtype identified in a survey of history textbooks, “mental process asyndetic constructions” (Fitzgerald, in revision). Authors use these constructions when they infer/ascribe a mental process to an actor, in this case “didn’t like.” There are also relational process asyndetic constructions, verbal process asyndetic constructions, modal asyndetic constructions, and degree asyndetic constructions.

4.2.9 Cohesion

Continuing with the discussion of “Jane and Sally’s fight,” the two sentences above not only indicate a causal relationship but also illustrate the concept of *cohesion*. Cohesion is a semantic

concept; the appropriate interpretation of one clause is dependent on the appropriate interpretation of the previous one (Halliday & Hasan, 1976). Cohesion defines a text as opposed to random sentences strewn together without meaning. It can be described at the inter- and intra-sentence level and is useful for explaining asyndetic constructions. In the above example, the phrase “between the two” refers to both Jane and Sally from the previous sentence. A reader who comprehends these two sentences as cohesive will recognize the referential cohesive tie that makes the connection explicit. Recognizing the tie allows a reader to integrate this knowledge into his/her textbase and subsequent situation model.

Causal cohesion occurs when cohesive ties imply a causal relationship between two events, rather than explicit lexical ties. Causal cohesion is differentiated from asyndetic constructions by the distance of the clauses in the text. While sentences forming an asyndetic construction are situated next to each other, causal cohesion is defined here as implied causation evidenced by ties across more than one text structure (e.g., a sentence, a paragraph divide, multiple paragraphs, etc.).

4.2.10 Coherence

Although the sentences in a text may be cohesive, they might not be coherent. In other words, all of the sentences may seem to relate to one another based on referential ties but the structure of the information and the inclusion of certain material might not make sense in a given text. *Coherence*, then, “refers to the extent to which the sequence of ideas or events in a text makes sense and the extent to which the text makes the nature of events and ideas and their relationships apparent” (Beck, et al., 1989, p.110).

Coherence is measured by the relationships between events, as depicted in the network chains developed for each source and all participant summaries. To the extent that one of these texts can be considered coherent, the total number of clauses located on a text's network chain is a general measure of coherence. The more a text describes content tangential to the main topic, the more a text can be considered incoherent.

4.2.11 Instructional Explanation

While all explanations are intended to communicate information, *instructional explanations* are designed to teach (Leinhardt, 1997). Instructional explanations include the contributions of the teacher, the contributions of the students, and the instructional materials used to explain a historical event. In this study, the historical event is defined as a question, "What happened during "The Victory at Yorktown?" (Leinhardt, et al., 1994). By including all three of these aspects within this concept, an inclusive, interactive explanation was captured without constraining instruction to fit a specific study design. Ms. Forest's instructional explanation of "The Victory at Yorktown" is provided in Appendix D.

4.3 PARTICIPANTS

Seven 8th grade US History students and their US History teacher were recruited to participate in this study. Pseudonyms for all participants are used throughout this study. Student participants were selected from one of Ms. Forest's classes (N=28). Of this group, seven excellent readers,

five females and two males, were selected to continue with the study's procedures, based on pre-screening criteria.

4.4 MATERIALS

4.4.1 The Text

The text selected for this study was an excerpt from the students' history textbook, *The American Nation* (Davidson & Castillo, 2000). Three pre-conditions were considered during its selection: (1) the text employed both lexical and asyndetic causal constructions, (2) the content of the text covered an event with which most students were unfamiliar, and (3) the content of the text matched the content being taught at the time of the study. Appendix A, "The Victory at Yorktown," contains the passage selected, based on these criteria.

The first pre-condition ensured that students were exposed to a variety of causal constructions from which they would develop a textbase. Narratives are organized by temporal and causal constructions (Perfetti, et al., 1995; Trabasso & Broek, 1985). The variety of causal constructions enabled an analysis of the influence of particular causal constructions on students' mental representations.

The second pre-condition related to the pre-screening portion of the study. Since student-participants were selected based on their reading comprehension abilities as well as their limited knowledge of the historical event, the selected passage needed to yield low scores on the knowledge assessment (Appendix E), following Perfetti et al.'s (1995) protocol.

The third pre-condition had two purposes. First, by selecting a passage that was already in the curriculum, this study did not interrupt normal instruction. Aside from this consideration being a part of a responsible study design, it was hoped that aligning this study with curricular content would encourage parental and administrative support of this investigation. Second, in order to study the instructional explanation provided for an event, the historical event used in this investigation had to be taught in the curriculum. Selecting an event that was already in the curriculum ensured that the event was taught. It also mediated validity concerns resulting from experimenter effects (Gay, Mills, & Airasian, 2009). As will be described below, Ms. Forest was asked to teach a lesson she had taught in the past, limiting research effects on the observation of normal instructional practice.

In consultation with Ms. Forest, “The Victory at Yorktown” was selected because many students had not been taught about the conclusion of the American Revolution in previous years. It was also assumed that it was unlikely that students had discussed this event outside of school. Upon cursory examination, one causal conjunction and three asyndetic constructions were present in the passage, providing a sufficient number of constructions with which to proceed with the study. Furthermore, Ms. Forest’s class was about to begin studying the end of the American Revolution at the time of this study. This particular passage met the design criteria and was integrated into the study design.

“The Victory at Yorktown” concludes Chapter Five of *The American Nation* (Davidson & Castillo, 2000). It spans three text pages, however the text only covers about one and a half pages total; space on these pages was also dedicated to two maps and a biographical sketch of James Armistead. It is divided into three sub-sections: “An American traitor,” “Cornwallis trapped,” and “The British surrender.” After a short introduction about Cornwallis’ decision to

try to conquer Virginia and sever the Patriot's supply lines, "An American traitor" details Benedict Arnold's turn traitor and his victories in Virginia. This section is followed by "Cornwallis trapped," where Cornwallis retreats to Yorktown. The passage describes how Washington, with the help of the French army and navy, laid siege to Yorktown. Finally, in the last section, readers learn that Cornwallis surrendered.

4.4.2 Follow-up Questions

Although participants' summaries of the textbook reading and the instructional explanation provided a rough estimate of their mental representations, summaries are only one measure of student learning. After reading the textbook passage and providing their summaries, both Ms. Forest and the student participants were asked four follow-up questions (Appendix F). Following Perfetti et al.'s (1995) design, these questions solicited information from participants that they may have receptively comprehended but did not express in their summaries. Two of these questions related to two of the passage's asyndetic constructions, illustrating participants' comprehension of implicitly expressed content. The other two questions were scenarios that asked participants to reason about causal events in the passage, simulating the decisions that the historical actors in the text made. These scenarios were intended to elicit still more information about participants' reasoning of causal constructions.

4.4.3 Interviews

Both Ms. Forest and the student participants were interviewed about their experiences with history (Appendix G and Appendix H). These interviews served two purposes in this study. First,

the answers that the study participants offered about their experiences in history education and their historical epistemology contextualized this study's results. Thus, these interview data were not intended to be included in the study's findings. Rather, as evidenced in Chapter Three, the participants' answers set the stage for the expectations of all the participants with regards to history instruction in the Woodland Hills School District.

Second, the interviews served the functional purpose of buffering time between the participants' exposure to the textbook passage and their summary of the event. By separating these two activities, participants were unable to simply recite information from the text. Rather, engaging participants in discussions about their history experiences forced them to rely on their long-term memories to recall the historical event.

Originally, Ms. Forest and all student participants were supposed to read the passage, participate in the interview and summarize the event in a one-on-one setting with the researcher. However, given time constraints in the school schedule, Ms. Forest's interview was the only one given in this fashion. All student participants were asked to read the passage individually as they sat in a group, engage in the interview as a group, and individually summarize the event while remaining in the group. Due to this revised context, the interview was only partially completed during this first session. Available student participants were later asked to complete the interview three days later, again, as a group.

4.4.4 Instructional Explanation

Ms. Forest's instructional explanation was the only material that the researcher was unable to prepare. Given the nature of instructional explanations and a desire to limit the amount of experimental intervention used in this study, Ms. Forest was simply asked to teach a lesson

explaining the events of “The Victory at Yorktown” (Appendix D). Ms. Forest chose to enact her instructional explanation in a lecture format, aided by PowerPoint slides. Students took notes on a guided note-taking worksheet while she spoke.

During her thirty-minute instructional explanation, Ms. Forest covered topics ranging from Benedict Arnold’s turn traitor to the British surrender. Aside from her attempts to relate these historical events to students’ prior knowledge (e.g., relating Cornwallis’ situation at Yorktown to being stuck on a friends’ porch waiting to go home), the content of her instructional explanation mirrored the content of the textbook. Students were rarely asked to participate in this explanation; only two students contributed comments.

4.5 PROCEDURES

As mentioned above, some of the procedures intended for this study were modified in order to meet various, unplanned scheduling obstacles. Holiday breaks, 4-Sight testing (data collection to predict students’ performance on the Pennsylvania standardized reading and math tests), and teacher absences all necessitated the modification of the originally planned procedures. This section will outline the original procedures and modified procedures for all three phases of the study.

4.5.1 Phase I – Pre-screening

Ms. Forest was the teacher recommended by Woodland Hills Junior High School’s principal for participation in this study. After obtaining her consent, Ms. Forest was consulted regarding

which class to study, given the above criteria. It was originally hoped that the selected class would produce a high return rate of consent forms, providing a high number of students from which ten could ultimately be selected to participate in Phases II and III. Of the 28 students in the selected class, 13 students returned a signed consent form, a return rate of 46%. After spending two additional weeks reminding students to give their parents the consent form, and contacting parents via Ms. Forest, it was determined that all of the students who would return the signed consent form had done so.

These 13 students were asked for their assent; all of them agreed to participate in the study. Per the planned procedures, these 13 students were scheduled to participate in the pre-screening procedures six days later. Unfortunately, there was not enough time left in the scheduled class period on that day to complete both the GMRT-4 test of reading comprehension and the multiple choice quiz. Instead, the students were asked only to complete the ten-question multiple choice quiz (Appendix E); all students scored the required 50% or lower to continue with the study procedures.

Since Ms. Forest was planning to begin teaching the lessons fore-fronting the selected textbook passage, administration of the GMRT-4 was postponed until the end of Phase III. Thus, 13 students were asked to participate in the final two stages of the study, even though it was not clear as to whether all 13 students' data would be used for final analysis.

The pre-screening procedures were completed after Phase III was conducted. Of the original 13 students' data, seven students met the pre-screening criteria of an above-average reading comprehension score and a 50% or lower score on the multiple choice quiz. Only these seven students' results are reported in this study.

4.5.2 Phase II – Text Treatment

Three school days prior to Ms. Forest’s instructional explanation, the student participants were asked to read the selected textbook passage, engage in an interview, write a summary of the historical event they read about, and answer four follow-up questions related to the event. The timing of Phase II implementation was designed to reduce the amount of prior knowledge students had about the event during the phase. While students were in the midst of learning about the final years of the American Revolution, they had not yet learned about the final battle at Yorktown. Thus, the Phase II procedures did not interfere with the curricular content being taught, yet students also did not have prior knowledge of the event.

It was originally hoped that time would be set aside for each student participant to meet with the researcher one-on-one to complete Phase II procedures. However, scheduling complications hindered this plan. Instead, the original procedures were modified from a one-on-one setting to a group setting, where students’ written responses were solicited individually but the interview was conducted as a group. Per the time constraints of the school’s 45-minute class periods, the interview was also cut short to ensure that all students had enough time to write as much as they could recall on both the summary and the follow-up questions sheets.

Since only half of the interview was completed on this first day of Phase II, it was continued the next day. Ms. Forest was absent on the second day of Phase II and no lesson plans were left for the substitute. Without any work to do, six of the 13 student participants agreed to continue the interview in the media center. During this impromptu meeting, the students completed Phase II.

Two days after the student participants completed Phase II, so too did Ms. Forest. During her planning period, Ms. Forest met with the researcher to read the passage, participate in a one-

on-one interview, write a summary of the event described in the passage, and answer the same four follow-up questions the student participants had answered. This data was solicited for comparison with her later instructional explanation, providing a detailed account of her knowledge of the historical event.

4.5.3 Phase III – Instructional Explanation Treatment

Three days after the completion of Phase II, Ms. Forest presented her instructional explanation to her whole class. Her explanation took the entire period and was audio and video recorded. Any student who had not returned a signed consent form was excluded from the camera lens. This data was later transcribed.

During the students' lunch periods that same day, the 13 student participants met to provide written summaries of the event and to respond to the same four follow-up questions they answered in Phase II. All students were given approximately twenty minutes to write their responses. Lunch was provided for these students so that they could eat while they wrote.

4.6 DATA ANALYSIS

Following the procedures outlined above, three sets of data were analyzed: (1) textbook data, (2) teacher participant data, including her summary, answers to the four follow-up questions, and her instructional explanation, and (3) student data, including two summaries per student as well as two sets of follow-up questions. Interview data was also analyzed, informing the context of the study in Chapter Three.

4.6.1 Textbook Data

The selected textbook passage was analyzed for causal and coherence structures using Halliday's (2004) Systemic Functional Linguistics and Kintsch's (1998) Construction-Integration Model as frameworks. Prior to analysis, the textbook passage was divided into clauses so that both analysis tools could be applied. Since this study examined the influence of input content and language on students' mental representations, dividing the passage into both propositions and clauses would have created a false bifurcation between content and language. As a meaning unit, clauses comprise predicates and their associated arguments (the definition of *propositions*) as well as information about the ways that information is expressed. Thus, clauses were selected as the units by which causal and coherence structures were analyzed in this study.

4.6.1.1 Coherence structures

The passage's coherence was analyzed by establishing each clause's link(s) to other clauses in the passage. Three types of coherence links were identified, (1) causal, (2) temporal, and (3) related/explanatory. Causal links were identified semantically; any clause that was necessary and/or sufficient for another clause to occur was coded as the antecedent to the causal link. Clauses that enable another clause to occur were also coded as causal antecedents, although such links expressed implied causation. Temporal links were identified by the inclusion of temporal markers (e.g., "next," "then," "after," etc.). Links between clauses that were not causal or temporal were labeled "related/explanatory."

Once the links between clauses were established, they were depicted as a network of clauses, following the protocols of Trabasso and his colleagues (1985; 1984; 1985) as well as Perfetti and his colleagues (1995). Clauses most important to the passage's narrative appeared as

the network chain. Clauses not located on the network chain were then compared to those that were, detailing which clauses the authors fore-fronted through coherence. This description also suggested the relative coherence/incoherence of the passage.

4.6.1.2 Causal structures

The experiential metafunction of each clause was also analyzed using Systemic Functional Linguistics (Halliday & Matthiessen, 2004) as an analytical tool. Specifically, the text's causal structures were described as either explicitly causal or implicitly causal. Explicit causal constructions were described through their lexical markers (i.e., causal verbs and conjunctions). Implicit causal constructions were analyzed by describing the transitivity and cohesion structures that implied the causal relationships. More specifically, asyndetic constructions and causal cohesion were analyzed in order to describe the types of implied causal constructions used in the text.

4.6.2 Teacher Participant Data

Three types of teacher participant data were collected: (1) Ms. Forest's summary, (2) her responses to the four follow-up questions, and (3) Ms. Forest's instructional explanation. As narrative accounts, Ms. Forest's summary and instructional explanation were analyzed similarly to the textbook passage. Their common analysis is described below. The four follow-up questions were analyzed separately and then compared to the results of the summary and instructional explanation.

4.6.2.1 Narrative accounts

Like the textbook passage, both Ms. Forest's summary and instructional explanation were divided into clauses and then depicted as causal networks. The causal constructions for each narrative were also identified and described. The results of these analyses allowed for comparisons between the textbook passage, Ms. Forest's summary, and her instructional explanation, describing how each narrative depicts the coherence of similar content and expresses that content through language.

4.6.2.2 Follow-up Questions

As short, directed questions, the follow-up question format did not elicit narrative data. Instead, these responses provided data about whether or not Ms. Forest was receptive to implied information in the passage, regardless of whether or not she included this information in her narrative productions. Thus, this data was coded regarding the presence or absence of some of the implied relationships described in the text. This data was used in support of or contrast to Ms. Forest's narratives.

Unfortunately, the scenario questions asked did not provide usable data for comparison. The two scenario questions posed solicited personal opinions about how participants would react in situations described in the passage. These opinions illustrated more about the participants' personal conflict resolution strategies than their comprehension of the implied causal relationships. Thus, all scenario data collected in Phases II and III were excluded from the results of this study.

4.6.3 Student Data

Two sets of data were collected from each of the seven student participants: (1) summaries and follow-up questions solicited after students' exposure to the textbook passage and (2) summaries and follow-up questions solicited after students' exposure to Ms. Forest's instructional explanation. These data sets were analyzed per student and then compared to other students and to the results of both the passage analysis and instructional explanation analysis. Restructuring the information found in both the passage and the instructional explanation enabled the latter analysis.

4.6.3.1 Post-passage summaries and follow-up questions

Each student's passages were divided into clauses and analyzed per the causal and coherence analyses described for the earlier narrative passages. These analyses enabled comparison of the information summarized between student participants and a description of the causal structures each student used to express the content. Thus, a comparison was made between students who were exposed to the same input, illustrating the varying mental representations and language decisions of like peers. Again, the follow-up questions were used to explain the students' comprehension of implied causal constructions in the passage, regardless of their expression in the students' summaries.

4.6.3.2 Post-instructional explanation summaries and follow-up questions

These same analyses were used to examine the students' second set of summaries and follow-up questions. These results, however, enabled comparisons to be made between individual participants. That is, changes in the content and language used from the text treatment to the

instructional explanation treatment were described. These data measured the influence of the one treatment on students' production compared to the influence of another treatment.

In order to describe these student data in relation to the textbook passage and Ms. Forest's instructional explanation, these latter data were restructured into important Events/States. The importance of these Events/States were determined with preference to the causal and temporal links that connected the clauses and their location on the network chains of both sources, following Perfetti, Britt and Georgi's (1995) procedure for comparing single participant responses to multiple network chains. The content of each student's summaries were compared to these Events/States in order to trace from which source students recalled information.

The causal constructions used by the students were also compared to those used by the textbook authors and Ms. Forest in her instructional explanation. The frequency of each type of causal construction produced by the student participants were combined with the frequencies and types used by the input sources. In this way, the causal constructions between all three of the study's data sets were compared, describing the causal and coherence structures employed by the authors of all texts.

5.0 FINDINGS

Seven students and their 8th grade US History teacher participated in summarizing their understanding of “The Victory at Yorktown.” After reading about this event in the class’s US History textbook, the teacher as well as the students wrote a summary of it and answered follow-up questions. The teacher then presented an instructional explanation of this event to her class. Afterwards, the seven students again wrote summaries of the event and answered the same follow-up questions. These data were collected to answer three research questions: (1) What causal and coherence structures are present in a sample US History textbook passage?, (2) To what extent do the causal and coherence structures of the textbook passage influence a teacher’s mental representation of a historical event?, and (3) To what extent do the causal and coherence structures of the textbook passage and the instructional explanation influence students’ mental representations of a historical event? This chapter is divided into three sections, one per research question.

Section One identifies and describes the causal and coherence structures in the textbook passage. First, the passage’s network chain is established, illustrating the clauses most relevant to summarizing the narrative. Then, the passage’s causal constructions are described in order to evaluate the extent to which the authors used explicit and implicit causal structures and how implicit causal constructions are formed within the text. The findings from these two analyses

form the basis for a comparison between the passage, the participants' summaries, and the teacher participant's instructional explanation.

Section Two examines the influence of the textbook passage's causal and coherence structures on the teacher participant's summary and instructional explanation. After the network chain and causal constructions from the teacher's summary are compared to those found in the textbook passage, her instructional explanation is analyzed in the same manner. Together, the analyses of these two pieces of data illustrate the teacher's mental representation of "The Victory at Yorktown." In addition, the descriptions of the causal and coherence structures found in the instructional explanation are combined with those identified in the textbook passage, forming a description of important Events/States common to both sources as well as a comparison of the causal constructions used in the textbook passage and the instructional explanation. The integration of these two sources represents the causal and coherence structures to which students were exposed prior to writing their final summaries.

Section Three examines the influence of the causal and coherence structures found in the textbook passage on students' summaries, as well as the influence of the Events/States and detailed description of all causal constructions identified in Section Two. This data is explored by comparing information included in the students' first summaries (those written after only reading the passage) to the information in the passage. Next, information from the students' second summaries (those written after exposure to both the passage and the instructional explanation) were compared to the Events/States common to both the textbook passage and the instructional explanation. Then, the causal constructions students formed in their summaries are described and compared to the passage and the instructional explanation. Finally, students'

understandings of implied, asyndetic constructions are examined by comparing their summaries with the follow-up questions asked at the end of each summary exercise.

5.1 WHAT CAUSAL AND COHERENCE STRUCTURES ARE PRESENT IN A SAMPLE US HISTORY TEXTBOOK PASSAGE?

Before any influence of the textbook passage could be determined, the passage was analyzed in order to determine the causal and coherence structures to which both Ms. Forest and the student participants were exposed. Prior to analysis, research suggested that (1) the passage's network chain would display linear connections (e.g., Trabasso, et al., 1984) and (2) asyndetic constructions would occur almost as frequently as other forms causation (e.g., Fitzgerald, in revision). On the whole, these findings were confirmed; however, coherence analysis revealed important details about the structure of the passage. Furthermore, causal analysis of the passage illustrated the authors' delicate use of causal constructions.

5.1.1 The Textbook Passage's Network Chain

By separating the passage into clauses and identifying the logical connections between them, clauses most important to the main narrative become readily apparent. Appendix I, in conjunction with Appendix J, depicts each of the 60 clauses that form the passage as a whole and the relationship between them. Of the 60 relationships among and between these clauses, 10 were temporal and 13 were causal. The rest were identified by a third, general category of "related/explanatory" clauses. Those clauses that are most important to the narrative's network

of meanings form a “chain” of clauses, from which the general concept of the narrative can be understood (Trabasso & Broek, 1985).

In general, the passage’s network chain depicted a linear narrative (Appendix I). More than half of the clauses (56.66%) were located on the network’s chain. Along this chain (indicated by grey-font numbers), the authors expressed causal (20%), temporal (26.66%), and related/explanatory (53.33%) connections, underscoring both the relationships between these events and providing useful information about how those relationships connect (and progress) within the passage.

However, a substantial portion (approximately 43%) of the passage’s clauses fell outside of the network’s chain. Most of these clauses are grouped together, accounting for approximately 71% of all clauses outside of the chain. This set of clauses coincides with a discussion of Benedict Arnold’s traitorous victories for the British (Clauses 6-23, Appendix J). Although this discussion was only tangentially connected to the passage as a whole, the authors included it in an attempt to build coherence with the larger textbook narrative, contrasting Arnold’s role as a British general to information about Arnold’s successes as a military general for the Americans. In two prior sections of the textbook, Benedict Arnold is portrayed as an important general for the Continental Army (See Davidson & Castillo, 2000, pp. 164 and 171). Thus, his successful leadership as a traitor contextualized Arnold’s role in the American Revolution as well as Cornwallis’ decision to continue his fight in Virginia.

While the inclusion of Benedict Arnold’s traitorous behavior makes sense in the global coherence of the textbook, it is only loosely connected within this passage. The connections made between Arnold and Cornwallis center on three clauses: “He [Cornwallis] planned to conquer Virginia,” “The British had achieved some success in Virginia, even before the arrival

of Cornwallis,” and “Benedict Arnold, formerly one of the Americans’ best generals, was not leading British troops” (Appendix A). These three clauses are related only in time and place, not with regard to the clauses’ actors or motivations. Arnold and Cornwallis are never mentioned in the same sentence, a connection that would make Cornwallis’ decision to fight in Virginia directly connected to Arnold’s past success in the area. Rather, the authors’ used one temporal and one explanatory connection to link the network’s chain with the discussion of Arnold’s traitorous behavior (Appendix I).

The authors’ explanation about Arnold’s decision to help the British is also segregated from the main text because of the structure of the historical account. As the network’s chain illustrates, the portion about Benedict Arnold is located near the beginning of the passage; the rest of the text (beginning at Clause 24, Appendix J) is concerned with the main focus of the passage, the events at Yorktown. Without stronger and more numerous connections between these two portions of the text, the Benedict Arnold section appears to be a sidebar, loosely relating the actions of two generals.

Further complicating the relationship between Arnold’s actions and the rest of the passage is the nebulous connection between temporal links and explanatory links in the text. Although this study defined temporal links as those in which lexical temporal markers were present (i.e., if a clause used a word such as “next,” “before,” “after,” “then,” etc.), the text’s explanatory links often implied temporality. For example, while describing how and when General Washington laid siege to Yorktown, the authors’ wrote, “With the Americans were French soldiers under the Comte de Rochambeau... The combined army rushed to join Lafayette in Virginia” (Appendix A). No temporal cues were used in either of these two sentences; however, they implied two temporal relationships. By using “combined” in the second sentence,

the authors conveyed that the French and the Americans marched at the same time. Furthermore, the use of the non-finite “to join” conveyed an image of Washington and the Comte de Rochambeau’s forces engaging Cornwallis *after* Lafayette already had done so. Thus, although these sentences did not meet the criteria for an explicit temporal notation, they did support the chronological progression of the passage.

By connecting Arnold’s actions to the remainder of the passage, however, the authors conveyed an even more explicit temporal connection than the example above. At the beginning of the passage, the authors oriented the reader to the context of the historical event, explaining that Cornwallis invaded Virginia in the spring of 1781. Two sentences later, in a new section subtitled “An American Traitor,” the authors wrote, “The British had achieved some success in Virginia, even before the arrival of Cornwallis. Benedict Arnold, formerly one of the Americans’ best generals, was now leading British troops” (Appendix A). As a connection to other passages about Arnold within the textbook, where the authors explained that he was an American general, these sentences suggested that Arnold is *by now*, at the time of Cornwallis’ trek into Virginia, a traitor. If, however, these sentences were read solely in relation to the passage’s introductory paragraph, Arnold would appear to be an active British general *at the time* that Cornwallis invaded Virginia. Thus, the language the authors used to convey time and explanation complicated the text, implying historically invalid relationships.

Just as explicit temporality and implied chronology complicated *time*, so too was *cause* complicated by explicit and implicit causation constructions. Although “cause” was labeled as a singular category on the depiction of the network’s key (Appendix I), the means the authors used to express it varied throughout the text. A more delicate linguistic analysis demonstrated that the

passage’s causal relationships were expressed in four ways, through conjunctions, cohesion, and two types of asyndetic constructions.

5.1.2 Causation in the Textbook Passage

Research findings, suggesting that asyndetic constructions would occur almost as frequently as other forms of causation, were confirmed. As Table 5.1 illustrates, asyndetic constructions were one of the most common causal constructions in this passage, expressing seven implied causal connections, matching the number of causal connections expressed by cohesion. The authors only used one causal conjunction and no other explicit lexico-grammatical constructions such as causal verbs or nouns. (See Appendix K for specific instances of these occurrences.)

Table 5.1: Occurrence of Types of Causation Within the Textbook Passage Per Word

Type	Conjunctions	Cohesion	Asyndetic Constructions	
			Mental Process	Modal
Occurrences	1 (.19%)	7 (1.35%)	5 (.96%)	2 (.39%)
Total			7 (1.35%)	

The authors used two sub-types of asyndetic constructions, each to a different affect. Although neither sub-type expresses direct cause-effect relationships, the conditions that enabled consequent events were conveyed, implying a causal relationship between two sentences. Thus, the authors drew on varied linguistic structures, described below, to link enabling antecedents (“causes”) with consequent events (“effects”).

In one sub-type of asyndetic construction, the authors used modality to imply causal relationships. In one instance, modality was used to explain the probability of a consequent event related to a historical actor’s situation, as in, “Cornwallis was cut off. He could not get supplies”

(Appendix A). The addition of “could” to “could not get” illustrates a high degree of commitment to the assertion that Cornwallis was cut off. In other words, instead of saying “Cornwallis was blocked off and might not have been able to get supplies,” the authors chose to explain that it was impossible for Cornwallis to get supplies. Not only does the use of the negative modal “could not” illustrate the consequence of “being cut off” but it also supports the authors’ assertion that Cornwallis found himself isolated.

In another instance, the authors also used a modal of obligation (“had to”) to imply causation. Unlike “could not,” which involves probability of an event or action, “had to” conveys a meaning of obligation on someone else’s part to act. For example, in “Cornwallis sent Loyalist troops to attack Charlottesville, where the Virginia legislature was meeting. Governor Thomas Jefferson and other officials had to flee” (Appendix A), the authors implied that Jefferson and the Virginia legislature were obliged to flee because of the attack. The attack by some “caused” others to run away. Again, the authors’ choice of modal indicated a high degree of commitment. According to the authors, Jefferson and his colleagues had no other choice but to run -- fighting or hiding were not options.

The authors also used another type of asyndetic construction to imply causation, however. Asyndetic constructions involving mental processes were the most frequently used by the authors. These constructions use one or more verbs to construe “a quantum of change in the flow of events taking place in our own consciousness” (Halliday & Matthiessen, 2004, p.197). When used in an asyndetic construction, this “quantum of change” explains the antecedent (“cause”) of the implied cause-effect relationship. That is, by explaining a historical actor’s mind-set or mental state, authors are able to imply the reason for a consequent action.

For example, in the introduction to the passage, the authors wrote, “In the spring of 1781, he [Cornwallis] moved his troops south into Virginia. He planned to conquer Virginia and cut off the Americans’ supply routes to the South” (Appendix A). By constructing these sentences in this way, the authors conveyed that Cornwallis, the actor in the first sentence, moved his troops intentionally. The reason for his intentional decision is realized in Cornwallis’ role as sensor of cognition. The thought that Cornwallis had “to conquer Virginia and cut off the Americans’ supply routes to the South” provided the reason for moving his troops.

Furthermore, the reader is cued to recognize “planned” as a cognitive process rather than desideration (“thought through” rather than “want”) by the logic of the second sentence. Cornwallis’ plan was two-fold, not a whim or desire for glory. Through these cues, the authors indicated that Cornwallis was intentional in his actions; his mental processes and his actions were correlated.

Processes of cognition are not the only ones that were used asyndetically, however. The authors also used emotive mental processes to explain why events occurred, as illustrated by “enraged” in “Arnold’s act of treachery and his raids on towns in Connecticut and Virginia enraged the Patriots. Thomas Jefferson, governor of Virginia, offered a sizable reward in gold for his capture” (Appendix A). Rather than the cognitive mental process described earlier, this asyndetic construction relies on the emotive power of “rage” to drive the Patriots, exemplified by Thomas Jefferson, to action.

Yet another example of how various mental processes can be used to imply causation is in the use of perception. Often, perception is directly experiential; seeing, hearing, feeling, etc. are all processed by the brain directly from real-world experience. Indeed, these direct experiences can cause action. Individuals can also metaphorically sense, however, as in

“Washington saw an opportunity to trap Cornwallis on the Yorktown peninsula. He marched his Continental troops south from New York” (Appendix A). The authors used “saw” to blur the boundaries between perception and cognition; Washington did not physically *see* an opportunity, yet the authors did not say that he intentionally decided to trap Cornwallis either. Even in with these blurred boundaries, however, the authors used the mental process to imply causation. By “seeing” the opportunity, Washington was enabled to act toward his ultimate goal of defeating Cornwallis.

Not only do these last two examples illustrate how various types of mental processes were used to imply causation in this passage, they also illustrate the mental processes that were used to imply “forward” and “backward” causation. In the first example involving Cornwallis’ plans to move his troops, the authors situated the consequence before the antecedent. In other words, the second sentence “caused” the first. In the last two examples, however, the first sentence explained why the second occurred. In both cases, the authors used the mental process in the antecedent sentence; mental processes explained consequent events in this passage.

Mental process asyndetic constructions were not only used frequently as a sub-type but they also played a role in causal cohesion. While asyndetic constructions imply causation at the sentence-level, causation can also be expressed across greater distances in the text through cohesive ties (Halliday & Hasan, 1976). Of the 14 causally related events in the passage, seven were identified through cohesive ties. Of those seven, mental process asyndetic constructions factored in two.

The authors expressed causation through cohesive ties in two instances, (1) when more than one antecedent or consequence factored into a related cause or effect, and (2) when details regarding an antecedent or consequence forced an antecedent apart from the consequence in the

text. It is in the first instance that mental process asyndetic constructions played a role in cohesive causation.

When the authors noted that Benedict Arnold's treacherous behavior "enraged the Patriots," they cited two consequences of their rage. First is the asyndetic construction mentioned above; "Thomas Jefferson, governor of Virginia, offered a sizable reward in gold for his capture" (Appendix A). Yet, another consequence was that Washington ordered Arnold to be hanged. This second consequence was linked to the enraged Patriots by a reference to Arnold as well as the inclusive relationship of George Washington as a member of "Patriots." Thus, Arnold's "act of treachery" was causally related to Washington's desire for him to be hanged.

Still a second type of cohesive causation occurs when details involving an antecedent or consequence separated two causally related events. For example, when the authors explained that Cornwallis sent troops to attack Charlottesville, they also wanted to explain that this attack caused Jefferson and his colleagues to flee, as explained above. However, Jefferson's flight did not progress the narrative. Rather, it was the next paragraph that causally related Cornwallis' orders and a colonial reaction; the connection between the two progressed the narrative. The authors began the next paragraph by explaining that "American troops under Lafayette fought back by making raids against the British" (Appendix A). Using "Cornwallis' troops" as an elliptical object, the authors causally linked Lafayette and his men to Cornwallis' attacks. The inclusion of Jefferson's flight did not negate the causal relationship between the attacks and Lafayette's counter attack; it simply separated discussion of the two events.

5.1.3 Summary

In this passage, then, causation was expressed in various ways, most of them implicit. Although there was one instance of an explicit use of a causal conjunction, most of the causation expressed in this passage was derived from implied, asyndetic constructions and cohesive causation that necessitated readers' attention to the narrative at and above the sentence level. Furthermore, these last two types of causation were expressed in varied, delicate forms (Figure 1). Thus, the network's largely linear chain belies the complexity of its construction, especially in relation to causation. Various inter- and intra-clausal structures signaled explicit and implicit causation.

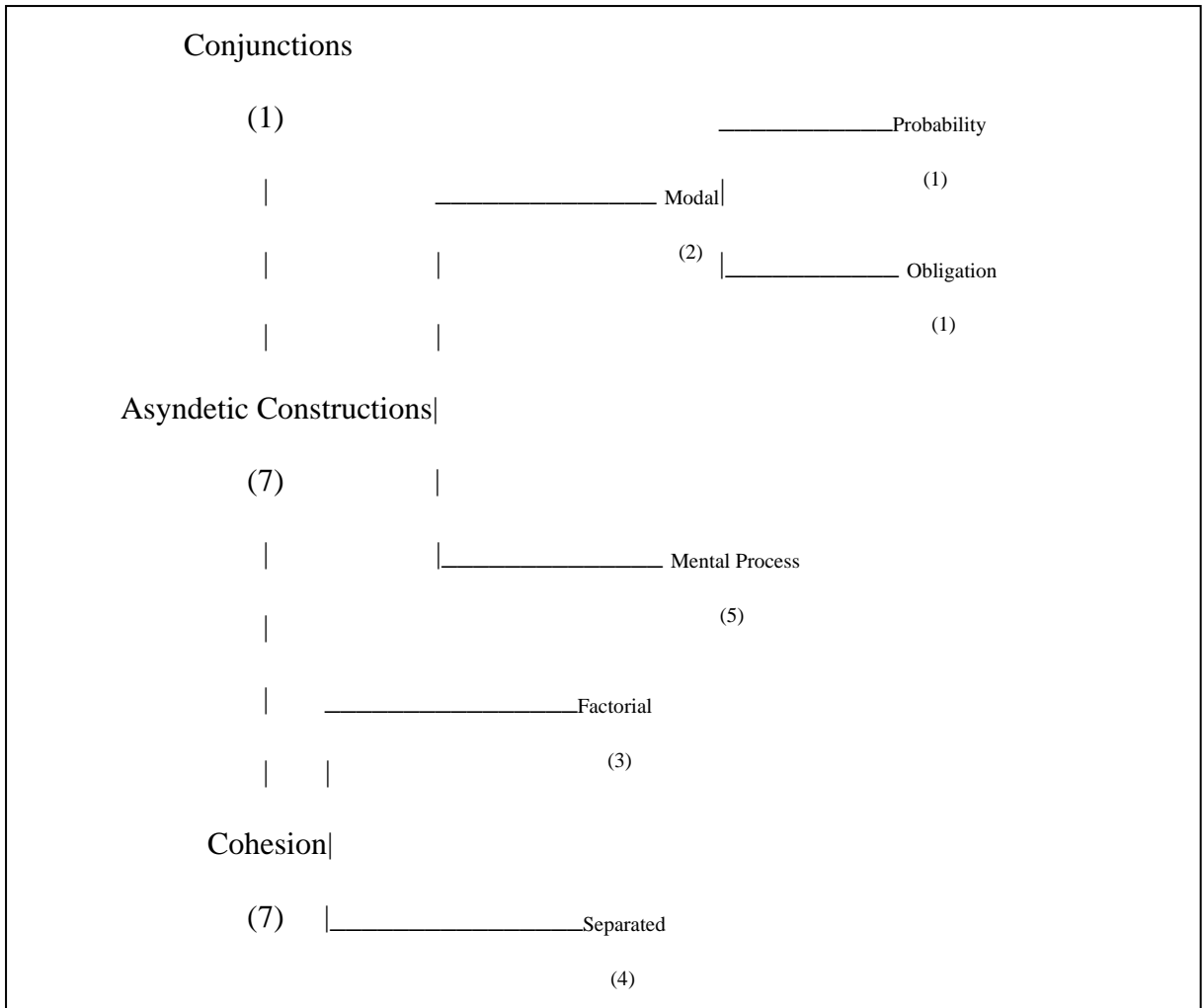


Figure 1: Types of Causation in Passage with Number of Occurrences

Since causal structures are important for reader recall of narratives (Trabasso & Broek, 1985) and language and content are inextricably linked (Halliday & Matthiessen, 2004), both the language and structure of the passage influence readers’ mental representations of history, as indicated by their summaries of the event. In addition, research suggested that the majority of readers’ summaries would contain information found along the passage’s main causal chain (Trabasso & Wiley, 2005). The close connection between the passage and a reader’s summary might be even stronger for individuals who immerse themselves in a particular text over a period of time.

5.2 TO WHAT EXTENT DO THE CAUSAL AND COHERENCE STRUCTURES OF THE TEXTBOOK PASSAGE INFLUENCE A TEACHER'S MENTAL REPRESENTATION OF A HISTORICAL EVENT?

The teacher participant in this study is an example of an individual who has immersed herself in this particular text. As was described in Chapter Three, Ms. Forest adopted this textbook and frequently uses it in her instruction. Thus, she is an example of a high-knowledge individual who is frequently immersed in both the language and content of the text. When asked for her summary of the sample textbook passage, the majority of the events she included in her summary were identified on the passage's main network chain. However, the language she used in her writing did not mirror the causal structures found in the text. Analysis of her instructional explanation produced similar results, although the purpose of the instructional explanation altered her inclusion of content and causal language. To answer this second research question, first, Ms. Forest's summary was analyzed; then, her instructional explanation was similarly analyzed. Finally, comparisons between the passage, her summary, and her instructional explanation are made.

5.2.1 Ms. Forest's Summary of the Passage

Ms. Forest's summary was short; yet it covered factual information from throughout the textbook passage. As the analysis below illustrates, the coherence structure of her summary is similar to that of the textbook. The causal language Ms. Forest uses in her summary, however, is explicit, unlike the textbook passage.

5.2.1.1 Coherence structure of Ms. Forest's summary

Although Ms. Forest's summary was short, the information was presented in a fairly linear fashion (Appendix L); only three of the nine clauses (33%) were located off of the passage's chain (Appendix M). All three of those clauses were explanatory, contextualizing information on the passage's chain. For example, Ms. Forest made the claim that "the British were suffering defeats" at the time that the event "The Victory at Yorktown" began, yet contrasted this information with a time when they had once won victories in Virginia. These explanatory clauses, then, were meant to contextualize main events, not to develop new information.

Ms. Forest's summary did not link any clauses using explicit temporal markings. Rather, along her summary's network chain, she used three explanatory links and two causal links; the causal links were the last two on the chain. Instead of temporal markers, Ms. Forest used prepositions to contextualize events, giving them a chronological order without directly stating when each event occurred in sequence. The only temporal cue she used was the date that the British surrendered, October 19, 1781. This date, however, was not used to link any of the summary's clauses; thus, its temporal significance is not marked on the network chain.

5.2.1.2 Causal structure of Ms. Forest's summary

In the two instances when she used causal connections, Ms. Forest employed two different causal structures. The first instance of causation was a "preposition + modal" structure linking clauses 5, 6, and 7: "With limited supplies and being blockaded into Yorktown and most ground troops under siege, Cornwallis had no choice but to surrend¹² on Oct 19 1781" (Appendix L). In order

¹² In order to avoid unnecessary notations throughout this study, I refrained from using [sic] to note spelling and grammar issues. All direct quotes are written as they were written or spoken by the participants.

to express the causal link between the Yorktown siege and Cornwallis' eventual surrender, Ms. Forest construed a circumstance using preposition phrases. Although prepositional phrases are not clauses unto themselves, they simulate clausal structures in that they contain noun-groups (i.e., "limited supplies") that are indirect participants in the event (Halliday & Matthiessen, 2004). The causal relationship linking these indirect participants to Cornwallis' decision to surrender was explicitly marked by Ms. Forest's use of the modal "had...to." Through the use of the modal, Ms. Forest signals that the prior circumstances compelled, or forced, Cornwallis into a decision; the decision was not his own to make.

This causal structure is followed in the next clause by a less-marked causal structure – a causal verb. In Clause 9, Ms. Forest wrote, "Which led to the American Colonist victory of the British with the help of the French & Spanish" (Appendix L). By using the verb "led," she indicated that Cornwallis' surrender (discussed in the previous clause) enabled a total victory over the British. Although "led" was not as causally imperative as the modal "had to," it still creates an explicit causal link between the last two clauses.

These findings do not match with the way cause is expressed in the textbook passage. While the textbook authors used various causal structures, Ms. Forest's language mirrors none of them, choosing instead to use a causal verb and a preposition + modal structure to make causal connections between events. Furthermore, the textbook passage and Ms. Forest's summary differ in the explicit and implicit nature of causal expression. While cause was only explicitly expressed once in the textbook passage, Ms. Forest used only explicit means of causation, indicating her certainty about those relationships.

Ms. Forest's commitment to certain relationships is also illustrated in her discussion about Benedict Arnold, a discussion to which the textbook authors devoted quite a bit of time but

did not substantially link to their network's chain. Ms. Forest's brief discussion of Benedict Arnold was marked by verb choice and aspect, conveying a sense that Arnold's victories were in a more distant past and were more significant than the impression conveyed by the textbook authors. Although Ms. Forest's verb choices did not relate Arnold's actions to her summary's network chain with any more strength than the textbook authors', the verbs she used did make stronger claims about Arnold's actions.

For example, Ms. Forest wrote, "... the British were suffering defeats, although Arnold established some victories for the British, such as burning Richmond. The British army was finding itself in unable to put the American army into surrendering" (Appendix L). In these four clauses, Ms. Forest shifted from a past progressive construction ("were suffering") to a simple past form ("established") and back to a past progressive construction ("was finding"). By shifting the aspect of these verbs in this way, she construed Arnold's actions as being in the past, without the need for dates or other temporal markers. Unlike the textbook authors, who used the phrase "even before" (Appendix A) to construe the "past-ness" of Arnold's victories, Ms. Forest's shift between the simple past and the past progressive alerted the reader that Arnold's actions occurred some time ago, rather than in the "near past."

Furthermore, the verb "established" strongly commits Ms. Forest to the importance of Arnold's British victories. In order to "establish some victories," Arnold's success in Virginia was significant and well known. In contrast, the textbook authors wrote, "The British had achieved some success in Virginia..." (Appendix A), construing Arnold's victories (to which they are referring) to minor events that the British acknowledged. Ms. Forest's use of "established," then, created a stronger explanatory link between Arnold's actions and her summary's network chain than did the textbook authors' use of "some victories."

5.2.1.3 Summary of Ms. Forest's summary

Ms. Forest's use of language, as a whole, was more committed to certainty than the textbook authors' use of language. Such commitment was most explicit in her expression of causation. By using a causal verb and a preposition + modal construction, she made explicit, causal links between clauses, even though these constructions do not mirror those in the textbooks. There was, however, a connection between the clauses Ms. Forest included as important to her summary and the clauses located on the passage's network chain. Thus, while the language of the summary was different from that of the textbook passage, there were commonalities in the content that is deemed important.

To be sure, the language that Ms. Forest used in her summary was a reflection of her mental representation, not of her comprehension (or lack of comprehension) of the textbook authors' causal expression. When asked what caused Benedict Arnold to be resentful, she replied, "He felt that he was not given just pay and credit for his successes," indicating that she understood the passage's related asyndetic construction. Later in the session, she also identified Cornwallis' retreat to Yorktown as a result of a retreat from the Patriots and a need for supplies. Thus, even though this information was not conveyed in her summary, Ms. Forest understood the implied causal relationship between Arnold's resent and the lack of pay and credit he had received by the Patriots. She had command of the information and chose not to include it in her summary.

5.2.2 Ms. Forest's Instructional Explanation

Ms. Forest's mental representation of "The Victory at Yorktown" likely played a key role in the development of her instructional explanation. As a means to relate content and disciplinary

expectations to students, instructional explanations link disciplinary knowledge (in this case, knowledge from the textbook) with knowledge from the teacher and the students. Even if students are not active participants in the explanation, the teacher needs to keep their experiences and comprehension in mind, for the instructional explanation is for their benefit. In short, instructional explanations help link students to disciplinary material (Leinhardt, 1997, 2010).

Indeed, there were similarities between and amongst the textbook passage, Ms. Forest's summary, and her instructional explanation. Aspects of both the passage and Ms. Forest's summary were demonstrated in both networks' chains as well as in the ways in which she expressed causation in her instructional explanation. Yet there are many aspects of the instructional explanation that are clearly for the benefit of student comprehension, necessitating an analysis of the explanation itself before comparing it to either the passage or her summary.

5.2.2.1 Coherence structure of Ms. Forest's instructional explanation

Ms. Forest's instructional explanation was longer than the textbook passage, extending over 190 clauses (Appendix N and Appendix O). It proceeded in a linear narrative, only deviating to make general points to the class, ask questions of students, or to relate the material to students' real-world experiences. Otherwise, the clauses flowed from one to the next as the narrative unfolded, predominantly through explanatory links (81%).

The linear flow of the instructional explanation was facilitated by Ms. Forest's use of PowerPoint. Slides linked factual information from the textbook passage together. For example, Benedict Arnold's successes were linked directly to Cornwallis' plans to conquer Virginia (Appendix N and Appendix O). As she proceeded from the slide that discussed Arnold's successes in the south to the slide about Cornwallis, she said, "Next, and here's the big thing that

happens, “Cornwallis trapped.” Her use of a temporal marker such as “next” linked the slides and the historical events, creating a linear network chain.

5.2.2.2 Causal structure of Ms. Forest’s instructional explanation

Throughout her instructional explanation, Ms. Forest made 23 causal connections. Nineteen of those connections were expressed through causal conjunctions, especially through the use of the conjunction “so.” Yet these numbers conceal the complex use of some of these conjunctions. Furthermore, conjunctions do not account for all of the causal expressions; Ms. Forest also used a causal noun phrase, verb, and cohesion to express causal connections.

Ms. Forest’s frequent use of conjunctions underscored the explicit causal connections she made throughout her instructional explanation. She used these conjunctions, specifically “so,” to not only make direct links between events but to also restate causal information for emphasis. For example, in Clauses 124-127, Ms. Forest used “so” to emphasize the causal connection as well as restate information in new, possibly more accessible ways: “In September, 16,000 Patriot troops surrounds the 8,000 British troops that were left. So, 16,000 Patriot troops, our Continental Army, basically surrounds the 8,000 British troops that were left. So, basically, that’s a 2 to 1 ratio. So, the British were outnumbered 2 to 1 in Yorktown” (Appendix O). This explanatory sequence began with a historical fact and continued by restating the fact as causal logic. By doing so, she marked the logic that transformed the information from raw numbers to comparative ratios.

At the same time, the use of “so” in this sequence continued the forward progress of the narrative. Indeed, Ms. Forest could not have used “because” in the same fashion; “*Because*, 16,000 Patriot troops, our Continental Army, basically surrounds the 8,000 British troops that were left. *Because*, basically, that’s a 2 to 1 ratio” would refer backwards in time and not make

sense (Appendix O). Thus, “so” fulfilled two functions in this instructional explanation, (1) causal expression and (2) forward movement of the narrative.

This is not to say that “because” is a single-use conjunction. Indeed, Ms. Forest used “because,” at one point, in coordination with a causal noun to mark information as especially important. When she discussed why Benedict Arnold turned traitor, she explained, “The reason he turned traitor is because he wasn’t, in his mind, given enough notoriety or fame for his victories” (Appendix O). By using both the causal noun (“the reason”) and the causal conjunction (“because”), Ms. Forest marked this antecedent for importance within the larger discussion.

In this case, “because” was used in a position in which “so” could not be used. Since the reason for Benedict Arnold’s decision was the antecedent to his traitorous behavior, the direction of the causation reached backwards in time. It would not make sense to say, “The reason is so…” Indeed, doing so would confuse the direction of causation. Rather, as “so” was used for two functions, Ms. Forest uses the causal noun + causal conjunction construction to mark explicit causation.

In addition to using causal conjunctions, Ms. Forest also used a causal verb [“led (to)”] and a causal noun phrase (“this is why”) to express causation. Like the causal conjunctions, both of these constructions expressed explicit causation. Ms. Forest’s instructional explanation contained no instances of implied causation (See Figure 2). Even in the one instance of causal cohesion, discussed below, Ms. Forest used the conjunction “so” to re-engage a former discussion that had been separated by an instructional example. Thus, this instructional explanation was clearly intended to explain specific details about “The Victory at Yorktown” in support of students’ content mastery.

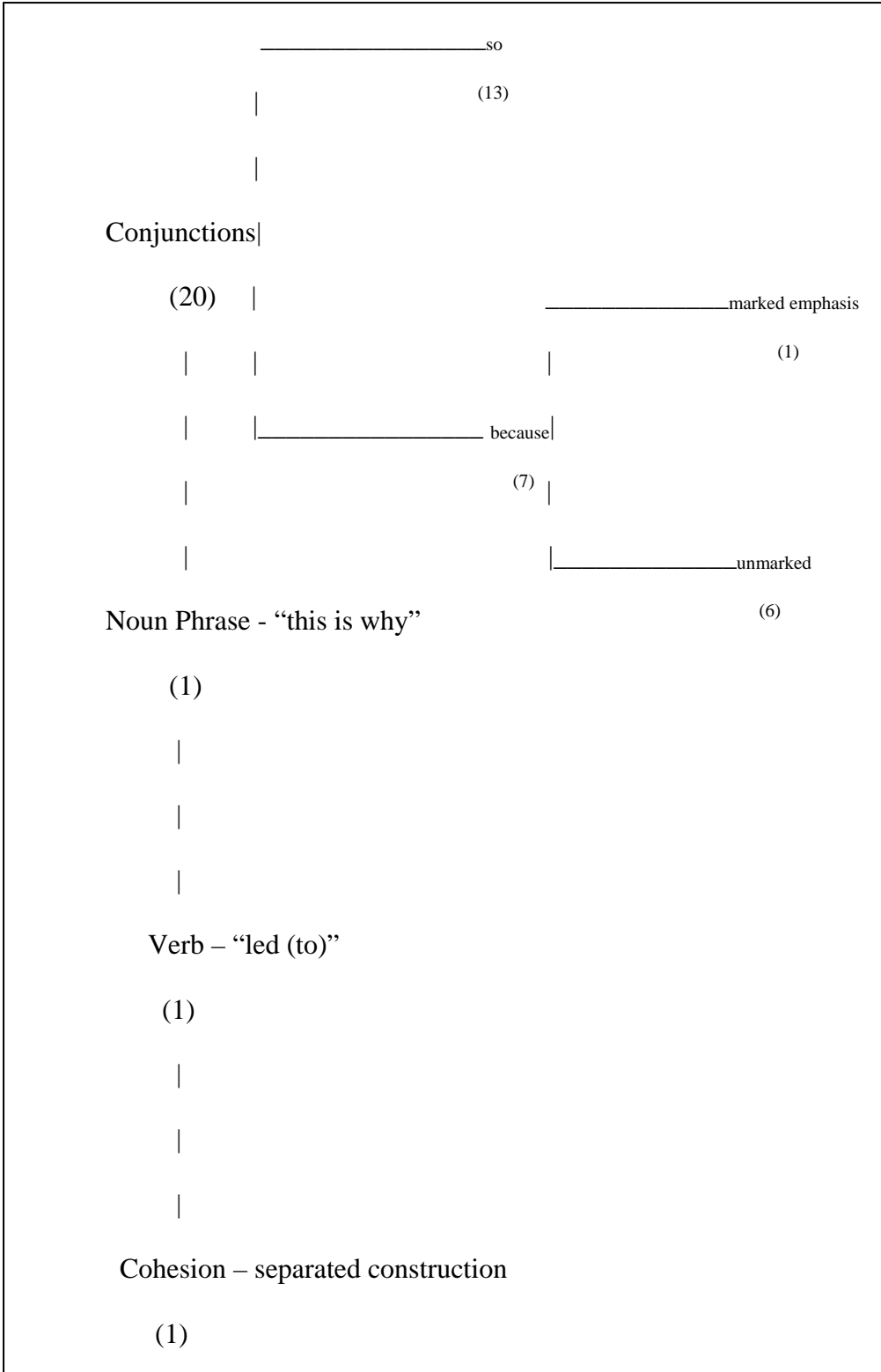


Figure 2: Types of Causation in the Instructional Explanation with Occurrences

5.2.2.3 Summary of Ms. Forest’s instructional explanation

Ms. Forest’s instructional explanation was longer than the textbook passage, containing 190 clauses rather than the 60 clauses used in the passage. Like the textbook passage, Ms. Forest’s instructional explanation discussed the same content in the same order, producing a linear network chain. Unlike the textbook passage, however, the instructional explanation contained many explicit causal constructions, the most frequent being “so.”

5.2.3 Comparison of the Textbook Passage, Ms. Forest’s Summary and Her Instructional Explanation

By comparing Ms. Forest’s instructional explanation with her summary and the textbook passage, aspects of the latter two’s causal and coherence structures were identified in the instructional explanation. In contrast to the passage and the summary, some aspects were particular to Ms. Forest’s instructional explanation, focusing on its intended connection with students rather than the text. These aspects were also identified through this comparison.

5.2.3.1 Comparing coherence structures

The most obvious difference between the instructional explanation and the summary and textbook passage was length, as measured by the number of clauses used to represent each text. As the initial input, the textbook passage contained 60 clauses. Ms. Forest’s written summary was shorter; it only contained nine clauses, two of which extended and linked the passage’s narrative to other relevant historical material and event (e.g., that winning the Battle of Yorktown meant that the Continental Army had won the American Revolution).

Compared to these two texts, then, Ms. Forest's instructional explanation was long, containing 190 clauses. The length of her explanation can be described, in part, by the difference in mode of communication. Verbal communication is generally more "unpacked" than written communication, resulting in the use of more clauses to express a meaning (Halliday & Matthiessen, 2004). "Unpacking" clauses allows speakers to use fewer complex nominal and verb groups, making the verbal discourse easier to understand.

Indeed, Ms. Forest unpacked information when she explained Cornwallis' retreat to Yorktown. According to the textbook authors, "Then, Cornwallis made a mistake.|| He refused an order from Sir Henry Clinton|| to send part of his army to New York.|| Instead, he retreated to Yorktown peninsula,|| a strip of land jutting into Chesapeake Bay.|| He felt confident|| that British ships could supply his army from the sea||" (Appendix J, clauses 34-40). The authors used seven clauses to cover this event. In contrast, Ms. Forest uses 19 clauses in her verbal explanation to cover the same content:

Cornwallis moved to Yorktown, Virginia.|| It's a peninsula|| and a peninsula[[, if you don't know,]] is a area of land|| that's surrounded by water on all three sides.|| So, Florida, think of Florida.|| Florida's a peninsula.|| If you look at how it goes,|| it's like this [demonstrates drawing it in the air].|| There's water all around it except for the in the interior.|| Well, the peninsula of Yorktown is surrounded,|| and this is what makes this a peninsula,|| it was surrounded by the James and York River, the James and York River.|| So, Cornwallis was really really was supposed to be|| leaving the South.|| He was actually given orders|| to go to New York from the British|| but instead of going to New York like his orders said,|| he thought that he could achieve victories in the South|| (Appendix O, clauses 58-76).

Instead of relying on her students to infer that Cornwallis should be leaving the south if he were given orders to move his army to New York, Ms. Forest made the explicit connection

that Cornwallis was supposed to move north, expanding the number of clauses used to express that event.

These two examples illustrate yet another reason why Ms. Forest's instructional explanation is so much longer than either the textbook passage or her own summary. In order to provide further explanation of the events for her students, she extended her discussion, representing key terms and events for students. For instance, she did not assume that students could define *peninsula*. Rather, she paused her explanation of Cornwallis' movement to describe *peninsula* and related it to a peninsula that students already knew. Such clarifying explanations necessitated the use of extra clauses, making the instructional explanation longer.

5.2.3.2 Comparing causal structures

The effects of the length of Ms. Forest's instructional explanation extended to the way she expresses causation. Like her summary, Ms. Forest's instructional explanation contained only explicit causal connections. Indeed, she used the same verb, "led," to express a causal connection, though it was used in a different context. However, whereas she used a prepositional phrase + modal construction in her summary, such a construction was not used in her instructional explanation. Rather than creating content-dense, complex sentences, she instead chose to use conjunctions to explain causally related events.

The differences between the causal expression in her instructional explanation and the textbook passage were even more distinct. Unlike the textbook passage, Ms. Forest's instructional explanation contained no asyndetic constructions. Furthermore, causation was not implied through cohesion structures similar to the passage. Indeed, the one instance of causal cohesion in her instructional explanation was marked with a causal conjunction: "And he did stay in Americas, he never left, but he was never found or captured. So it'd be sorta like me

saying this person's a traitor and they live next door to me and I can't find him or capture him. So, he didn't go very far" (Appendix O, clauses 43-52). The "so" that begins the last sentence referred to Benedict Arnold, the subject of the first sentence. The causal relationship between the first and the last sentence was separated by a "real world" clarification, supposedly for the benefit of student comprehension. Unlike the separated causal cohesion employed by the textbook authors, Ms. Forest marked the separation by using "so" to indicate that she was moving back to the original discussion about Arnold, leaving the fictitious explanation she just created.

5.2.3.3 Summary of Comparison

For the ample use of conjunctions, Ms. Forest's instructional explanation displays a network chain similarly linear to that of the textbook passage, progressing the reader/listener through the story of "The Victory at Yorktown." Many of the differences derived from Ms. Forest's use of clarifying and extending discussions intended to help students relate to the material and to support the development of their own mental representations of the content.

This is not to imply that Ms. Forest's instructional explanation was a copy of the textbook passage. Indeed, while both detour for a discussion of Benedict Arnold, Ms. Forest's instructional explanation made fewer links between Arnold's actions and the clauses that formed the explanation's network chain. As described earlier, the textbook passage linked Arnold to its network chain using two explanatory links. Ms. Forest, on the other hand, used one link, connecting the topics through the discourse but not through content explanation. Rather, Ms. Forest treated these two topics as separate pieces of information rather than integrated pieces of the same discourse.

As Appendix N illustrates, ignoring connections between the Arnold discussion and Cornwallis' retreat (Appendix O, clauses 24-32,) neglects three causal connections made by the textbook authors. In addition to neglecting to mention the connection between Benedict Arnold's Virginia victories and Cornwallis' attack on Virginia, she also neglected to explain why Cornwallis was trapped in the south (Clauses 27 →30). This link in the textbook passage was an example of a separated causal cohesion. Yet, in her instructional explanation, this connection was not made, implicitly or explicitly.

Additionally, Ms. Forest also neglected to make a connection between the siege on Yorktown and the Cornwallis' lack of supplies in her instructional explanations. To be sure, Ms. Forest recognized the asyndetic construction that the textbook authors employed to causally link these events. She even mentioned this connection in her summary. Yet, she did not resolve the asyndetic construction for her students in the instructional explanation, instead choosing to move from the siege to the conditions the British faced during the siege.

5.2.4 Summary

Although the passage, Ms. Forest's summary, and the instructional explanation all produced linear network chains, the resources for causal expression were rich, even in just these two texts. As Figure 3 illustrates, a combined five ways of expressing causation were demonstrated by both the textbook authors and Ms. Forest, not counting the various sub-divisions. Figure 3 also illustrates the frequency with which each text employs each means of causal expression; the first number in any number sequence represents the frequency of that particular construction found in the textbook passage and the second number represents the frequency of that construction in the instructional explanation.

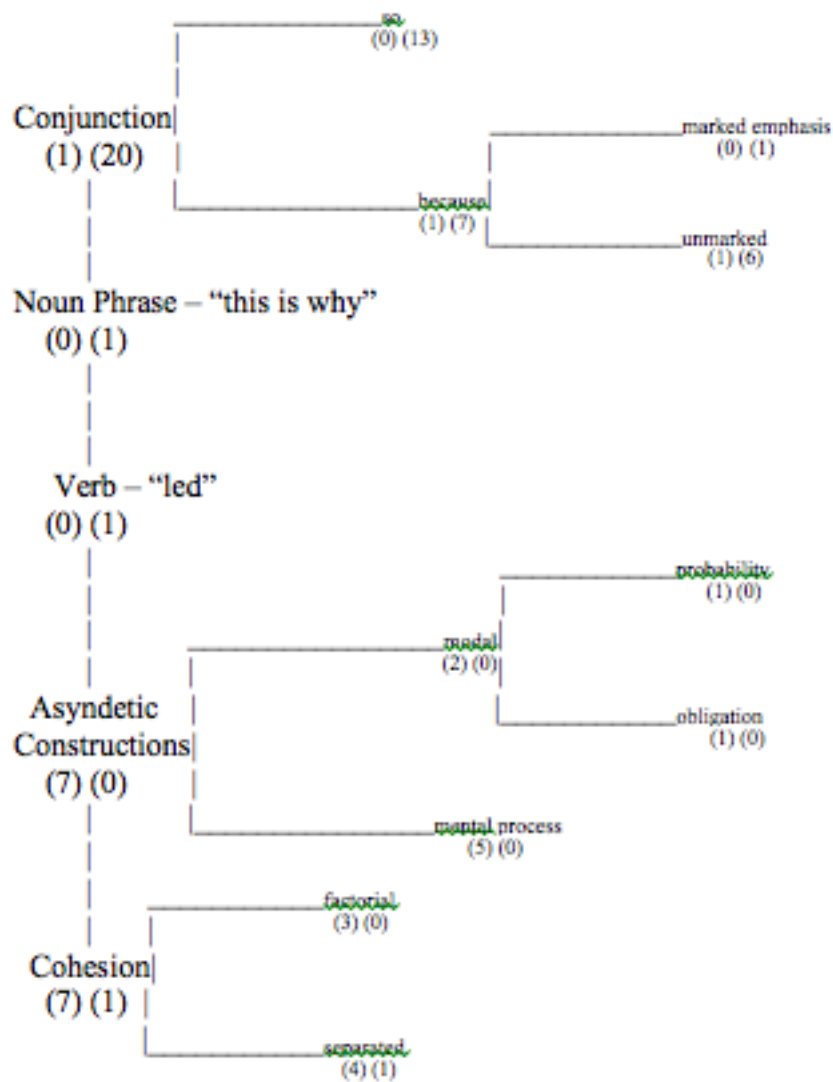


Figure 3: Types of Causation: Passage and Instructional Explanation Combined

5.3 TO WHAT EXTENT DO THE CAUSAL AND COHERENCE STRUCTURES OF THE TEXTBOOK PASSAGE AND THE INSTRUCTIONAL EXPLANATION INFLUENCE STUDENTS' MENTAL REPRESENTATIONS OF A HISTORICAL EVENT?

In addition to including events located on a narrative's network chain more frequently than those not on the network chain (Trabasso & Broek, 1985; Trabasso, et al., 1984; Trabasso & Sperry, 1985; Warren, Nicholas, & Trabasso, 1979), research has also demonstrated that when two or more topically related narratives are read, readers include events common amongst those narratives in their summaries more frequently than those occurring on only one of the narratives (Perfetti, et al., 1995). Thus, the data collected from the seven student participants (Appendix P) were compared to the important events/states included in "The Victory at Yorktown," as related by the textbook authors and Ms. Forest (Appendix Q).

5.3.1 Students' Recall of Events/States from the Textbook Passage and the Instructional Explanation in Their Summaries

After reading the textbook passage, most students included events related to Benedict Arnold's traitorous behavior and the trapping of Cornwallis in Yorktown in their summaries, as indicated by the asterisk symbols in Appendix Q. Few students included the British surrender after this initial reading, even though it was the result of the siege on Yorktown and the conclusion of the

narrative passage. Rather, most of the student participants (5 of 7) included information about Benedict Arnold in their first summaries that was not located on the passage’s network chain. As will be described below, their inclusion of this information was segmented from their discussions of the siege at Yorktown; students related both pieces of information without making connections between them.

Following their second exposure to this information, by way of Ms. Forest’s instructional explanation, many of the clauses that the student participants included in their summaries were common amongst the passage and the instructional explanation, as Table 5.2 illustrates. Indeed, the total number of common clauses students included may be higher; fifteen clauses were included in their summaries from information about Benedict Arnold that was common to both texts but not to both network chains. In other words, Events/States such as “He [Benedict Arnold] turns traitor” (Appendix Q) were stated in the textbook passage but were not included in the passage’s network chain. However, those Events/States were a part of the instructional explanation’s network chain. Students, then, were exposed to this information twice, although the information was only on one network chain.

Table 5.2: Total Number of Clauses Included Per Source

Student Participants	# Included from Passage Only	# Included from Instructional Explanation Only	# Included from Common Clauses
Abby	0	6 (6)	10
Brynne	2	3 (3)	1
Charlie	2	2	10
Danielle	0	2 (2)	6
Elaine	0	2 (2)	8
Faith	2	2 (2)	12
George	0	0	7
Total	6	17 (15)	54

Aside from including Cornwallis' surrender in their summaries, the most included events were those about Benedict Arnold and the siege against Cornwallis, regardless of whether students had only read the textbook passage or had also heard the instructional explanation. The student participants did not include many clauses expressing newly learned information following the instructional explanation, as Figure 4 illustrates. Abby, Charlie, Danielle, and Brynne all used the same number of clauses to represent their knowledge after reading the passage as they did after listening to the instructional explanation as well. Two students, Faith and Elaine, actually used fewer clauses in their second summary compared to their first summary. Only George increased the number of clauses used in his second summary compared to his first, from two to five clauses.

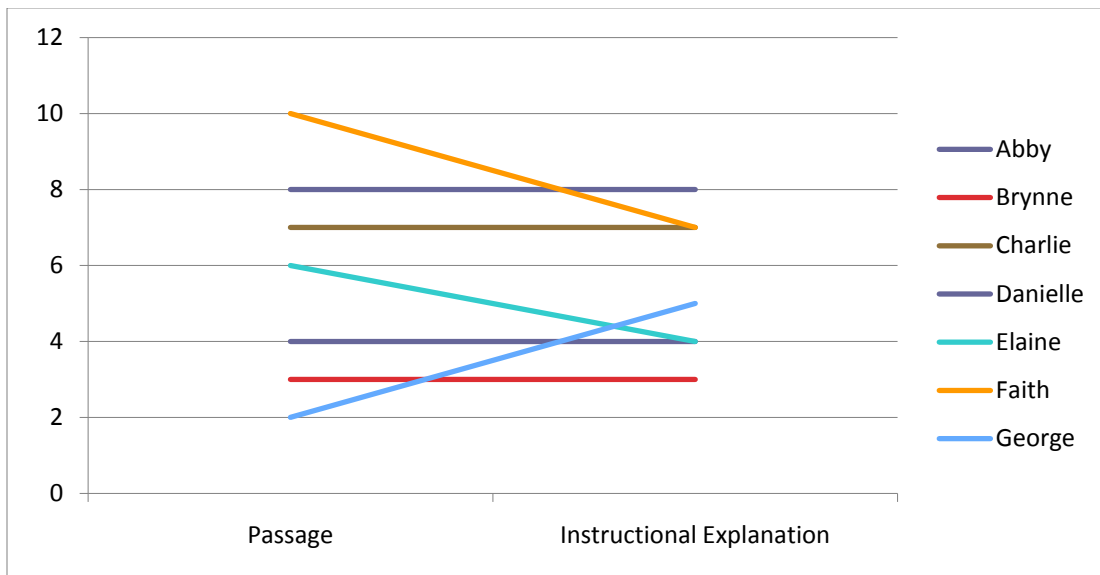


Figure 4: Number of Clauses Expressed from Common Clauses

Still Figure 4 does not illustrate what new knowledge the student participants gained or found new importance for, following their exposure to the instructional explanation. Table 5.3 illustrates the number of Events/States that remained the same in each student's summary. While the student participants may not have increased the number of Events/States in their summaries,

their content did change. In general, student participants exchanged information they learned about Benedict Arnold from the passage [indicated by “+/- P (BA)”] for information common to both sources’ network chains. Brynne, for example, exchanged information about Benedict Arnold that she learned from the passage for other information exclusive to the textbook passage. Only two student participants, Abby and Charlie, exchanged information they had included from the passage for information exclusive to Ms. Forest’s instructional explanation.

Table 5.3: Occurrences of Similar Event/States Between Student Summaries and the Source of Exchanged Information

Student Participant	# Events/States in Summary After Passage	# Events/States in Summary After Instructional Explanation	# of Similar Events/States Expressed in Both Summaries	# and Source of Exchanged Information
Abby	8	8	7	-1 P(BA) +1 Instruc.Ex.
Brynne	3	3	0	-3 P(BA) +2 Passage +1 Common
Charlie	7	7	4	-2 Common +2 Instruc. Ex.
Danielle	4	4	1	-2 P(BA) -1 Common +3 Common
Elaine	6	4	3	-3 Common +1 Common
Faith	10	7	6	-2 P(BA) -2 Passage +1 Common
George	2	5	2	+3 Common

5.3.2 Links Between Information Included in Summaries

Although the number of clauses student participants used to convey their understanding of “The Victory at Yorktown” was relatively stable, the means by which they linked those pieces of information changed after each treatment. As Table 5.4 depicts, the majority of the connections students made between clauses were explanatory in their first summaries. Students used 42 explanatory links compared to 14 causal links and eight temporal links. Like the explanatory links identified in the passage and in Ms. Forest’s instructional explanation, the students’ explanatory links contributed to the progression of the narrative in ways other than explicit temporal markings (e.g., “then,” “next,” “meanwhile,” etc.) or causal constructions. Rather, of the 64 total links made collectively by the student participants, 42 (65.63%) were explanatory.

Table 5.4: Types of Connections Per Student Participant – Summary 1

Student Participant	# of Causal Connections	# of Temporal Connections	# of Explanatory Connections
Abby	5	0	8
Brynne	2	1	7
Charlie	1	2	3
Danielle	1	0	5
Elaine	2	3	4
Faith	3	2	12
George	0	0	3
Total	14	8	42

The remaining twenty links were split amongst causal and temporal links. Causal links were more prevalent [14 occurrences (21.88%)] than temporal links [eight occurrences (12.50%)]. Three out of the six student participants employed causal connections more frequently than they employed temporal connections; George’s frequency count is excluded here because he did not provide any causal or temporal connections in his first summary.

When students wrote their second summaries, however, they included even more causal connections than they did in their first summaries. They also included fewer temporal connections than they did in their first summaries (See Table 5.5). Only one student, Danielle, used more temporal connections in her second summary than she did in her first; all other students used the same number or fewer.

Table 5.5: Types of Connections Per Student Participant – Summary 2

Student Participant	# of Causal Connections	# of Temporal Connections	# of Explanatory Connections
Abby	3	0	10
Brynne	3	1	6
Charlie	1	1	7
Danielle	2	1	7
Elaine	1	2	4
Faith	3	0	5
George	2	0	3
Total	15	5	42

Comparing these two data sets further, a relationship between these students' use of causal and temporal connections becomes evident. Five out of seven student participants used the same number or more causal connections in their second summary as they did in their first. One student, George, used two more causal links while keeping the number of temporal and explanatory links constant between his first and second summaries. Despite the frequency changes in the causal and temporal connections categories, the number of explanatory connections remained the same throughout both summaries.

5.3.3 Causation in Students' Summaries

Although the number of causal connections students used in their second summaries increased from the number used in their first summaries, this information does not describe what, if any,

changes occurred in the way that causal connections were expressed by the students. Appendix R illustrates the varied ways in which the student participants expressed causal connections. With the exception of two cases, discussed below, all student participants expressed causation in ways similar to the textbook passage, the instructional explanation, or both. Asyndetic constructions, causal conjunctions, and causal verbs were used by a variety of student participants. The frequency counts for each type are displayed in Table 5.6.

Table 5.6: Frequency of Types of Causal Constructions Per Treatment

Source	Asyndetic Constructions	Conjunctions	Verbs	Nouns	Com-plementizer	Total
Passage	4	8	0	0	1	13
Instructional Explanation	6	7	2	0	0	15
Total	10	15	2	0	1	28

On the whole, the student participants used more explicit means of expressing causation than they used implicit means. Causal conjunctions were used more than any other form of causal expression (15 times). In addition, causal verbs were used twice, bringing the frequency of explicit causal expression to 17.

These data do not imply that the student participants only expressed explicit causal relationships. Indeed, the second highest frequency of causal expression was constructed using asyndetic constructions. Combined with a causal construction unique to one student’s writing, a causal complementizer, the student participants’ expressed implicit causation 11 times.

It is in these forms of implied causation that two students, Abby and Danielle, used constructions unique from those seen in the passage, the instructional explanation, and other students’ writings. Although each means of causal expression was only used once, their use

warrants explanation and inclusion into the ways in which causation is expressed when relating “The Victory at Yorktown.”

5.3.3.1 New forms of causation

Abby expressed causation through the use of a complementizer, “that.” Typically, complementizers are used to subordinate one clause to another, linking them relationally (Yule, 2008). However, Abby wrote in her first summary, “He [Benedict Arnold] was angry that he didn’t get full credit for his victories and he needed money...” (Appendix P). Instead of using a conjunction, like “because,” Abby chose to connect the independent clause, “He was angry,” with a subordinate clause used to explain his anger – a causal link. In a sense, this type of construction is similar to that of an asyndetic construction, since both clauses could be independent of each other and still imply causation. However, Abby linked the causal antecedent and consequence more directly than in an asyndetic construction by using this construction. The complementizer bound both the antecedent and consequence within the sentence structure. Still, Abby’s use of a causal complementizer expressed causation implicitly since she refrained from using a causal conjunction that would have more directly demonstrated the causal relationship.

Yet another student, Danielle, implied causation in a different way. Rather than use a mental process or modal asyndetic construction, she used a relational asyndetic construction (Fitzgerald, in revision). She wrote in her first summary, “Their was a traitor and he traded on the Americans for the British. He was low on money” (Appendix P). In the second sentence, Benedict Arnold becomes the Token of the Value “low on money.” In other words, Arnold’s worth as an individual is summarized in his financial situation. As a product of that Value, he became a traitor to the Americans. Much like the other forms of asyndetic construction, this relationship is implied. However, in this instance, Arnold’s agency to think, be, and act is

dictated by the author, Danielle. Her decision to value Benedict Arnold in this way implicitly links him to the action of turning traitor.

Thus, these two student participants further refine the ways in which causal events were expressed through the text, Ms. Forest's instructional explanation, and the summaries of the event. Figure 5 includes these last two ways in addition to the information contained in Figure 3. In addition, Figure 5 also illustrates that types of causal connections all student participants made over two summaries. Similar to the connections in Ms. Forest's instructional explanation, conjunctions frequently expressed causation in the students' summaries.

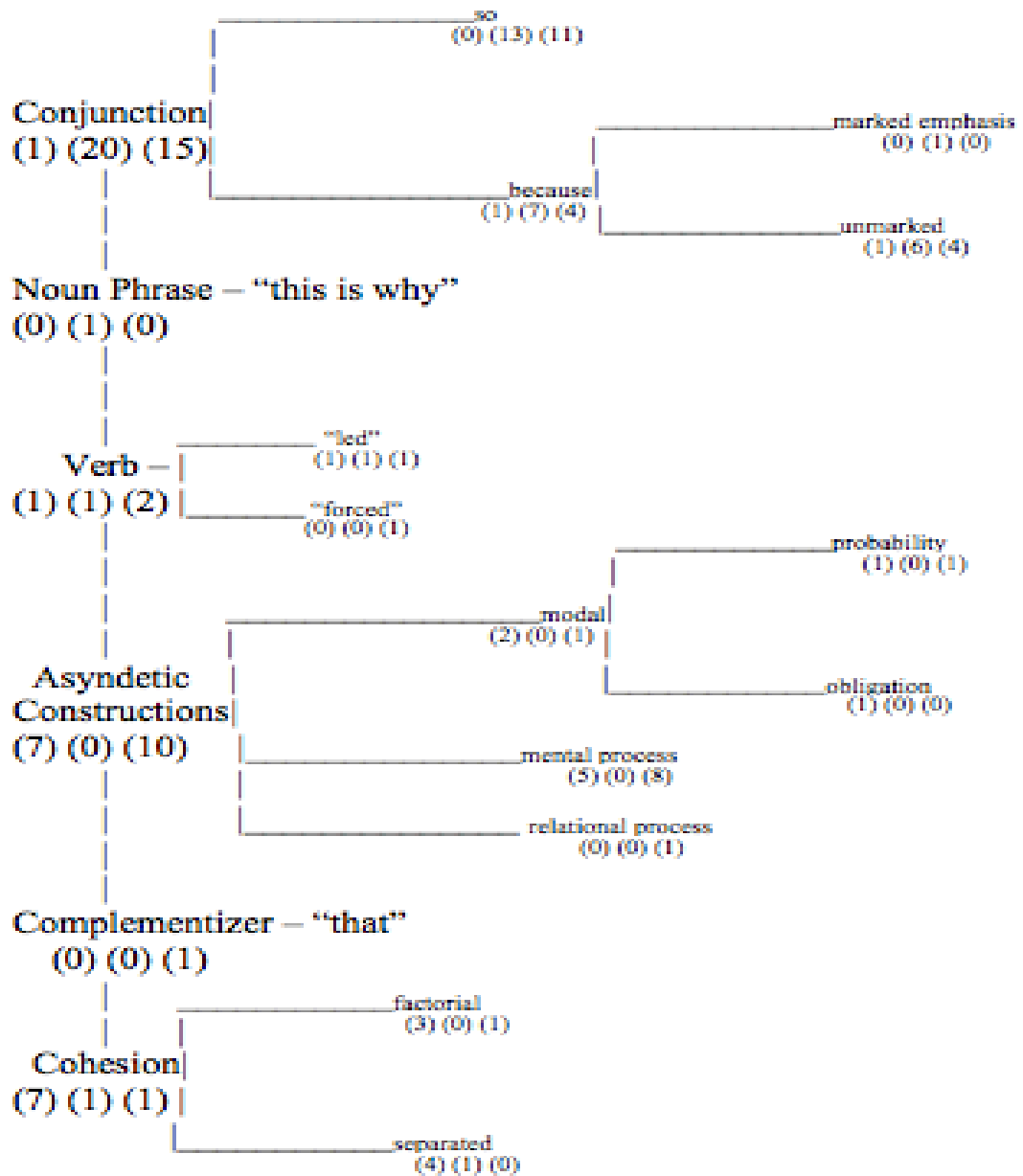


Figure 5: Types of Causation: Passage, Instructional Explanation, and Student Summaries Combined

Just as the textbook passage and Ms. Forest’s instructional explanation were contrasted in the occurrences of implicit and explicit causal constructions respectively, the students’ tended to prefer one mode of explanation to another in their summaries. Table 5.7 depicts the types of causation students used across both summaries with reference to the type of causal structures

found in each source. For example, since Abby used three mental process asyndetic constructions and one instance of factorial causal cohesion, she wrote her summaries using four causal constructions found only in the textbook passage, not in the instructional explanation. She also used one causal conjunction, “so,” that was only found in Ms. Forest’s instructional explanation, two instances of “because” that occurred in both sources, and the complementizer “that,” which did not appear in either source. (For more descriptive relationships between the numbers in Table 5.7, see Appendix R).

Table 5.7: Occurrences of Causal Construction in Students’ Summaries Per Source Exposure

	Abby	Brynne	Charlie	Danielle	Elaine	Faith	George	Total
Text + IE –	4	0	2	1	0	3	0	10
Text – IE +	1	3	0	1	2	3	1	11
Text + IE +	2	2	0	0	1	0	0	5
Text – IE –	1	0	0	1	0	0	1	3

The frequency counts in Table 5.7 show that certain students had preferences as to which source they mirrored when using their own causal constructions. For example, Abby and Charlie both show preference for using the implied causal constructions in the textbook passage; five mental process asyndetic constructions are used between the two of them. In contrast, Brynne, Elaine and George prefer using more explicit causal constructions, such as those found in Ms. Forest’s instructional explanation. Danielle and Faith prefer using a mixture of implicit and explicit causal constructions, drawing linguistic resources from both sources.

5.3.4 Students' Understanding of Implied, Asyndetic Constructions

Although some students were able to use asyndetic constructions to imply causation, not all students were able to comprehend their use. Indeed, reception and expression are two different cognitive functions, necessitating direct questions to elicit information about what students comprehended about specific, implicitly linked events (Perfetti, et al., 1995). To this purpose, students were asked two series of questions about implied causal events in the text: first, “What caused Benedict Arnold to be resentful? How do you know?,” and second, “Why did Cornwallis retreat to Yorktown peninsula? How do you know?” Each series of questions was asked after students had written each of their summaries.

After reading and summarizing information from the textbook passage, students were mixed in their ability to explain the implicit causal links probed in the follow-up questions. As Table 5.8 illustrates, only three students were able to resolve the first causal question; four students were able to resolve the second. For those that were able to resolve these constructions, most cited the textbook as the source of their knowledge. Only Elaine answered each question, one correctly and one incorrectly, based on her own personal opinions.

After listening to Ms. Forest’s instructional explanation, however, the number of students who were able to resolve the asyndetic construction doubled, measured by students’ correct answers to the first question. Six students were able to correctly answer the question versus three students who could answer the question after only reading the passage. The only participant who was not able to correctly answer Question 1 after exposure to both sources was George.

Table 5.8: Students' Abilities to Resolve Two Asyndetic Constructions from the Textbook Passage

Student Participant	Questions Following Summary 1		Questions Following Summary 2	
	Question 1	Question 2	Question 1	Question 2
Abby	Yes	Yes	Yes	Yes
Brynne	No	No	Yes	No
Charlie	Yes	Yes	Yes	Yes
Danielle	No	Yes	Yes	No
Elaine	Yes	No	Yes	No
Faith	No	Yes	Yes	Yes
George	No	No	No	Yes
Total	3	4	6	4

Question 2, however, had more mixed results. As Table 5.8 depicts, the same total number of students answered Question 2 correctly after only reading the passage as they did after also hearing the instructional explanation. The same four students who answered correctly after their first summaries were not necessarily the same four students who answered correctly after writing their second summaries. Danielle answered Question 2 correctly the first time but was unable to recall the same answer the second time. George, on the other hand, was unable to recall the answer after reading the passage but was able to do so after hearing the instructional explanation.

There are also differences between these data and students' expression of these causal relationships in their summaries. In their first summaries (Appendix P), Abby and Danielle mentioned why Benedict Arnold felt resentful. In their second summaries, Danielle did not mention this information; Abby was the only student participant to restate this information (See Table 5.9). Although students did not always express specific information about Benedict Arnold's resentfulness in their summaries, some were still able to comprehend the implied causation of the text. Indeed, after hearing the instructional explanation, only one student, Abby,

expressed this information in her summary but six participants were able to resolve the passage's asyndetic construction.

Table 5.9: Open Expression and Cued Reception Explaining Benedict Arnold's Resentfulness

Student Participants	Passage		Instructional Explanation	
	Summary 1	Question 1	Summary 2	Question 1
Abby	Yes	Yes	Yes	Yes
Brynne	No	No	No	Yes
Charlie	No	Yes	No	Yes
Danielle	Yes	No	No	Yes
Elaine	No	Yes	No	Yes
Faith	No	No	No	Yes
George	No	No	No	No
Total	2	3	1	6

The results for the second question, "Why did Cornwallis retreat to Yorktown peninsula?" showed less of a shift between expression and reception. All four participants who expressed the causal relationship implied in the textbook passage also expressed the relationship after hearing the instructional explanation. Those who did not express the relationship after reading the passage did not do so after hearing the explanation (See Table 5.10). Those who included this information in their summaries were also the only students who were able to correctly answer the question, with the exception of Danielle who did not mention this relationship in her first summary but was able to answer the question correctly. Danielle was also the only participant that was able to answer Question 2 correctly the first time but not answer it correctly the second time.

Table 5.10: Open Expression and Cued Reception Explaining Cornwallis' Retreat

Student Participants	Passage		Instructional Explanation	
	Summary 1	Question 2	Summary 2	Question 2
Abby	Yes	Yes	Yes	Yes
Brynne	No	No	No	No
Charlie	Yes	Yes	Yes	Yes
Danielle	No	Yes	No	No
Elaine	No	No	No	No
Faith	Yes	Yes	Yes	Yes
George	No	No	Yes	Yes
Total	3	4	4	4

5.3.5 Summary

After reading the textbook passage, the content of students' summaries were more variant than after exposure to Ms. Forest's instructional explanation. The inclusion of information about Benedict Arnold in the passage, yet not in the passage's network chain, complicated the relationship between students' summaries and events located solely on the passage's network chain. After exposure to both sources, students mostly included events in their summaries that were commonly located on the sources' network chains. The students' summaries did not expand in length, however. Although they conveyed different content information between their summaries, the number of clauses each student used to summarize the event mostly remained static.

While the content of students' summaries drew on common information between the input sources, their use of causal constructions to express the content often showed preference to one source over another. Two students mostly used constructions found only in the textbook passage and three students mostly used constructions only found in the instructional explanation.

Two students used constructions found in both sources, showing no preference. While students preferred some constructions to others, almost all students increased their use of causal constructions following exposure to the instructional explanation.

In addition to these expressive results, the student participants also demonstrated that their understandings of implied causal relationships did not mirror what they were willing to express in their summaries. Students who were able to demonstrate cued receptive confidence on questions related to implied causal structures did not necessarily include such information in their summaries. Thus, it appears that the coherence structures, measured by the network chains of each source, influence students' mental representations of the historical event more than the choice of causal constructions used in its presentation.

6.0 DISCUSSION

The purpose of this study was to investigate the influence of a textbook passage about the Patriot's victory at Yorktown and a related instructional explanation on students' mental representations, as indicated by causal and coherence structure analyses of their event summaries following exposure to each source of information in turn. An analysis of the textbook passage's coherence structure illustrated that approximately 43% of its clauses were not connected to the passage's main network chain; most of those clauses were related to a tangential discussion of Benedict Arnold's turn traitor. Four types of causal expression were identified through a causal analysis of the textbook passage: causal conjunctions, causal cohesion, and mental process and modal asyndetic constructions. Causal analysis also illustrated that the textbook passage authors linked causally related events through mostly implied constructions.

In contrast, Ms. Forest's instructional explanation of the event explicitly expressed what were implied links in the passage. She used causal conjunctions in a much higher frequency than the textbook authors and used a causal verb and causal noun phrase to highlight other explicit connections. Again, in contrast to the textbook passage, her instructional explanation included the discussion about Benedict Arnold's turn traitor in the network chain.

After exposure to both sources of information (the textbook passage and the instructional explanation), the student participants mostly included events in their summaries that both sources commonly held on their network chains. These results were in comparison to the students'

summaries prior to hearing the instructional explanation, where they included more variant pieces of information. Furthermore, after exposure to both texts, the students' means of causal expression showed students' preference towards expressing cause either explicitly (like the instructional explanation) or implicitly (like the textbook passage). This preference did not exclude students from using other types of causation, however. In fact, two students used causal constructions not observed in either of the two input sources.

This chapter will consider three questions related to these findings: first, why were there differences in students' summaries with regards to discussing Benedict Arnold's traitorous behavior?, second, why did students use a similar number of clauses in their second summary, compared to their first?, and third, why did students prefer the causal constructions of one source to another? Following these discussions, some of this study's limitations will be considered. Finally, the implications of these findings will be discussed both within the Woodland Hills Junior High School setting and for the field of social studies.

6.1 WHY WERE THERE DIFFERENCES IN STUDENTS' SUMMARIES WITH REGARDS TO DISCUSSION OF BENEDICT ARNOLD'S TRAITOROUS BEHAVIOR?

Not only were there differences in how students expressed causation but there were also differences in what information they chose to express. For example, students seemed unsure about whether to include information about Benedict Arnold in their summaries (Appendix P). Some students, such as Brynne, included information about Arnold and linked it temporally to her summary of Cornwallis and the events at Yorktown. Others, such as Abby and Danielle, included this information but chose not to connect it to their discussions of Cornwallis. Elaine

dealt with the information in yet a third way, including it in both summaries, but only as an afterthought. Three reasons might account for these differences.

First, the methods used to solicit summaries may have confused some of the students. The summary prompt asked students to “Summarize “The Victory at Yorktown.”” The topic of this event was also the heading for the textbook passage, a heading that included information on Benedict Arnold. It is possible that some students confused the title for the event, an issue of coherence similar to those observed by Beck, McKeown and Gromoll (1989).

Yet the content of the students’ summaries may have differed because of the text structure as well. It was evident by their responses that students understood the textbook passage as a text. Collectively, their summaries link information from across the entire passage, indicating that these events were not only related but were a defined unit (Halliday & Hasan, 1976). Thus, they may have included information about Benedict Arnold because they knew it was important information, even if they did not understand why it was important. Some of the features included in the textbook passage could have signaled the importance of this information, Benedict Arnold’s name was in bold print, the information was written under its own sub-title and multiple paragraphs were dedicated to it (Bluestein, 2010). If students understood such clues as signals to the importance of the information, they may have included it even if they did not comprehend why it was so important.

Still a third reason why students may have included information on Benedict Arnold relates to the value of “facts” in K-12 history classes. The text structure described above aligns with the traditional view of social studies education; “facts,” such as Benedict Arnold’s name and his accomplishments, are valued on assessments. Indeed, students easily identify these facts when they read their textbook (Epstein, 1994), whether they remember them or not. Some of the

student participants may have identified Benedict Arnold as an important figure, one that Ms. Forest would probably include on a chapter section worksheet, as described in Chapter Three. Experience with identifying and summarizing this type of information was valued on the students' tests and quizzes. Thus, student may have paid special attention to this information.

6.2 WHY DID STUDENTS USE A SIMILAR NUMBER OF CLAUSES IN THEIR SECOND SUMMARY, COMPARED TO THEIR FIRST?

Despite differences in the content of students' summaries, including the inclusion and exclusion of information about Benedict Arnold, students generally used a similar number of clauses to express their comprehension of "The Victory at Yorktown" between their first and second summaries. Abby, Brynne, Charlie and Danielle all used the same number of clauses to summarize the event the first time as they did the second. Faith and Elaine actually used fewer clauses in their second summary than in their first. Only George used more clauses in the second summary than the first, increasing the number of clauses from two to five (See Figure 4). Three reasons might account for the similarity in the number of clauses between students' summaries.

First, these data may be the result of experimental error. Although students were given nearly thirty minutes to write their second summaries and answer the follow-up questions, they did so during their lunch period. By asking students to think about what they learned in social studies class during a non-academic time, some of the students may have forgotten pieces of information that would have otherwise been included in summaries written within the classroom context (Ericsson & Simon, 1993). Additionally, lunch is a time when students usually socialize and break from academic work. While writing their summaries, students may have been

distracted, tired, or entirely uninterested in summarizing events learned in social studies. Thus, the circumstance in which students were asked to contribute their knowledge may have limited the number of clauses that students recalled.

However, these results could also indicate that students' mental representations of the event were refined after exposure to Ms. Forest's instructional explanations. Since both the content of the textbook passage and the instructional explanation were similar, including many overlapping events/states (See Appendix Q), students may have refined their summaries, incorporating only what they viewed as the most important pieces of information, as participants in Perfetti et al.'s (1995) study did. Support for this explanation can be found in the increased number of causal constructions students used in the second summary, even when the number of clauses in those summaries remained static or declined in number. In addition, the content of the students' second summaries were less variant across all student summaries, aligning with common events/states found in the textbook passage and the instructional explanation.

Furthermore, information highlighted on the students' chapter section worksheets was valued on test and quizzes. It is possible that students paid particular attention to common clauses because they believed that those were the most important to remember. By paying special attention to those pieces of information, they may have been included in later summaries to the exclusion of information included from the text alone.

If this explanation for the study's results is correct, students' summaries would become more streamlined as they identified the most important pieces of information (for whatever purpose they may find this information useful), and discard information that do not meet their needs. For example, students who view Cornwallis' decision to retreat to Yorktown as central to the narrative may discard information about Jefferson and the Virginia delegates fleeing after an

attack by his troops. Evidence for such an explanation is circumstantial at best, however. In order to appropriately study whether or not students' mental representations of the event were refined following the instructional explanation, an experiment would need to include information about students' purposes for reading as well as information about why they chose to write the information they did, to the exclusion of other information.

Still another explanation for why the students did not include more clauses of information in their second summaries is that they have been conditioned as students to summarize information only to a certain length, containing only important pieces of information. Evidence supporting this explanation is seen in the number of students who could recall the consequences related to the follow-up questions but did not include that information in their summaries. Those students selected from the information that they learned, placing only a certain amount in their summaries. Data regarding what students have been taught about writing summaries, the expectations of summary writing in the classroom and write-aloud data may confirm this explanation.

6.3 WHY DID STUDENTS PREFER THE CAUSAL CONSTRUCTION OF ONE SOURCE TO ANOTHER?

Five of the seven student participants tended to prefer the causal constructions of one source to another (Appendix R). For example, Abby and Charlie both showed preference for using more implied causal constructions in their writing, whereas Brynne, Elaine and George tended towards more explicit causal constructions. These preferences appear in contrast to the content that students' summarized, the majority of which was common to both sources. As language

represents human experience (Halliday & Matthiessen, 2004), in the case of “The Victory at Yorktown,” the preference of one source’s language to another requires explanation; four reasons are provided below.

One reason why students may prefer using implicit causal constructions, at least, is related to how language is used to represent human experience. It may be that some students’ prior knowledge of emotions, perceptions, and historical situations makes the use of implied causal constructions obvious. That is, some students may make a direct link between an emotion and an action, for example. Charlie’s first summary provides an excellent example of this explanation. He wrote, “Yorktown was the area that General Cornwallis retreated to. He thought that the British Navy could provide him with supplies through the sea behind him” (Appendix P). The rest of Charlie’s summary illustrates his knowledge that Yorktown is on a peninsula near the sea. With this knowledge, Charlie may assume that if Cornwallis *thought* he could get needed support from his ships, he would naturally retreat to an area where such an exchange could occur. If this situation was obvious to Charlie, there may be no need to make an explicit connection by including “because.” Rather, the relationship may have been self-evident to Charlie.

Others, however, may not have seen such a relationship as self-evident, reasoning that Cornwallis could have headed north, as his orders had originally said, or that retreating to a peninsula is a horrible tactical error regardless of the reason. For numerous reasons, then, other students may not have seen the “obvious” connection that Charlie may have. Although this study did not collect information by which such an explanation could be confirmed, a study that asks students to “write-aloud” may solicit enough information to make a determination.

Another possible explanation for students preferring the causal structures observed in one source to another is that students value one set of structures more than another. Although this study only examined a textbook passage and an instructional explanation as input to students' summary production, input from external sources of information may have influenced students' preference for some structures and not others. It is possible that some students read outside material that reinforces the use of implied causal structures. It is also likely that some students, like Brynne, Elaine, and George, are exposed to more explicit means of constructions such as those they expressed in their summaries.

To obtain evidence in support of such a hypothesis, research is needed to examine the various types of causal structures students are exposed to within the course of their daily experience, both at school and at home. Such research should not be limited to only verbal or only written sources, since causal structures appear to differ depending on the mode of communication. In short, a study tracing students' use of explicit and implicit forms of communication throughout their daily lives would be needed to support or refute this explanation.

A third explanation may be more easily studied; students may value one source more than another. In interviews with the students and during daily interactions, the students expressed that there were some teachers that they liked more than others. Their preference for certain causal constructions may stem from their ultimate preference in instruction. For example, during the second group interview, Charlie expressed an appreciation for how his 7th grade teacher taught history. It is possible that, in lieu of her instruction, Charlie attempts to mimic the discourse structures of the text, disregarding the ways in which Ms. Forest constructs causal links. A

longitudinal study would be needed in order to track students' linguistic development across time, as they interact with various teachers, texts, and instructional materials.

A fourth explanation for why some students prefer to use certain causal structures to others relates to the mode of expression in which students engaged the information in this study. Although students were asked to read a written historical account (the textbook passage) and listen to their teacher's instructional explanation, they were only asked to communicate their understanding in writing. It is possible that some students are more sensitive to the conventions of written communication versus verbal communication. Students sensitive to this distinction may have written their summaries using constructions similar to the textbook as opposed to the instructional explanation. Still, some students may not be sensitive to this distinction, instead choosing to write their explanation in a more informal, verbal mode. Asking students to both write about and talk about their comprehension would provide evidence to judge this hypothesis.

6.4 LIMITATIONS

For all the questions that still remain regarding the influence of textbooks and instructional explanations on students' mental representations of history, this study has two major findings: (1) the majority of information that the students' included in their summaries about the historical event was expressed in both the textbook passage and the instructional explanation, and (2) the students' summaries showed preference for the causal language found in either the text or the instructional explanation. The conclusions that can be drawn from this study, however, are limited in a number of ways, including the small number of participants, the analysis of only written protocols and lack of student writing samples prior to the study. The limited number of

participants hinders the generalizability of these results, even in such a diverse setting. Additionally, the collection of only written data sources made this analysis of students' language quite subjective, since the students could not later be asked what they were trying to say. Finally, without writing samples obtained prior to the start of the study, it was difficult to trace the influence of the textbook passage and the instructional explanation as thoroughly as could have been possible.

Despite these limitations, however, the present study was able to trace the influence of a textbook passage and a teacher's instructional explanation on students' mental representations of history, as indicated by their summaries. Information that was commonly included on the sources' main network chains were most often also included in students' summaries, even though no systemic links were found between the ways that students expressed causal links and the means of causal expression used by the textbook authors or the teacher. Thus, this study suggests that teachers need to explicitly teach students to express disciplinary information if they are to learn to do so consistently. It also suggests that instructional explanations are useful for highlighting and underscoring content that students might need to remember.

6.5 IMPLICATIONS

Although the results of this study are not generalizable across all 8th grade United States history classes, they do have implications for the students at Woodland Hills Junior High School. In as much as this educational context is an instance of what social studies education looks like across the country and is tacitly approved as a curriculum that meets all students' needs (See Chapter Three), these findings have implications on the field of social studies as well. Specifically, there

are three perspectives from which to discuss these results, (1) reading in social studies, (2) teachers' instructional explanations, and (3) expectations of students' production of K-12 history content.

6.5.1 Implications for the Students at Woodland Hills Junior High School

Aside from the social and political contexts that made Woodland Hills Junior High School an ideal setting for an educational investigation, Ms. Forest's classroom was an ideal classroom context for this study because instruction focused on the textbook and her instructional explanations, a curriculum endorsed by the federal courts. As discussed in Chapter Three, students were frequently required to read the textbook and complete worksheets on the readings. In addition, Ms. Forest was explicit in her commitment to meet the district's "reading anchors," standards that link reading across the content areas in the hopes of improving standardized reading scores. Exploring students' mental representations of a historical event after they read a textbook passage and listened to their teacher's instructional explanation in such a context was timely and relevant to the instructional goals of the class.

6.5.1.1 Reading in social studies

With regards to reading in social studies, this study's findings imply that reading for content does not mean that students comprehend the historical narrative or that they know how to express their comprehension in a disciplined way. Although the content of Ms. Forest's instructional explanation aligned with the information in the textbook, students were not always able to identify the most important pieces of information, as measured by the textbook passage's causal chain. Some of these students were also unable to comprehend the implied causal structures used

in the text, as measured by their responses to the follow-up questions. Furthermore, students used a variety of causal constructions to link events that they could summarize, suggesting that they did not have a clear understanding of how to write summaries in this class.

The implications of these results can best be illustrated by George's first summary (Appendix P). As a student who admits to loving history and is an above average reader, one might expect George to identify important relationships between events in the text and maybe even connect those events with others in history. His situation model of history may be broader than a student who does not like the subject or is not as proficient at reading. However, when George was asked to write a summary of "The Victory at Yorktown" after reading the textbook passage, he did not include a single causal link. Instead, using four clauses, he linked events regarding Cornwallis' retreat to Yorktown through only related/explanatory links. The causal and temporal links important to the passage's account never appeared in George's summary. George's love of history did not translate into a sophisticated reading of the text. That is, by not being held accountable to comprehending the connections in the text, George was not able to include information in his summary using some of the most important discourse structures in history, *time* and *cause*. An instructional focus on content (i.e., historical facts) does not mean students learn how to comprehend or express the narrative.

6.5.1.2 Teachers' instructional explanations

When asked to provide students with an instructional explanation of "The Victory at Yorktown," Ms. Forest did so by explaining the event to students, via PowerPoint. This method produced an instructional explanation extending to 190 clauses over a twenty-five minute period, during which time, only two students provided input. Thus, the influences of the instructional explanation on students' learning were solely under her control.

This study's findings suggest that teacher-directed instructional explanations influence students' learning, specifically their content knowledge and their means of expressing that knowledge. After hearing Ms. Forest's instructional explanation, the majority of the students' summaries contained information common to both the passage and the instructional explanation. Thus, the information that Ms. Forest deemed important from the passage and reinforced in her instructional explanation was present in students' summaries. This finding suggests that instructional explanations can mold students' comprehension of curricular material by highlighting content. Content important for future knowledge, then, can be fore-fronted for students.

However, these findings also have implications of how students express history. Some students in the study preferred Ms. Forest's direct causal connections to the implicit connections in the textbook. If not only the content of the textbook but its linguistic structures are valued, especially in written expressions of history, these students may not have the ability to meet such expectations.

6.5.1.3 Expectations of students' production of K-12 history content

Related to the implications of Ms. Forest's instructional explanation on student achievement in history, this study's findings also have implications for the expectations teachers have for students' production of K-12 history content. Throughout this study, there was no instruction given to students about how to write a summary of a historical event or how best to express causal connections between events. Furthermore, the textbook is brief, often touching upon an idea once before progressing to the next event. In contrast, Ms. Forest's repeats important content yet, through the use of explicit causal constructions, produced one, fairly linear network

chain. Important ideas were identified for focused investigation; rather, the network chain suggests a chain of informational pieces connected to each other by only single links.

Within this context, the data suggest that the students' primary way of determining the importance of an event is by its presence in both the passage and the instructional explanation. Indeed, when an event/state was present in both sources, students' included the majority of that information in their summaries. By not focusing on ways in which students can recognize an event's importance through the language, students will vary in their inclusion of events that they think might be important enough to include in a summary.

6.5.2 Implications for the Field of Social Studies

Although the findings of this study have direct implications for the students who participated in it and who attend similar classes across the country, these findings also have implications for the field of social studies. These implications have less to do with how these findings will influence students' mental representations of history and more to do with the expectations of the social studies community. The expectations these findings call to question are those regarding social studies "disciplinary literacy," teaching, and assessment.

6.5.2.1 Disciplinary literacy

Recent reading research suggests that adolescent literacy is an important focus for secondary schools (Biancarosa & Snow, 2006; C. D. Lee & Spratley, 2010; Schleppegrell, 2004; Shanahan & Shanahan, 2008). Secondary education requires students to "read to learn" rather than "learn to read," as they did in early elementary school. Many secondary educators, though, neglect to instruct students on what "reading to learn" looks like in their particular discipline.

For their part, social studies educators have suggested that history teachers focus on teaching students to read and think historically rather than use the textbook (Seixas, 1993; VanSledright, 2002; Wineburg, 2001). In many history classrooms across the United States, however, K-12 history teachers choose the textbook as their primary instructional resource (Nokes, 2010) and, as this study illustrates, provide their students with instructional explanations that focus on “fact-based” content. Thus, a disconnect has occurred between what researchers in social studies education advocate and the instruction that students receive in the classroom.

The findings of this study have implications for what social studies teachers and researchers term “disciplinary literacy.” As was argued in Chapter One, K-12 United States History does not qualify as history, compared to the work of academic historians. Rather, US History inculcates students to a nation-state narrative, impressing upon them notions of what it means to be “a good citizen” (i.e., “following the law,” “peaceful protest,” “supporting the free market economy,” etc.) To be successful in such a curriculum, students do not necessarily need to know how to read various primary sources. Rather, they primarily need to know how to identify the facts in order to memorize them, as one student participant observed. If students are to read and comprehend the textbook as a text, rather than a fact-book, they need to know how to navigate the language and coherence structures of their history textbook.

This is not to imply that the textbook is or should be the ultimate instructional material in the history classroom. Rather, as this study suggests, the textbook is a primary instructional material that even some of the best readers have difficulty navigating. Teaching students to manage incoherence in the texts (e.g., the discussion of Benedict Arnold’s turn traitor) and to recognize implied causal links may go far in helping students to build coherent mental representations of history.

This view of “disciplinary literacy,” however, is predicated on the assumption that the social studies community favors students producing accounts of history in the many forms history textbooks present them. If so, social studies students need to be taught how to learn from the history textbook. If not, the social studies community needs to discuss what “good” social studies writing looks like and demand that same writing from textbook authors and publishers.

6.5.2.2 Social studies teaching

The same questions the social studies community should ask about “disciplinary literacy” should also be asked of social studies teaching. This study’s findings suggest that students sometimes prefer the language heard in an instructional explanation to the language in the history textbook. In the case of Ms. Forest’s instructional explanation, the language used in the instructional explanation was very different from that of the textbook. If these same findings are true in other classrooms, the social studies community should ask what good social studies discussion sounds like, beyond the content discussed. For example, should social studies discussions and instructional explanations express causation explicitly even when a related information source does not make that relationship explicit? Should social studies teachers call information into question when explicit links are not made?

An important motivator of the “historical thinking” movement has been the desire to get students to think critically (Dutt-Doner, et al., 2007; Seixas, 1994; Wineburg & Schneider, 2009). By examining the language that teachers use when explaining history events and the language informational sources use to discuss historical events, the social studies community has the ability to open critical discussions about how history is represented regardless of the instructional materials selected. By including even simple analyses of language into instructional

explanations, students can be provided the opportunity to think critically about multiple types of texts, including the textbook.

Such critical thinking may enable students to make personal connections with history (VanSledright, 2002). These connections may increase not only the inclusion of events in their summaries and comprehension of information important to the nation-state narrative but, more importantly, increase the usefulness of that information. For example, in Chapter Three a rhetorical question was asked: “How does a life of poverty/oppression/discrimination/etc. fit into the theme of patriotism?” In Ms. Forest’s class, these issues were left untouched. Although it was not the purpose of this study to investigate such interactions between issues of injustice and curriculum, it seems that learning to think critically about why historical events occurred and their importance in the narrative would empower all students to question the authors and their teachers, ultimately enabling them to question the disconnection between the patriotic narrative and their own lived experiences (Apple, 2000; Giroux, 1995; Kincheloe, 2001). Equal opportunity does not mean equality, as the communities of Braddock, North Braddock, and Rankin know too well. Critical questioning of a people’s “collective heritage” may provide a step to improving historical understanding and lived experiences.

6.5.2.3 Social studies assessment

It has been well established that formative and summative assessments are important for focused, reflective instruction (Black & Wiliam, 1998; Cowie & Bell, 1999; Hargreaves, Earl, & Schmidt, 2002). However, many of the standards on which students are assessed are rooted in “facts,” not in the cognitive activities of the discipline (Noddings, 2007). For example, Coffin’s (2006b) research suggests that students do not learn to create historical arguments because they are not taught how to employ those discourse structures. Similarly, this study suggests that students do

not necessarily learn to make implicit or explicit causal links because such structures are not taught as part of the instructional explanation. In the words of one student, their “brains adjusted to more advanced things” (Student Participants, 2010a).

Once the social studies community reaches consensus about the structures of “good” historical writing and speaking, students can be held accountable for learning these structures and engaging in disciplinary modes of communication. In addition to the possibility that students could express meaning in ways appropriate to the discipline, students might also be able to build more coherent mental representations of historical events, aiding in the retention of historical information (Beck, et al., 1989; Graesser, et al., 2003; McNamara, et al., 1996). In order to engage students in disciplinary ways of thinking, language and text coherence must be integral parts of the larger discussion of what constitutes “good social studies.”

Such discussions ultimately must lead to how we present history to our students, specifically through the history textbook narrative; assessment and instruction are necessarily linked. By examining the language and text coherence of history textbooks, the unified nation-state narrative proves untenable: tokenism is exposed; oppression is thematized; power structures are displayed. Exposing the causal language of history textbooks has the power to not only help students construct a more coherent narrative but, in so doing, question how and why history happened as it is told. In this way, history textbooks can be used to engage students in the critical, historical thinking that Rugg (1936), Nash (1997), and many current education scholars (Levesque, 2008; Vansledright, 1996; Wineburg, 2001) have dreamt of for years.

6.6 CONCLUSION

This study investigated the extent to which the causal and coherence structures of a textbook passage and related instructional explanation influenced seven 8th grade US History students' mental representations a historical event. Major findings included students' inclusion of events in their summaries common to the textbook passage and the instructional explanations, as well as students' tendency to prefer the causal constructions of either the textbook or the instructional explanation. These findings have implications for how textbook content should be taught, how instructional explanations should be conceived, and how students express content in ways appropriate to the discipline of history.

APPENDIX A

TEXTBOOK PASSAGE

Victory at Yorktown

Finally, Cornwallis gave up on his plan to take the Carolinas. In the spring of 1781, he moved his troops north into Virginia. He planned to conquer Virginia and cut off the Americans' supply routes to the South.

An American traitor

The British had achieved some success in Virginia, even before the arrival of Cornwallis. **Benedict Arnold**, formerly one of the Americans' best generals, was now leading British troops. Arnold captured and burned the capital city of Richmond. His forces raided and burned other towns as well.

Arnold had turned traitor to the American cause in September 1780, while commanding West Point, a key fort in New York. Arnold was resentful because he felt he had not received enough credit for his victories. He also needed money. He secretly agreed to turn over West Point to the British. The plot was uncovered by a Patriot patrol, but Arnold escaped to join the British.

Arnold's act of treachery and his raids on towns in Connecticut and Virginia enraged the Patriots. Thomas Jefferson, governor of Virginia, offered a sizable reward in gold for his capture. Washington wrote orders that Arnold was to be hanged. Despite these efforts, Arnold was never captured.

Cornwallis trapped

Cornwallis hoped to meet with the same kind of success in Virginia that Arnold had. At first, things did go well. Cornwallis sent Loyalist troops to attack Charlottesville, where the Virginia legislature was meeting. Governor Thomas Jefferson and other officials had to flee.

American troops under Lafayette fought back by making raids against the British. Lafayette did not have enough troops to fight a major battle. Still, his strategy kept Cornwallis at bay.

Then, Cornwallis made a mistake. He refused an order from Sir Henry Clinton to send part of his army to New York. Instead, he retreated to Yorktown peninsula, a strip of land jutting into Chesapeake Bay. He felt confident that British ships could supply his army from the sea.

Washington saw an opportunity to trap Cornwallis on the Yorktown peninsula. He marched his Continental troops south from New York. With the Americans were French soldiers under the **Comte de Rochambeau** (roh shahm BOH). The combined army rushed to join Lafayette in Virginia.

Meanwhile, a French fleet under **Admiral de Grasse** was also heading towards Virginia. Once in Chesapeake Bay, De Grasse's fleet closed the trap. Cornwallis was cut off. He could not get supplies. He could not escape by land or by sea.

The British surrender

By the end of September, more than 16,000 American and French troops laid siege to Cornwallis's army of fewer than 8,000. A siege is the act of surrounding an enemy position in an attempt to capture it. Day after day, American and French artillery pounded the British.

For several weeks, Cornwallis held out. Finally, with casualties mounting and his supplies running low, Cornwallis decided the situation was hopeless. The British had lost the **Battle of Yorktown.**

On October 19, 1781, the British surrendered their weapons to the Americans. The French and the Americans lined up in two facing columns. As the defeated redcoats marched between the victorious troops, a British band played the tune "The World Turned Upside Down."

(Davidson & Castillo, 2000: 179-182)

APPENDIX B



MS. FOREST'S INSTRUCTIONAL UNIT

Woodland Hills School District

Unit of Instruction – U.S. History 8

NAME OF THE UNIT: **The Revolutionary Era**

TIME ALLOTTED FOR UNIT: **6 Weeks**

PENNSYLVANIA ACADEMIC STANDARDS ADDRESSED IN THIS UNIT:

8.1.9.A-D – Analyze chronological thinking.

Analyze and interpret historical sources.

Analyze the fundamentals of historical interpretation.

Analyze and interpret historical research.

8.3.6.A - Identify and explain the political and cultural contributions of individuals and groups to U.S. history from Beginnings to 1824.

- 8.3.6.B - Identify and explain primary documents, material artifacts and historic sites important in United States history from beginnings to 1824.**
- 7.3.9.B - Explain the human characteristics of places and regions by their cultural characteristics.**
- 7.3.9.C - Explain the human characteristics of places and regions by their settlement characteristics.**
- 7.3.9.D - Explain the human characteristics of places and regions by their economic activities.**
- 7.3.9.E - Explain the human characteristics of places and regions by their political activities.**

PENNSYLVANIA ASSESSMENT ANCHORS ADDRESSED IN THIS UNIT:

- R8.A.2 – Understand nonfiction text appropriate to grade level.**
- R8.A.2.1 – Identify the meaning of vocabulary from various subject areas.**
- R8.A.2.2 - Apply word recognition skills.**
- R8.A.2.3 - Make inferences, draw conclusions, and make generalizations based on text.**
- R8.A.2.4 – Identify main ideas and relevant details.**
- R8.A.2.5 – Retell or summarize the main ideas and important details of text.**
- R8.A.2.6 - Identify text as narrative, informational, persuasive, or instructional.**
- R8.B.3 - Identify and analyze concepts and organization of nonfiction text.**
- R8.B.3.1 – Differentiate fact from opinion in text.**
- R8.B.3.2 – Distinguish between essential and nonessential information within or across text.**
- R8.B.3.3 - Analyze text organization including sequence, question/answer, comparison/contrast, cause and effect, problem/solution, the headings and charts to derive meaning.**
- M8.E.1 – Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.**
- M8.E.1.1 – Choose, display or interpret data (tables, charts, graphs, etc.)**

ESSENTIAL SKILLS/OBJECTIVES:

**Describe the European Rivalry in North America.
Analyze the effect of the British taxation on North America.
List the major events in the colonies that directly led to the Revolution.
Outline the major events of the American Revolution.**

ASSESSMENT PROCEDURES:

**Show on map the territories claimed by France and England.
Create a chart showing taxes passed and colonist reaction.
Write a newspaper article about a battle of the Revolution.
Produce a report on a major figure of the Revolution.**

**SUGGESTED LEARNING ACTIVITIES: MAPWORK; JIG-SAW EXERCISE;
JOURNAL WRITING; GROUP PROJECT WORK**

REQUIRED RESOURCES:

TEXT – THE AMERICAN NATION – PRENTICE HALL, 2000

PRIMARY SOURCES – DECLARATION OF INDEPENDENCE

***A BRIEF DESCRIPTION OF THE PROVINCE
OF CAROLINA (SUGGESTED)***

***EXERPTS FROM AUTOBIOGRAPHY OF BENJAMIN
FRANKLIN (RECOMMENDED)***

COMMON SENSE (THOMAS PAINE)

***LETTERS ON INDEPENDENCE (JOHN AND ABIGAIL
ADAMS, SUGGESTED)***

HISTORY ALMANACS;

COMPUTERS; OUTSIDE READINGS

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL

Pitt

Seal<https://stg.osiris.pitt.edu/osiris-dev/Doc/0/2EM15I2P60HK18BCUD0RH7EF8D/pitt_bluegold_seal10.gif> University of Pittsburgh

Institutional Review Board

3500 Fifth Avenue

Pittsburgh, PA 15213

(412) 383-1480

(412) 383-1508 (fax)

<http://www.irb.pitt.edu> <<http://www.irb.pitt.edu/>>

Memorandum

To: Jason Fitzgerald

From: Christopher Ryan PhD , Vice Chair

Date: 9/27/2010

IRB#: PRO10080405

<[https://www.osiris.pitt.edu/osiris/Rooms/DisplayPages/LayoutInitial?Container=com.webridge.entity.Entity\[OID\[18CD3F8270312D4599B5C201DAF3D3C8\]\]](https://www.osiris.pitt.edu/osiris/Rooms/DisplayPages/LayoutInitial?Container=com.webridge.entity.Entity[OID[18CD3F8270312D4599B5C201DAF3D3C8]])>

Subject: Comprehending Historical Narrative: Exploring the Relationship Between Causal Language and Students' Mental Representations of History

The University of Pittsburgh Institutional Review Board reviewed and approved the above referenced study by the expedited review procedure authorized under 45 CFR 46.110. Your research study was approved under:

45 CFR 46.110.(6)

45 CFR 46.110.(7)

Approval Date: 9/27/2010

Expiration Date: 9/26/2011

For studies being conducted in UPMC facilities, no clinical activities can be undertaken by investigators until they have received approval from the UPMC Fiscal Review Office.

Please note that it is the investigator's responsibility to report to the IRB any unanticipated problems involving risks to subjects or others [see 45 CFR 46.103(b)(5) and 21 CFR 56.108(b)]. The IRB Reference Manual (Chapter 3, Section 3.3) describes the reporting requirements for unanticipated problems which include, but are not limited to, adverse events. If you have any questions about this process, please contact the Adverse Events Coordinator at 412-383-1480.

The protocol and consent forms, along with a brief progress report must be resubmitted at least one month prior to the renewal date noted above as required by FWA00006790 (University of Pittsburgh), FWA00006735 (University of Pittsburgh Medical Center), FWA00000600 (Children's Hospital of Pittsburgh), FWA00003567 (Magee-Womens Health Corporation), FWA00003338 (University of Pittsburgh Medical Center Cancer Institute).

Please be advised that your research study may be audited periodically by the University of Pittsburgh Research Conduct and Compliance Office.

APPENDIX D

INSTRUCTIONAL EXPLANATION DIVIDED BY SENTENCES

1. Alright, next, “Victory at Yorktown” and I’m going to tell you how victory was achieved at Yorktown.
2. It was real simple, the way that they achieved victory.
3. First [pause], the Victory at Yorktown, first, former American General, and they kinda try to depict him in a way in *The Patriot*.
4. Remember the guy who says, “Oh, I know Benjermin, um, I know Benjermin’s boot size?”
5. He was supposed to be kinda like the Benedict Arnold character.
6. Remember, he burned down the church and all that?
7. He gave his way...
8. So, they were trying to depict that whole Benedict Arnold character in there but not necessarily sayin’ in was Benedict Arnold.
9. Movies do that.
10. Alright, in their minds and in the minds of the Americans, he turned traitor.
11. The reason he turned traitor is because he wasn’t, in his mind, given enough notoriety or fame for his victories.
12. And, pretty much, the Americans weren’t paying as much as the British.
13. They didn’t have a whole lot of money to work with so he felt like he wasn’t, he was not only getting, wasn’t getting the fame but he also wasn’t getting’ any money.
14. Now, if you’re gonna do something in battle, a couple things you want is fame.
15. Most of our famous generals had their names in history books.
16. Or, at some point at the end of the war, they became wealthy.
17. He thought, kinda the way that war was going, the Americans didn’t have a chance so he said, “I may as well side with the people who’s goin’ to win.”
18. But in the end, you know...
19. But they called him a traitor.
20. He helped the British win victories in New York and Virginia because he obviously told them some of their strategies.
21. At one point, and this is why they call him a traitor, he was supposedly, because we don’t really know for sure, supposed to turn over the plans for West Point.
22. But he was never captured, he was never found so he was never tried a traitor in the end.
23. And he did stay in Americas, he never left, but he was never found or captured.

24. So it'd be sorta like me saying this person's a traitor and they live next door to me and I can't find him or capture him.
25. So, he didn't go very far.
26. He was still in America until the day he died but they claimed him a traitor and they he was selling out the Americans.
27. Next, and here's the big thing that happens, "Cornwallis trapped."
28. Basically, this is what happened at the Victory at Yorktown.
29. Cornwallis moved to Yorktown, Virginia.
30. It's a peninsula and a peninsula, if you don't know, is a area of land that's surrounded by water on all three sides.
31. So, Florida, think of Florida.
32. Florida's a peninsula.
33. If you look at how it goes, it's like this [demonstrates drawing it in the air].
34. There's water all around it except for the in the interior.
35. Well, the peninsula of Yorktown is surrounded, and this is what makes this a peninsula, it was surrounded by the James and York River, the James and York River.
36. So, Cornwallis was really really was supposed to be leaving the South.
37. He was actually given orders to go to New York from the British but instead of going to New York like his orders said, he thought that he could achieve victories in the South.
38. And he was kinda trapped in the South.
39. He was moving forward but the American Patriots and a lot of their help, their militia, was basically trapping him.
40. They were using those guerrilla, or hit and run, tactics to keep Cornwallis in the South.
41. Their whole plan was, if they can keep Cornwallis in the South, because they were startin' to achieve victories in the North, then they could win this war.
42. So they kept on tryin' to keep Cornwallis in the South.
43. So he was trapped at Yorktown, which was a peninsula.
44. Cornwallis counted on the British navy, British navy, to supply his troops and basically evacuate him if he needed them to.
45. He counted on them to basically give him the supplies that they need and, if he needed to get out, remember, and we talk about the rank-and-file system, we really didn't care about the people who were up under us, like the Kindergarteners, so he was worried about getting himself out.
46. So, he was hoping that the troop, that they would come in with their needed supplies and if he needed to get out he could get out.
47. Well, what happens is, Washington moves to Yorktown, trapping Cornwallis along with the French fleet and it led that basic blockade.
48. You remember at the end of the movie where they show that blockage, all the French ships sitting out in the water?
49. Anyone remember that, besides Ms. Green?
50. If you remember, put your hands up.
51. Thank you.
52. So, they led the blockade led by a French Admiral, de Grasse.
53. So, it was led by a French Admiral. Huh?
54. S – That's a show.
55. T – Yes, I know it's a show, but it's also the name of a French Admiral.

56. So, this is how Cornwallis got trapped.
57. In the end, this is what happened.
58. In the end, the British surrenders.
59. In September, 16,000 Patriots troops surrounds the 8,000 British troops that were left.
60. So, 16,000 Patriot troops, our Continental army, basically surrounds the 8,000 British troops that were left.
61. So, basically, that's a 2 to 1 ratio.
62. So, the British were outnumbered 2 to 1 in Yorktown.
63. They were basically trying to get out.
64. So it's sorta like your parents are comin' to pick you up and you're ready to go home from your friend's house and you're waiting and waiting and waiting and waiting and waiting; you don't have any clean clothes, you don't want to stay another night at their house and you're ready to go home.
65. So, and you're waiting for them to come.
66. All the sudden, you're ambushed 2 to 1.
67. You're sitting on the porch, two people come up and take you away.
68. So, basically, that's what happens.
69. Another thing that really really hindered them, their supplies were running low and they looked that they were going to be defeated.
70. They were outnumbered 2 to 1, their supplies didn't come in, they were ready to go home.
71. So, when you're ready to go home, what do you think?
72. They have a lot of fight in 'em?
73. If it's like midnight and you're waitin' for your parents, you've been sittin' on someone's porch since 8:00pm, are you really ready to fight somebody?
74. You're just ready to go home.
75. You're tired.
76. So they were tired and, after all this happens, Cornwallis sees imminent defeat, basically he knew he was going to lose, and to save face, and to save some of his men, Cornwallis agrees to surrender October 19, 1781 and he does not, and this is the one thing they noted Cornwallis.
77. He was such the notable, such the great General but the one thing that he did in the end?
78. He didn't even surrender on his own.
79. He sent his next in command and he went riding off.
80. So, they thought that was a cowardly way of doing it.
81. Cornwallis really couldn't return to England to save face 'cause they were considering him a coward.
82. Next, excuse me ladies, and this is just a quick fun fact, the British troops marched out of Yorktown to the song "The World Turned Upside Down."
83. Why do you think they marched out with the song "The World Turned Upside Down?"
84. S – Because they destroyed everything.
85. T – Basically because they figured the life that they knew, having the American colonists, having some control over them, the idea that the whole world as they know it is now going to change because of quote unquote this American Revolution.

APPENDIX E

QUIZ

1. Where did British General Cornwallis take his troops towards the end of the American Revolution?

- a. Maryland
- b. Pennsylvania
- c. Virginia
- d. Washington, D.C.

2. Whose military raids isolated General Cornwallis?

- a. General Gates
- b. General Greene
- c. General Lafayette
- d. General Washington

3. Which country helped the Americans defeat the British?

- a. France
- b. Holland

- c. Mexico
- d. Spain

4. To what landform did Cornwallis retreat?

- a. island
- b. mountains
- c. peninsula
- d. plateau

5. Why did Cornwallis retreat to this landform?

- a. It separated Washington's army.
- b. It was easy to defend.
- c. He could get supplies there.
- d. There was enough room for all of his troops.

6. Where did Washington originally think Cornwallis would take his army?

- a. New York
- b. North Carolina
- c. Pennsylvania
- d. Virginia

7. Which of the following was Benedict Arnold NOT?

- a. a British general

- b. a colonial general
- c. a French general
- d. a traitor

8. The Continental Army beat the British by:

- a. a frontal assault
- b. a surprise attack
- c. guerilla warfare
- d. laying siege to their camp

9. Cornwallis was trapped because

- a. his army had no supplies
- b. his troops rebelled against him
- c. the colonists surrounded his camp
- d. the French navy blocked his escape

10. The last battle of the American Revolution was called:

- a. The Battle of Richmond
- b. The Battle of Saratoga
- c. The Battle of Yorktown
- d. The Victory

APPENDIX F

FOLLOW-UP QUESTIONS

1. What caused Benedict Arnold to be resentful? How do you know?

2. Why did Cornwallis retreat to Yorktown peninsula? How do you know?

3. Imagine you are a colonial general who has fought in some of the most important battles of the American Revolution, have risked your life for your country, and have received little credit and little pay. How would you feel? Why?

4. Imagine you are in command of an army that has a terrific navy. What geographic features would you find best for fighting? Why?

APPENDIX G

TEACHER PARTICIPANT INTERVIEW QUESTIONS

1. How many years have you taught US History?
2. What was your undergraduate major?
3. Did you attend graduate school? If so, what coursework did you complete?
4. What does a typical class period look like in your classroom?
5. What materials do you usually use in your teaching?
6. How much reading is assigned in your class? What are the students typically asked to read?
7. How do you most often assess student learning?
8. How prescriptive is your school district's US History curriculum?
9. What is the school's goal(s) for history education?
10. What is your goal in teaching history?

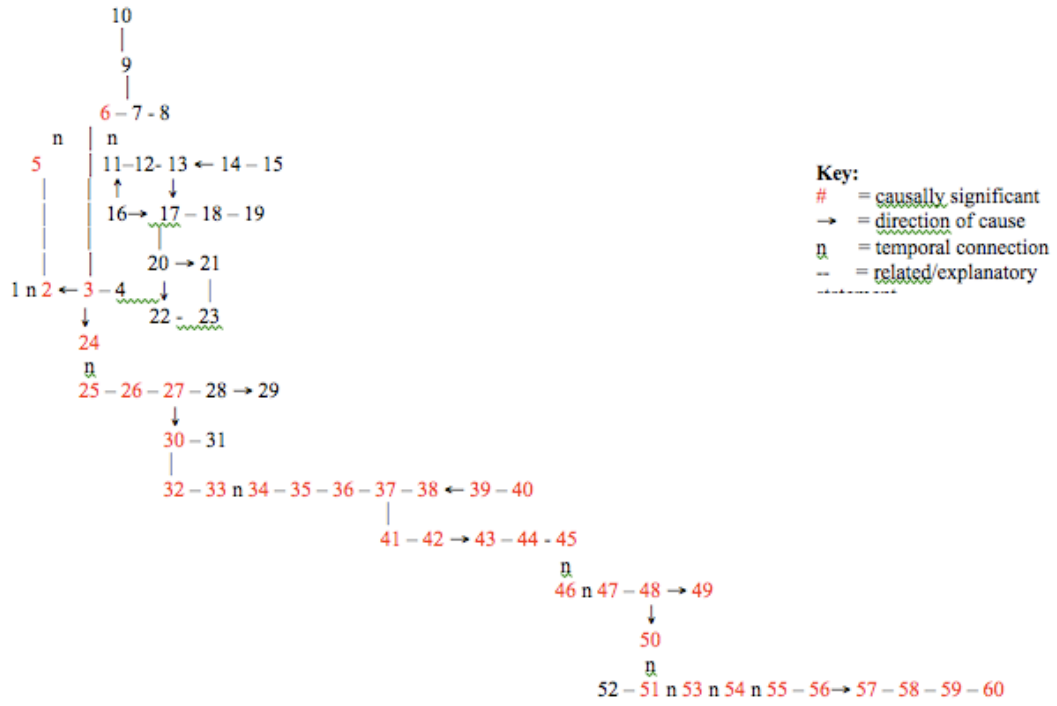
APPENDIX H

STUDENT PARTICIPANT INTERVIEW QUESTIONS

1. What is history?
2. Who makes history?
3. Why is history taught in school?
4. What does a typical day in your history class look like?
5. Who was your favorite history teacher and why?
6. Who was your least favorite history teacher and why?
7. Which of those last two teachers is most similar to your other history teachers?
8. How is history usually taught in school (i.e., materials, activities, etc.)?
9. How much reading is assigned for you to read in US History? What do you read?

APPENDIX I

PASSAGE CAUSAL CHAIN



APPENDIX J

PASSAGE DIVIDED BY CLAUSES

1. Finally, Cornwallis gave up on his plan to take the Carolinas.
2. In the spring of 1781, he moved his troops north into Virginia.
3. He planned to conquer Virginia
4. and cut off the Americans' supply routes to the South.
5. The British had achieved some success in Virginia, even before the arrival of Cornwallis.
6. **Benedict Arnold**, formerly one of the Americans' best generals, was now leading British troops.
7. Arnold captured
8. and burned the capital city of Richmond.
9. His forces raided
10. and burned other towns as well.
11. Arnold had turned traitor to the American cause in September 1780,
12. while commanding West Point, a key fort in New York.
13. Arnold was resentful
14. because he felt
15. he had not received enough credit for his victories.
16. He also needed money.
17. He secretly agreed to turn over West Point to the British.
18. The plot was uncovered by a Patriot patrol,
19. but Arnold escaped to join the British.
20. Arnold's act of treachery and his raids on town in Connecticut and Virginia enraged the Patriots.
21. Thomas Jefferson, governor of Virginia, offered a sizable reward in gold for his capture.
22. Washington wrote orders that Arnold was to be hanged.
23. Despite these efforts, Arnold was never captured.
24. Cornwallis hoped to meet with the same kind of success in Virginia that Arnold had.
25. At first, things did go well.
26. Cornwallis sent Loyalist troops
27. to attack Charlottesville,
28. where the Virginia legislature was meeting.
29. Governor Thomas Jefferson and other officials had to flee.
30. American troops under Lafayette fought back

31. by making raids against the British.
32. Lafayette did not have enough troops to fight a major battle.
33. Still, his strategy kept Cornwallis at bay.
34. Then, Cornwallis made a mistake.
35. He refused an order from Sir Henry Clinton
36. to send part of his army to New York.
37. Instead, he retreated to Yorktown peninsula,
38. a strip of land jutting into Chesapeake Bay.
39. He felt confident
40. that British ships could supply his army from the sea.
41. Washington saw an opportunity
42. to trap Cornwallis on the Yorktown peninsula.
43. He marched his Continental troops south from New York.
44. With the Americans were French soldiers under the **Comte de Rochambeau** (roh shahm BOH).
45. The combined army rushed to join Lafayette in Virginia.
46. Meanwhile, a French fleet under **Admiral de Grasse** was also heading towards Virginia.
47. Once in Chesapeake Bay, De Grasse's fleet closed the trap.
48. Cornwallis was cut off.
49. He could not get supplies.
50. He could not escape by land or by sea.
51. By the end of September, more than 16,000 American and French troops laid siege to Cornwallis's army of fewer than 8,000.
52. A siege is the act of surrounding an enemy position in an attempt to capture it.
53. Day after day, American and French artillery pounded the British.
54. For several weeks, Cornwallis held out.
55. Finally, with casualties mounting and his supplies running low, Cornwallis decided the situation was hopeless.
56. The British had lost the **Battle of Yorktown**.
57. On October 19, 1781, the British surrendered their weapons to the Americans.
58. The French and the Americans lined up in two facing columns.
59. As the defeated redcoats marched between the victorious troops,
60. a British band played the tune "The World Turned Upside Down."

APPENDIX K

CAUSAL ANALYSIS OF PASSAGE

Asyndetic Constructions:

Mental Process:

“In the spring of 1781, he moved his troops south into Virginia. He planned to conquer Virginia and cut off the Americans’ supply routes to the South” (Davidson & Castillo, 2000: 179).

“Arnold’s act of treachery and his raids on towns in Connecticut and Virginia enraged the Patriots. Thomas Jefferson, governor of Virginia, offered a sizable reward in gold for his capture” (Davidson & Castillo, 2000:180)

“Instead, he retreated to Yorktown peninsula, a strip of land jutting into Chesapeake Bay. He felt confident that British ships could supply his army from sea” (Davidson & Castillo, 2000: 180).

“Washington saw an opportunity to trap Cornwallis on the Yorktown peninsula. He marched his Continental troops south from New York” (Davidson & Castillo, 2000: 180).

“Finally, with casualties mounting and his supplies running low, Cornwallis decided the situation was hopeless. The British lost the Battle of Yorktown” (Davidson & Castillo, 2000: 180-182).

Modality:

“Cornwallis sent Loyalist troops to attack Charlottesville, where the Virginia legislature was meeting. Governor Thomas Jefferson and other officials had to flee” (Davidson & Castillo, 2000: 180)

“Cornwallis was cut off. He could not get supplies” (Davidson & Castillo, 2000: 180).

Conjunctions:

“Arnold was resentful because he felt he had not received enough credit for his victories” (Davidson & Castillo, 2000: 180)

Cohesion:

“Arnold had turned traitor to the American cause in September 1780, while commanding West Point, a key fort in New York” ← “He also needed money” (Davidson & Castillo, 2000:180)

“Arnold was resentful because he felt he had not received enough credit for his victories” + “He also needed money” → “He secretly agreed to turn over West Point to the British” (Davidson & Castillo, 2000:180)

“Arnold’s act of treachery and his raids on towns in Connecticut and Virginia enraged the Patriots” → “Thomas Jefferson, governor of Virginia, offered a sizable reward in gold for his capture” + “Washington wrote orders that Arnold was to be hanged” (Davidson & Castillo, 2000:180)

“Cornwallis hoped to meet the same kind of success in Virginia that Arnold had.” → “Cornwallis sent Loyalist troops to attack Charlottesville, where the Virginia legislature was meeting.” (Davidson & Castillo, 2000: 180)

“Cornwallis sent Loyalist troops to attack Charlottesville, where the Virginia legislature was meeting” → “American troops under Lafayette fought back by making raids against the British” (Davidson & Castillo, 2000:180)

“Cornwallis was cut off” → “He could not get supplies” + “He could not escape by land or by sea” (Davidson & Castillo, 2000:180)

“The British had lost the Battle of Yorktown” → “On October 19, 1781, the British surrendered their weapons to the Americans” (Davidson & Castillo, 2000:182)

APPENDIX L

TEACHER PARTICIPANT SUMMARY

Teacher Participant Summary:

That the British were suffering defeats, although Arnold established some victories for the British, such as burning Richmond. The British army was finding itself in unable to put the American army into surrendering. With limited supplies and being blockaded into Yorktown and most ground troops under siege, Cornwallis had no choice but to surrend on Oct 19, 1781. Which led to the American Colonist victory of the British with the help of the French & Spanish.

Passage Clauses:

1. That the British were suffering defeats,
2. although Arnold established some victories for the British,
3. such as burning Richmond.
4. The British army was finding itself in unable
5. to put the American army into surrendering.
6. With limited supplies and being blockaded into Yorktown
7. and most ground troops under siege,
8. Cornwallis had no choice but to surrend on Oct 19, 1781.
9. Which led to the American Colonist victory of the British with the help of the French & Spanish.

Causal Chain:

3

|

2 5

| |

1 - 4 - 6 - 7 → 8 → 9

Types of Causation:

Modal – non-asyndetic:

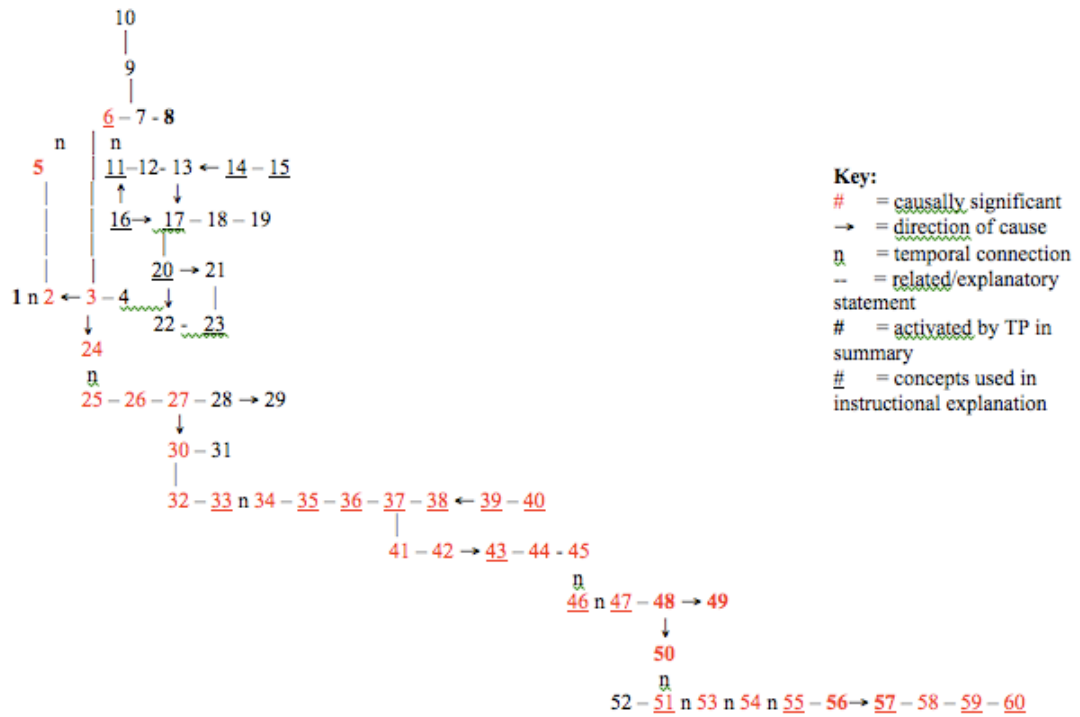
“had no choice but to surrend[er]”

Verbs:

“led”

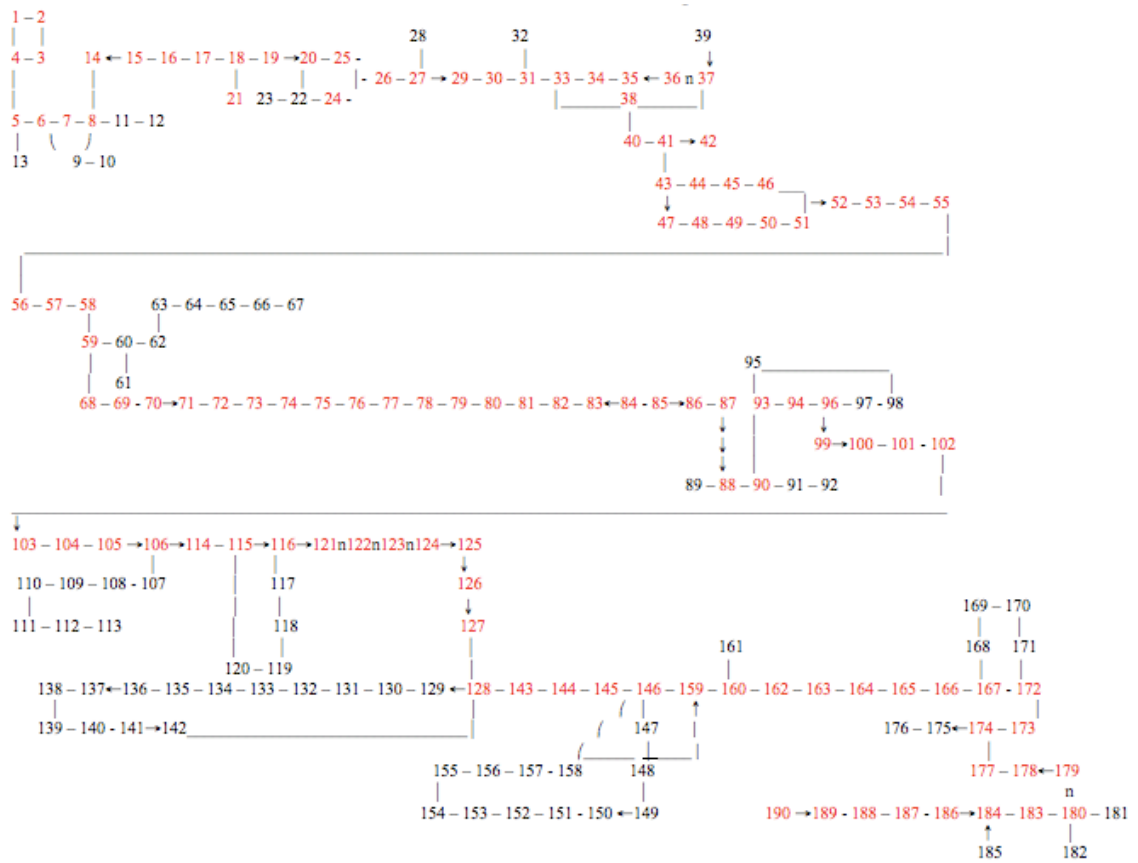
APPENDIX M

CAUSAL CHAIN ACTIVATED BY TEACHER PARTICIPANT



APPENDIX N

NETWORK CHAIN OF INSTRUCTIONAL EXPLANATION



APPENDIX O

INSTRUCTIONAL EXPLANATION BY CLAUSES

1. Alright, next, “Victory at Yorktown” and I’m going to tell you
2. how victory was achieved at Yorktown.
3. It was real simple,
4. the way that they achieved victory.
5. First [pause], the Victory at Yorktown, first, former American General, and they kinda try to depict him in a way in *The Patriot*.
6. Remember the guy who says, “Oh, I know Benjermin,
7. um, I know Benjermin’s boot size?”
8. He was supposed to be kinda like the Benedict Arnold character.
9. Remember, he burned down the church and all that?
10. He gave his way...
11. So, they were trying to depict that whole Benedict Arnold character in there
12. but not necessarily sayin’ it was Benedict Arnold.
13. Movies do that.
14. Alright, in their minds and in the minds of the Americans, he turned traitor.
15. The reason he turned traitor is
16. because he wasn’t, in his mind, given enough notoriety or fame for his victories.
17. And, pretty much, the Americans weren’t paying as much as the British.
18. They didn’t have a whole lot of money
19. to work with
20. so he felt like he wasn’t, he was not only getting, wasn’t getting the fame
21. but he also wasn’t getting any money.
22. Now, [[if you’re gonna do something in battle,]] a couple things you want is fame.
23. [[if you’re gonna do something in battle,]]
24. Most of our famous generals had their names in history books.
25. Or, at some point at the end of the war, they became wealthy.
26. He thought,
27. [[kinda the way that war was going,]] the Americans didn’t have a chance
28. [[kinda the way that war was going,]]
29. so he said,
30. “I may as well side with the people
31. who’s goin’ to win.”

32. But in the end, you know...
33. But they called him a traitor.
34. He helped the British
35. win victories in New York and Virginia
36. because he obviously told them some of their strategies.
37. At one point, [[and this is why they call him a traitor,]] he was supposedly, [[because we don't really know for sure,]] supposed to turn over the plans for West Point.
38. [[and this is why they call him a traitor,]]
39. [[because we don't really know for sure,]]
40. But he was never captured,
41. he was never found
42. so he was never tried a traitor in the end.
43. And he did stay in Americas,
44. he never left,
45. but he was never found
46. or captured.
47. So it'd be sorta like me saying
48. this person's a traitor
49. and they live next door to me
50. and I can't find him
51. or capture him.
52. So, he didn't go very far.
53. He was still in America until the day he died
54. but they claimed him a traitor
55. and that he was selling out the Americans.
56. Next, and here's the big thing that happens, "Cornwallis trapped."
57. Basically, this is what happened at the Victory at Yorktown.
58. Cornwallis moved to Yorktown, Virginia.
59. It's a peninsula
60. and a peninsula, [[if you don't know,]] is a area of land
61. [[if you don't know,]]
62. that's surrounded by water on all three sides.
63. So, Florida, think of Florida.
64. Florida's a peninsula.
65. If you look at how it goes,
66. it's like this.
67. There's water all around it except for the in the interior.
68. Well, the peninsula of Yorktown is surrounded,
69. and this is what makes this a peninsula,
70. it was surrounded by the James and York River, the James and York River.
71. So, Cornwallis was really, really was supposed to be
72. leaving the South.
73. He was actually given orders
74. to go to New York from the British
75. but instead of going to New York like his orders said,
76. he thought that he could achieve victories in the South.

77. And he was kinda trapped in the South.
 78. He was moving forward
 79. but the American Patriots and a lot of their help, their militia, was basically trapping him.
 80. They were using those guerrilla, or hit and run, tactics
 81. to keep Cornwallis in the South.
 82. Their whole plan was,
 83. if they can keep Cornwallis in the South,
 84. because they were startin' to achieve victories in the North,
 85. then they could win this war.
 86. So they kept on tryin'
 87. to keep Cornwallis in the South.
 88. So he was trapped at Yorktown,
 89. which was a peninsula.
 90. Cornwallis counted on the British navy, British navy,
 91. to supply his troops
 92. and basically evacuate him if he needed them to.
 93. He counted on them
 94. to basically give him the supplies that they need
 95. and,[[if he needed to get out,]] [[remember,]] [[and we talk about the rank-and-file
 system,]] we really didn't care about the people who were up under us, like the
 Kindergarteners,
 96. [[if he needed to get out,]]
 97. [[remember,]]
 98. [[and we talk about the rank-and-file system,]]
 99. so he was worried about getting himself out.
 100. So, he was hoping that the troop,
 101. that they would come in with their needed supplies
 102. and if he needed to get out he could get out.
 103. Well, what happens is,
 104. Washington moves to Yorktown,
 105. trapping Cornwallis along with the French fleet
 106. and it led that basic blockade.
 107. You remember at the end of the movie
 108. where they show that blockage,
 109. all the French ships sitting out in the water?
 110. Anyone remember that, besides Ms. Green?
 111. If you remember,
 112. put your hands up.
 113. Thank you.
 114. So, they led the blockade
 115. led by a French Admiral, de Grasse.
 116. So, it was led by a French Admiral.
 117. Huh?
 118. That's a show.
 119. Yes, I know it's a show,
 120. but it's also the name of a French Admiral.

121. So, this is how Cornwallis got trapped.
122. In the end, this is what happened.
123. In the end, the British surrenders.
124. In September, 16,000 Patriots troops surrounds the 8,000 British troops that were left.
125. So, 16,000 Patriot troops, our Continental army, basically surrounds the 8,000 British troops that were left.
126. So, basically, that's a 2 to 1 ratio.
127. So, the British were outnumbered 2 to 1 in Yorktown.
128. They were basically trying to get out.
129. So it's sorta like
130. your parents are comin'
131. to pick you up
132. and you're ready to go home from your friend's house
133. and you're waiting and waiting and waiting and waiting and waiting;
134. you don't have any clean clothes,
135. you don't want to stay another night at their house
136. and you're ready to go home.
137. So, and you're waiting for them to come.
138. All the sudden, you're ambushed 2 to 1.
139. You're sitting on the porch,
140. two people come up
141. and take you away.
142. So, basically, that's what happens.
143. Another thing that really really hindered them,
144. their supplies were running low
145. and they looked that
146. they were going to be defeated.
147. They were outnumbered 2 to 1,
148. their supplies didn't come in,
149. they were ready to go home.
150. So, when you're ready to go home,
151. what do you think?
152. They have a lot of fight in 'em?
153. If it's like midnight
154. and you're waitin' for your parents,
155. you've been sittin' on someone's porch since 8:00pm,
156. are you really ready to fight somebody?
157. You're just ready to go home.
158. You're tired.
159. So they were tired
160. and, [[after all this happens,]] Cornwallis sees imminent defeat;
161. [[after all this happens,]]
162. basically he knew
163. he was going to lose,
164. and to save face,

165. and to save some of his men,
166. Cornwallis agrees to surrender October 19, 1781
167. and he does not,
168. and this is the one thing
169. they noted Cornwallis.
170. He was such the notable, such the great General
171. but the one thing that he did in the end?
172. He didn't even surrender on his own.
173. He sent his next in command
174. and he went riding off.
175. So, they thought
176. that was a cowardly way of doing it.
177. Cornwallis really couldn't return to England
178. to save face
179. 'cause they were considering him a coward.
180. Next, [[excuse me ladies,]] [[and this is just a quick fun fact,]] the British troops
marched out of Yorktown to the song "The World Turned Upside Down."
181. [[excuse me ladies,]]
182. [[and this is just a quick fun fact,]]
183. Why do you think
184. they marched out with the song "The World Turned Upside Down?"
185. Because they destroyed everything.
186. Basically because they figured the life
187. that they knew,
188. having the American colonists,
189. having some control over them,
190. the idea that the whole world as they know it is now going to change because of
quote unquote this American Revolution.

APPENDIX P

STUDENT SUMMARIES

Abby

Summary 1:

Benedict Arnold became a traitor to the Americans. He was angry that he didn't get full credit for his victories and he needed money, so he went over to the British. Cornwallis took his troops to a peninsula because he thought he would be able to get supplies from British ships in the water. Washington brought his troops to where Cornwallis was and blocked them in from land. A French general took his ships to block in the British from the water. The British lost the battle.

Summary 2:

Benedict Arnold was an American General who turned traitor. He didn't feel as though he was being rewarded enough for all of his victories. He went over to the British and was never found or caught to be tried as a traitor. Cornwallis took his troops to the peninsula of Yorktown. He thought he would be able to get away or more supplied from the British ships. Washington's troops blocked Cornwallis in from the land, and French Admiral de Grasse blocked them in from the water. Cornwallis later surrendered.

Brynne:

Summary 1:

In "The Victory at Yorktown," a man named Benedict Arnold betrayed our land America. He became a British general and conquered a lot of the land, including some parts of Virginia. So the King ordered for him to be captured and hanged. But he was never found.

Now it's a year later, (1781) and a British general, named General Cornwallis, wants to take over some land in Virginia as well. So the King lent him some loyalists to help him. But he was killed.

Summary 2:

What I read in the victory of Yorktown was that General Cornwallis was a Loyalist who wanted to take over Virginia because he couldn't conquer anywhere else. So he had hopes to be like Benedict Arnold. But the King didn't like what he was doing he cut Cornwallis off. Soon after that in 1781 he surrendered and America took him out. (I think)

Charlie:

Summary 1:

Yorktown was the area that General Cornwallis retreated to. He thought that the British Navy could provide him with supplies through the sea behind him. But Lafayette and

Washington, with help from the French, hit him on land, while French navy stopped him escaping by boat. The combined forces laid siege to the general and his troops. Eventually, Cornwallis surrendered.

Summary 2:

After doing serious damage to the south, Cornwallis retreated to Yorktown, a peninsula between the James river. Cornwallis relied on his navy, thinking he could get supplies and an escape route. But Washington brought his troops in and de Grasse brought his navy in, and they trapped him in Yorktown. After being sieged for a while, Cornwallis had his 2nd in command surrender, while he fled.

Danielle:

Summary 1:

There was a traitor and he traded on the Americans for the British. He was low on money. Cornwallis didn't listen to the general and went to the peninsula. Some one thought they had a chance to capture Cornwallis. October something

I think they lose.

Summary 2:

Cornwallis decided to go to the peninsula at Yorktown instead of somewhere else. Washington wanted to capture Cornwallis. He wanted him to stay going the direction he was going. Washington came to capture Cornwallis and Cornwallis surrendered without a fight to save some of his men. Then someone rode off singing some kind of song.

Elaine:

Summary 1:

“The Victory at Yorktown” article is about Cornwallis surrendered a battle. Then the article talks about Benedict Arnold, then back to Cornwallis. Cornwallis was fighting the Americans, and noticed they were winning, so he tried to retreat, but then the French formed a blockade, so the Brits couldn’t leave. Finally, Cornwallis surrendered his troops weapons to the Americans. The Benedict Arnold section just describes how Arnold became a traitor and what he was tried for.

Summary 2:

The article is about the Victory at Yorktown. During the war Cornwallis was losing but he didn’t give up. They tried to retreat but de Grasse (a French general) led a blockade. As the British soldiers gave up, the band played “The World turned upside down.” Then it talked about how/why Benedict Arnold became a traitor.

Faith:

Summary 1:

Benedict Arnold became a traitor and that enraged the Patriots. George Washington ordered him to be hung, but he was never found. Then Cornwallis thought he would have as much luck as Benedict Arnold did, but he was wrong. He refused to send a part of his army to

New York. They fled to Yorktown so he could get more supplies from the British ships. When George Washington found out about this his army and his French allies went to Yorktown to surround him. Another French army heard about this and went there also. By the time they arrived Cornwallis was surrounded. He couldn't leave by land or ship.

Summary 2:

Cornwallis refused his orders to go to New York. So he went to Yorktown. He was hoping he would get his supplies from the British. George Washington heard about this and went there with his French allies, de Grasse. They surrounded him so Cornwallis had nowhere to go. He surrendered.

George:

Summary 1:

Yorktown was a town captured by Cornwallis. Cornwallis retreated back to Yorktown and he tried to get supplies from the British Navy.

Summary 2:

Cornwallis was forced to retreat to Yorktown. He needed supplies but when he was waiting for them they got ambushed by the Americans who had twice as many men as Cornwallis so Cornwallis surrendered.

APPENDIX Q

MOTIFS, EVENTS/STATES OF COMBINED SOURCES

Motifs	Events/States	Abby	Bryonus	Charlie	Dankle	Elaine	path	George
Cornwallis to conquer Virginia	(2) Moved troops to VA in spring 1781							
	(3) Planned to conquer VA		X					
Benedict Arnold: traitor	<i>15. He turned traitor</i>	*X	*		*	*X	*	
	<i>20&21 because he wanted fame and money</i>	*X			*			
	<i>35. He helped British win victories in VA and NY</i>	*	*					
	<i>37. He agreed to turn over West Point</i>							
	<i>40. He was never captured</i>	X	*				*	
Cornwallis stuck in the south	(24) Cornwallis wanted success like Arnold		X				*	
	(35) 73. Refuses orders to move to NY				*		*X	
	(30) 79. Is attacked by Lafayette's troops					*		
	(37) 58. Retreats to Yorktown	*X		*X	*X	*X	*X	*X
	(40) 94. to get supplies and escape from ships	*X		*X			*X	*X
Trapping Cornwallis	(42) 104. Washington moves troops to Yorktown	*X		*X	X		*X	X
	(44) Helped by French army			*			*	
	(47) 114. De Grasse creates naval blockade	*X		*X		*X	*X	
	(50) 121. Cornwallis can't escape			*		*	*X	
	(49) He also can't get supplies							
Cornwallis trapped	(51) 127. Cornwallis is outnumbered 2:1							X
	(53) American and French troops fire daily							
	(54) Cornwallis holds out for several weeks			X				
	(55) 148. Cornwallis runs out of supplies							
British surrender	(55) 160. Cornwallis' situation is dire							
	(57) 166. Decided to surrender, October 19, 1781	*X	X	*	X	*	X	X
	<i>173. Sends 2nd in command to surrender</i>			X				
	<i>174. Cornwallis flees</i>			X				
	(60) 184. British march out to "The World Turned Upside Down"				X	X		

APPENDIX R

TYPES OF CAUSATION – ALL STUDENTS

Summary After...	Abby	Brynne	Charlie	Danielle	Elaine	Faith	George
Reading Passage	Conjunction: 1. "so" (1) 2. "because" (2) Cohesion: 1. factorial (1) Relative Pronoun: 1. "that" (1)	Conjunction: 1. "so" (2)	Asyndetic Construction: 1. Mental (1)	Asyndetic Construction: 1. Relational (1)	Conjunction: 1. "so" (2)	Conjunction: 1. "so" (1) Asyndetic Construction: 1. Mental (1) 2. Modal (1)	None
Hearing Instructional Explanation	Asyndetic Construction: 1. Mental (3)	Conjunction: 1. "so" (1) 2. "because" (2)	Asyndetic Construction: 1. Mental (1)	Conjunction: 1. "so" (1) Asyndetic Construction: 1. Mental (1)	Verb: 1. "led" (1)	Conjunction: 1. "so" (2) Asyndetic Construction: 1. Mental (1)	Conjunction: 1. "so" (1) Verb: 1. "forced" (1)

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